

Sessions

Wednesday, 10.09.2014

Session I Stem Cells Bioengineering for Therapeutic Translation

Chair: Leonora Bużańska (Mossakowski Medical Research Centre, Polish Academy of Sciences, Warsaw),
Co-chair Alicja Józkowicz (Biochemistry Department, Jagiellonian University, Cracow)

Speakers:

Eva Sykova (The Institute of Experimental Medicine, Academy of Science of the Czech Republic)

Stem cells and biomaterials for treatment of CNS diseases

Zaal Kokaia (Lund Stem Cell Center, Faculty of Medicine, Lund University, Sweden)

Stem cells for the treatment of ischemic stroke

Constanza Emanuelli (University of Bristol, School of Clinical Sciences, United Kingdom)

Pluripotent stem cells for vascular repair

Oingbo Xu (Vascular Biology Section, Department of Cardiology, James Black Centre, London, United Kingdom)

Application of Adult Stem Cells for Vascular Tissue Engineering

Zoran Ivanovic (Universite Bordeaux, France)

Anaerobic nature of stem cells - an evolutionary paradigm and its impact on stem cell engineering

Session II Heterogeneity, Plasticity and Microenvironment of Cancer

Chairs: Janusz Siedlecki, Magdalena Chechlińska (Maria Skłodowska-Curie Institute of Oncology, Warsaw)

Speakers:

Michał Jarząb (Maria Skłodowska-Curie Institute of Oncology, Gliwice Branch)

Heterogeneity of cancer

Jan Konrad Siwicki (Department of Immunology, Maria Skłodowska-Curie Memorial Cancer Center and Institute of Oncology, Warsaw)

Plasticity of cancer

Alicja Józkowicz (Biochemistry Department, Jagiellonian University, Cracow):

Microenvironment of cancer

Company presentation: Krzysztof Brzózka (Executive Vice President, Chief Scientific Officer, Selvita)

Development of PIM/FLT3 kinase inhibitors for cancer treatment

Session III Cytoskeleton, Intracellular Transport and Cell Motility

Chair: Michał Witt (International Institute of Molecular and Cell Biology, Warsaw; Institute of Human Genetics, Poznań)

Speakers:

Dorota Włoga (Nencki Institute of Experimental Biology, Warsaw)

Zuzanna Bukowy-Gieryllo (Institute of Human Genetics, Poznań)

Jacek Jaworski (International Institute of Molecular and Cell Biology, Warsaw)

Session IV Bioinformatics and Computational Biology

Chair: Janusz Bujnicki (International Institute of Molecular and Cell Biology, Warsaw; Faculty of Biology, Mickiewicz University, Poznań)

Speakers:

Jacek Blazewicz (Institute of Computing Science, Poznań University of Technology, and Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznań)

Understanding life: bioinformatics point of view

Jerzy Tiuryn (Faculty of Mathematics, Informatics and Mechanics, University of Warsaw)

Computational genome-wide cell-type-specific predictions of dimeric transcription factor complexes

Izabela Makalowska (Faculty of Biology, Adam Mickiewicz University, Poznań)

Retrogenes - genomic trash or treasure

Krzysztof Józwiak (Laboratory of Medicinal Chemistry and Neuroengineering, Medical University of Lublin)

Rational development of beta2 adrenoceptor agonists capable to induce biased intracellular signalling

Session V Lipids: Metabolism and Biological Functions

Chair: Ewa Świeżewska (Institute of Biochemistry and Biophysics Polish Academy of Sciences, Warsaw)

Speakers:

Dirk Lefeber (Department of Neurology, Radboud University, Netherlands)

Dolichol metabolism as key regulator of protein glycosylation

Jerzy Bełtowski (II Faculty of Medicine, Medical University of Lublin)

Oxysterols - from cholesterol peroxidation products to signaling molecules

Satellite Session: From the Ivory Tower to the Real World; the facts about technology transfer

Chair: Marcin Ciuk (Neurobiology Center, Nencki Institute of Experimental Biology, Warsaw)

Description:

This session will consist of a series of presentations and a panel discussion on the realities of technology transfer, the opportunities and pitfalls. The panelists include a long-term vice-director of a prominent technology transfer office and an entrepreneur, as well as the chairman of a company that invests into technologies from academia.

Thursday, 11.09.2014

Session VI Genomics and Epigenomics

Chair: Marta Koblowska (Faculty of Biology, University of Warsaw; Institute of Biochemistry and Biophysics Polish Academy of Sciences, Warsaw) Wykładowcy

Speakers:

Grzegorz Placha (Department of Internal Medicine, Hypertension, and Angiology, Medical University of Warsaw) **Search for genetic variants influencing cardiac hypertrophy – an integrative genomics approach**

Bartosz Wilczyński (Faculty of Mathematics, Informatics and Mechanics, University of Warsaw)

Computing local chromatin state in Drosophila: a supervised approach

Andrzej Jerzmanowski (Faculty of Biology, University of Warsaw; Institute of Biochemistry and Biophysics Polish Academy of Sciences, Warsaw)

Epigenetic mechanisms behind plants phenotypic plasticity

Session VII Protein Functions in Cellular Signaling

Chair: Marta Międzyńska (International Institute of Molecular and Cell Biology, Warsaw)

Speakers:

Katarzyna Kwiatkowska (Nencki Institute of Experimental Biology, Warsaw)

Molecular basis of macrophage activation by lipopolysaccharide

Tomasz Lipniacki (Institute of Fundamental Technological Research Polish Academy of Sciences, Warsaw)

NF-kappa B regulation in response to TNF, LPS and poly(I:C) stimulation

Joanna Cichy (Biochemistry Department, Jagiellonian University, Cracow)

Neutrophil extracellular traps (NETs) in autoinflammatory responses

Session VIII Development and Ageing

Chairs: Maria Anna Ciemerych-Litwinienko (Faculty of Biology, University of Warsaw) and Ewa Sikora (Nencki Institute of Experimental Biology, Warsaw)

Speakers:

Zbigniew Polanski (Faculty of Biology and Earth Sciences, Jagiellonian University, Cracow)

Spindle Assembly Checkpoint in oocytes and zygotes and its importance for human aneuploidy

Magda Zernicka-Goetz (Gurdon Institute and Department of Physiology, Development and Neuroscience, University of Cambridge)

Mechanisms and players regulating cell differentiation and morphogenesis during both pre and post implantation stages

Claudio Franceschi (Department of Experimental Pathology, University of Bologna, Italy)

INFLAMMAGING: a lifelong/systemic/propagating view of the aging process

Krzysztof Książek (Department of Pathophysiology, Poznan University of Medical Sciences)

Bad impact of good cells, or how senescent peritoneal mesothelium promotes the progression of ovarian cancer

Valery Krizhanovsky (Department of Molecular Cell Biology, Weizmann Institute of Science, Israel)

Cellular senescence and its relationships with diseases and ageing

Session IX Plant Cell Biology and Biochemistry

Chairs: Agnieszka Mostowska, (Faculty of Biology, University of Warsaw), Przemysław Wojtaszek (Faculty of Biology, Adam Mickiewicz University, Poznan)

Speakers:

David Robinson (University of Heidelberg)

EXPO, exocyst recruitment and unconventional protein secretion

Wiesław Gruszecki (Marie Curie-Skłodowska University, Lublin)

Regulation of photosynthetic antenna activity in plants at the level of a single pigment-protein complex

Hanna Janska (University of Wrocław)

Ribosomal regulation of mitochondrial genome expression.

Session X Electrophysiology and bioelektrochemical sensors

Chair: Krzysztof Dołowy (Department of Physics, Warsaw University of Life Sciences)

Magdalena Stobiecka (Department of Physics, Warsaw University of Life Sciences)

Investigation of oxidative stress biomarkers using electrochemical quartz crystal nanobalance and other methods

Renata Toczyłowska Mamińska

The study epithelial ion transport using the new multisensory device

Kazimierz Trębacz

Long distance bioelectric signals in plants

Symposium EMBO and Poland

Organizer: Leszek Kaczmarek (Nencki Institute of Experimental Biology, Warsaw)

Part I.

Krzysztof Liberek: **Small heat shock proteins in protein aggregation and disaggregation**

Agnieszka Chacińska: **Regulation of mitochondrial protein homeostasis**

Michał Komorowski (IPPT) TBA

Part II.

Matthias Bochtler **The structural biology of DNA methylation**

Marcin Nowotny **Structure-specific nucleases in DNA repair**

Igor Konieczny **Nucleoprotein complexes in DNA replication and proteolysis**

Andrzej Dziembowski **RNA decay in health and disease**

Part III

Szymon Świeżewski **A tale of the tail. Role of antisense transcription in gene regulation in plants**

Joanna Sułkowska TBA

Tomasz Wilanowski **New roles of the Grainyhead-like family of transcription factors in cancer**

Paweł Bednarek: **Tryptophan-derived metabolites in the immunity of model Brassicaceae species**

Friday, 12.09.2014

Symposium EMBO and Poland:

Session XI (EMBO-sponsored session) Metabolic Disorders: External and Internal Signaling

Chairs: Dorota Włoga, Agnieszka Dobrzyń (Nencki Institute of Experimental Biology, Warsaw)

Speakers:

Tomasz Guzik: **Immune mechanisms of hypertension and vascular dysfunction**

Agnieszka Dobrzyń: **How to optimize pancreatic beta-cell function - is the regulation of lipid metabolism a golden tool?**

Final session

Maciej Żylicz: TBA

Leszek Kaczmarek: **MMP-9 rules the brain**

Gerlind Wallon: (EMBO) TBA

Session XII Cellular Neurobiology

Part A, Chair: Witold Konopka (Neurobiology Center, Nencki Institute of Experimental Biology, Warsaw)

Speakers:

Angel Barco (Instituto de Neurociencias, Alicante, Spain)

Genomic landscape of histone acetylation and gene expression in the adult brain: Role in neuronal plasticity and intellectual disability disorders

Jan Rodriguez Parkitna (Institute of Pharmacology, Krakow)

Generation of transgenic mice with neuron-type specific gene knock-down

Part B, **Local RNA translation at the synapse**

Chair: Marta Wiśniewska (Centre of New Technologies, University of Warsaw)

Speakers:

Magdalena Dziembowska (Nencki Institute/Centre of New Technologies, University of Warsaw)

Synaptic translation of matrix metalloproteinase 9 and its role in Fragile X Syndrom

Clive R. Bramham (University of Bergen)

Translational control underlying long-term synaptic plasticity

Session XIII Biospectroscopy and Oxidative Stress

Chair: Wiesław Gruszecki (Department of Biophysics, Marie Curie-Skłodowska University, Lublin)

Speakers:

Grzegorz Bartosz, Izabela Sadowska-Bartosz (Faculty of Biology and Environment Protection, University of Lodz)

Spectroscopic Detection of Reactive Oxygen Species and Oxidative Stress

Sabato D'Auria (Institute of Protein Biochemistry, Consiglio Nazionale delle Ricerche, Italy)

Advanced Optical Biosensors for new Applications in Biology and Medicine

Ignacy Gryczyński (University of North Texas Health Science Center, USA)

Surface Plasmon-Coupled Fluorescence Emission

Session XIV Bioenergetics

Chairs: Adam Szewczyk, Jerzy Duszyński, Lech Wojtczak (Nencki Institute of Experimental Biology, Warsaw)
TBA

Session XV Biotechnology

Chair: Ewa Bartnik (Faculty of Biology, University of Warsaw)

Speakers:

Janusz Bujnicki (International Institute of Molecular and Cell Biology, Warsaw; Faculty of Biology, Adam Mickiewicz University, Poznan)

Restriction enzymes for RNA?

Józef Dulak (Biochemistry Department, Jagiellonian University, Cracow)

Adult stem cells: hopes and hypes of regenerative medicine

Elżbieta Katarzyna Jagusztyn-Krynicka (Faculty of Biology, University of Warsaw)

Lactic acid bacteria (LAB) as a delivery vehicles for vaccine development