

Bridges in Life Sciences Annual Scientific Review Meeting

Bridges in Life Sciences Annual Scientific Review Meeting of the Regional Cooperation for Health, Science and Technology (RECOOP HST) Consortium October 5, 2007 Pecs, Hungary

Venue:

Faculty of Sciences, University of Pécs,
H-7624 Pecs, Ifjúság útja 6, Hungary

Program Chair:

Professor Peter Nemeth, Dean, Faculty of Medicine, University of Pecs, Hungary

Program Co-Chairpersons:

Professor Filip Culo, Department of Physiology and Immunology, Zagreb University School of Medicine, Zagreb, Croatia

Professor Calvin Hobel, Vice Chair, Department of Obstetrics & Gynecology
Miriam Jacobs Chair, Cedars-Sinai Medical Center, Los Angeles, CA, USA

Professor Alečš Macela, Faculty of Military Health Sciences, Hradec Králové, Czech Republic

Professor Andriy Sibirny, Director of the Institute of Cell Biology, National Academy of Sciences of Ukraine

Professor Balazs Sumegi, Head of the Department of Biochemistry and Medical Chemistry, Faculty of Medicine, University of Pecs, Hungary

Professor Mykhaylo A. Tukalo, Deputy Director, Head of Department of Protein Biosynthesis, Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine

Sandor Vari, MD, Director, International Research and Innovation Program Cedars-Sinai Medical Center, Los Angeles, CA, USA

Bridges in Life Sciences Annual Scientific Review Meeting

AGENDA

8:45 Welcome

Professors Peter Nemeth and Calvin Hobel

9:00 - 10:30 Session One

Session Chair: Professor Culo Filip

BIOTECHNOLOGY, GENERIC TOOLS AND MEDICAL TECHNOLOGIES FOR HUMAN HEALTH

Genomics

Presentation: Andrei Sibirny
Institute of Cell Biology, National Academy of Sciences of Ukraine, Lviv, Ukraine
Yeast Genomics and Metabolic Engineering in Biotechnology

Proteomics

Presentation: Kornelia Szabo
Department of Dermatology, Faculty of Medicine, University of Szeged, Hungary
Genomic and protein expression studies on multifactorial dermatological and allergological disorders

Poster Rynditch Alla
Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine
Regulation of functional diversity of Down syndrome-related intersectin adaptor protein involved in endocytosis, cell signaling and actin rearrangements

Molecular Biology

Presentation Natalia Yevdokimova
Palladin Institute of Biochemistry, National Academy of Sciences of Ukraine, Kyiv, Ukraine
Low-molecular-weight fragments of hyaluronan as a possible way to prevent in-stent restenosis

Presentation Filip Culo
Department of Physiology and Immunology, Zagreb University School of Medicine, Zagreb, Croatia
The Role of Prostaglandins and Inflammatory Cytokines in Acute Liver Damage by Xenobiotics

Bridges in Life Sciences Annual Scientific Review Meeting

Poster Kamil Kuca
Center of Advanced Studies and Department of Toxicology, Faculty of Military Health Sciences, University of Defence, Hradec Kralove, Czech Republic
Relationship between structure of acetylcholinesterase reactavators and their reactivation potency

Cell Biology

Presentation Gyorgy Panyi
Department of Biophysics and Cell Biology, Medical and Health Science Center, University of Debrecen, Hungary
Cellular and molecular background for the use of Kv1.3 K⁺ channel blockers in the management of autoimmune diseases

Poster Magyar Janos
Department of Dental Physiology and Pharmacology, Medical and Health Science Center, University of Debrecen, Hungary
Effects of stimulation frequency on the kinetics of I_{Kr} during the action potential

Poster Maria Obelenskaya / Bogdan Tokovenko
Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine
Novel technologies in the study of IFN alpha activity

Poster Alexander Sklyarov
Department of Endoscopy and Endoscopic Surgery, Danylo Halytsky Lviv National Medical University, Lviv, Ukraine
Ultrastructural and metabolic changes of the mucous membrane of large intestine under blockge of H⁺, K⁺-ATPase and CCK-2 receptors

Stem Cells

Presentation Lyubov Lukash
Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine
Development of the technology for cellular cardiomyoplasty with using adult mesenchymal stem cell lines and experimental models of myocardial infarction

Cell and Tissue Culture

Presentation Vitalii Melnyk
Institute of Molecular Biology and Genetic of National Academy of Science of Ukraine, Kyiv, Ukraine
Biotechnologies of in vitro culture and preservation perspectives of gentiana l. Species

10:30 - 11:00 COFFEE BREAK – OPENING OF THE POSTER SESSION

Bridges in Life Sciences Annual Scientific Review Meeting

11:00 – 12:30 Session Two

Session Chair: Professor Andriy Sibirny

TRANSLATIONAL RESEARCH IN MAJOR DISEASES

Cancer

Presentation Beata Polgar
Reproductive- and Tumour Immunology Laboratory, Department of Medical Microbiology and Immunology, Faculty of Medicine, University of Pécs, Hungary
The Progesterone-Induced Blocking Factor (PIBF) in malignant tumors

Presentation Rostyslav Stoyka
Department of Regulation of Cell Proliferation, Institute of Cell Biology National Academy of Sciences of Ukraine, Lviv, Ukraine
Bystander interrelations and targeted gene expression during macrophage-fibroblast cell interactions

Poster Sorin Paun
Emergency Hospital, Carol Davila University of Medicine and Pharmacy – Bucharest, Romania
Transperitoneal Laparoscopic Approach for Primary Retroperitoneal Tumors

Cardiovascular Disease

Presentation Ines Drenjancevic-Peric
Department of Physiology and Immunology, School of Medicine, University Josip Juraj Strossmayer Osijek, Croatia
The Use of Consomic Rat Strains in Determination of Role of the Renin-Angiotensin System (RAS) in the Regulation of Vascular Reactivity to Dilator Stimuli

Presentation Olena Kuchmenko
Palladin Institute of Biochemistry, National Academy of Sciences of Ukraine, Kyiv, Ukraine
Development of active complex for correction of bioenergetical status under cardiovascular disease

Poster Alexandr Sklyarov
Department of Biochemistry, Danylo Halytsky Lviv National Medical University, Lviv, Ukraine
Effect of COX-2 and proton pump inhibition on oxidative stress in heart tissue and gastric mucosa of rats

Metabolic - Diabetes and Obesity

Presentation Natalia Sybirna
Department of Biochemistry, Ivan Franko Lviv National University, Lviv, Ukraine
Molecular basis of structural and functional changes in the blood cells state under type 1 diabetes mellitus

Bridges in Life Sciences Annual Scientific Review Meeting

Brain, Spinal Cord and Musculoskeletal

Presentation Mirko Dikšić
School of Medicine University Josip Juraj Strossmayer Osijek, Croatia
**Citalopram restore brain 5-HT synthesis in olfactory bulbectomy rats:
An autoradiographic study**

Poster Tamas Bardos
Biomechanical Laboratory (CRC), Medical School, University of Pécs
**Introduction of autologous chondrocyte implantation (ACI) in Hungary:
Preliminary results in the ovine model for ACI**

12:30 - 13:30 – LUNCH BREAK

13:30 -15:00 Session Three

**Session Chair: Sandor G. Vari, MD
YOUNG SCIENTIST FORUM**

Presentations

Janos Nagy
Institute of Pathophysiology, Hungarian Academy of Sciences and Semmelweis
University Pediatric and Nephrology Research Group, Budapest and Department of
Biophysics and Cell Biology, Research Center for Molecular Medicine, Medical and
Health Science Center, University of Debrecen, Hungary
Fenestration of Endothelial Cells Detected with AFM

Juraj Lenco
Institute of Molecular Pathology, Faculty of Military Health Science, University of
Defence, Hradec Kralove, Czech Republic
Proteome analysis of Francisella tularensis LVS

Tanja Kovac
School of Medicine University Josip Juraj Strossmayer Osijek, Croatia
**Morphology of thyroid cartilage: Is there a link between thyroid angle and
type of hyoid bone?**

Rostyslav Bilyy
Institute of Cell Biology, National Academy of Sciences of Ukraine, Lviv, Ukraine
**Use of biofunctionalized nanoparticles for isolation and detection of pathological
cells**

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Taras Redchuk

Palladin Institute of Biochemistry of the National Academy of Sciences of Ukraine, Kyiv, Ukraine

Immunodiagnosics of tuberculosis

Oleksandr Dergai

Institute of Molecular Biology and Genetics of National Academy of Sciences of Ukraine, Kyiv, Ukraine

Binding specificity of SH3 domains can be regulated by alternative splicing

Krisztina Kovacs

Department of Biochemistry and Medical Chemistry, Medical Faculty, University of Pecs, Hungary

Identification of novel drug targets preventing ischemic heart diseases

Dmytro Atamanyuk

Department of Pharmaceutical, Organic and Bioorganic Chemistry, Danylo Halytsky Lviv National Medical University, Lviv, Ukraine

Search of novel potential leads among thiopyrano[2,3-*d*]thiazol-2-one derivatives with pharmacological importance

15:00 – 15:45 Session Four

Session Chair: Professor Alečš Macela

CONFRONTING MAJOR THREATS TO PUBLIC HEALTH - MAJOR INFECTIOUS DISEASES

Presentation Mykhaylo A. Tukalo

Department of Protein Biosynthesis, Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine

Directional search for synthetic antibacterial compounds against specific human infections

Presentation Roman Prymula

Department of Epidemiology, Faculty of Military Health Sciences, University of Defence, Hradec Kralove, Czech Republic

New vaccination strategies in communicable disease control

Presentation Gabriella Miklóssy / József Tözsér

Department of Biochemistry and Molecular Biology, Medical and Health Science Center, University of Debrecen, Hungary

High-Throughput assay for inhibition profiling of retroviral proteases

Bridges in Life Sciences Annual Scientific Review Meeting

15:45 – 16:15 Session Five

Session Chair: Professor Mykhaylo A. Tukalo
HEALTH AND SOCIETY

Epidemiology

Presentation János Garai
Department of Pathophysiology and Gerontology, University of Pécs, Faculty
of Medicine, Hungary
Epidemiology and pathophysiology of menopause

Environmental Health

Presentation Yuliya Hrynash
Pediatric Infectious Diseases Department, Lviv State Medical University;
Ukraine
Air Pollution and Respiratory Tract Diseases in Children

16:15 – 16:30 COFFEE BREAK

16:30 – 17:45 Session Six

Chairman: Professor Peter Nemeth
DETECTION, DIAGNOSIS AND MONITORING

Molecular Probes

Presentation Denis Kolybo
Department of Molecular Immunology, Palladin Institute of Biochemistry,
National Academy of Sciences of Ukraine, Kyiv, Ukraine
Diphtheria immunity assessment: Do we need one or two antigens?

Biosensors

Presentation Livia Nagy
Research Group for Chemical Sensors, Faculty of Sciences, University of Pécs,
Hungary
Biosensors for clinical diagnosis

Biomarkers

Presentation Vadym Kavsan
Department of Biosynthesis of Nucleic Acids, Institute of Molecular Biology
and Genetics, National Academy of Sciences of Ukraine, Kyiv, Ukraine
**Molecular markers for the typing, diagnostics and gene therapy of
human brain tumors**

Poster Alla Rynditch
Department of Functional Genomics, Institute of Molecular Biology and
Genetics of National Academy of Sciences of Ukraine, Kyiv, Ukraine
**Identification and characterization of new molecular biomarkers for
diagnostics and prognostics of epithelial tumors**

Bridges in Life Sciences Annual Scientific Review Meeting

Nanoparticles

Presentation Bogdan Melekh /Alexander. Sklyarov
Department of Biochemistry, Danylo Halytsky Lviv National Medical
University, Lviv, Ukraine
**Metabolic biomarkers for the diagnosis and differential prognosis of lung
and gastric cancer**

Biomedical Optics

Presentation Miklos Nyitrai
Department of Biophysics, Medical School, University of Pecs
**Fluorescent spectroscopic methods to explore the molecular mechanisms
playing a role in the function and regulation of the Actin Cytoskeleton**

17:45 – 19:00 Session Seven

Session Chair: Professor Balazs Sumegi
PHARMACEUTICAL RESEARCH

Pharmaceutical Discovery

Presentation Oleh Pinyazhko
Department of Pharmacology, Danylo Halytsky Danylo Halytsky Lviv
National Medical University, Lviv Ukraine
**5-phenylpropenilidenrodanine derivative (SPRD) influence on
nitric oxide radical concentration in liver during hypoxia**

Pharmaceutical Development

Presentation Roman Bogdanovych Lesyk
Department of Pharmaceutical, Organic and Bioorganic Chemistry, Danylo
Halytsky Lviv National Medical University, Lviv, Ukraine
**Search of novel potential anticancer agents among 4-thiazolidones and
related heterocyclic systems**

Presentation Lacramioara Popa
Department of Physical-Chemistry, Faculty of Pharmacy, University of
Medicine and Pharmacy “Carol Davila”– Bucharest, Romania
**Drug Diffusion and Rheology in biopharmaceutical topical dosage form
design and evaluation**

Poster Arpad Tosaki
Health and Science Center, Department of Pharmacology, Faculty of Pharmacy,
University of Debrecen, Hungary
**Cardioprotective mechanisms of sour cherry seed extract against
ischemia/reperfusion-induced damage in isolated rat hearts**

Poster Georgiy Donchenko
Department of Coenzymes Biochemistry Department, Palladin Institute of
Biochemistry on the National Academy of Sciences of Ukraine, Kyiv, Ukraine
Tocopheroles and cancer prevention: lung cancer treatment

Bridges in Life Sciences Annual Scientific Review Meeting

Poster Kamil Kuca
Centre of Advanced Studies and ²Department of Toxicology; Faculty of Military Health Sciences, University of Defence, Hradec Kralove, Czech Republic
Development of new acetylcholinesterase reactivators—antidotes against nerve agents

Toxicology

Presentation Yuriy Bidnychenko
Toxicological and Analytical Chemistry Department, Lviv Medical University, Lviv, Ukraine
Chemical-toxicological investigation of oligopeptide toxins of Amanita Phalloides mushrooms

Poster Kamil Kuca
Center of Advanced Studies, Faculty of Military Health Sciences, University of Defence, Hradec Kralove, Czech Republic
Countermeasures against chemical terrorism—Development of new antidotes against nerve agents

Clinical Pharmacology

Presentation Kamil Kuca
Center of Advanced Studies and Department of Toxicology, Faculty of Military Health Sciences, University of Defence, Hradec Kralove, Czech Republic
Medical countermeasure of chemical casualties

Poster Pal Perjesi
Department of Pharmaceutic Chemistry, Medical School, University of Pecs, Hungary
Quantisation of active pharmaceutical ingredients in formulated medicaments and biological fluids

16:30 – 18:30 Session Eight (Parallel session)

Session Chair: Professor Calvin Hobel

Round Table Discussion

HUMAN DEVELOPMENT

Presentation Calvin J. Hobel
Vice Chair, Department of Obstetrics & Gynecology, Miriam Jacobs Chair, Cedars-Sinai Medical Center, Professor, Obstetrics/Gynecology & Pediatrics, UCLA School of Medicine
Fetal Origins of Adult Diseases

Presentation Jozsef Bodis
Chairman Department of Obstetrics and Gynecology, University of Pecs, Hungary
Intra-Uterine Growth Restriction

Bridges in Life Sciences Annual Scientific Review Meeting

- Presentation Tibor Ertl
The Department of Obstetrics and Gynecology University of Pecs, Hungary
Low Birth Weight / Preterm Birth
- Presentation Lubica Palkovicova
Research Base of the Slovak Medical University, Bratislava, Slovak Republic
Prospective cohort study of developmental origins of adult diseases in the Slovak population
- Presentation Iuliana Ceausu
“Carol Davila” University of Medicine of Pharmacy, Bucharest, Romania,
“Dr. I. Cantacuzino” Department of Obstetrics and Gynecology
Gestational diabetes impact on maternal and fetal outcome
- Presentation Attila Pajor / Sandor Valent
The 2nd Department of Obstetrics and Gynecology, Semmelweis University
Budapest
Early-onset thromboembolism and factor V Leiden mutation enhance low birth weight rate and perinatal fetal loss

18:00 Panel Discussion

10:30 – 18:30 Session Nine

Session Chair: Professor Calvin Hobel
YOUNG SCIENTISTS’ POSTERS

Anastasiia Sydorova
Palladin Institute of Biochemistry of National Academy of Sciences Ukraine, Kyiv,
Ukraine
Thiaminetriphosphatase activity of thiamine-binding protein of neural cells

Olga Fesai
Institute of Molecular Biology and Genetics, National Academy of Sciences of
Ukraine, Kyiv
Genetic screening for infertile males from Ukraine

Yuliya Kosminska
Department of Physical Electronics, Sumy State University, Sumy, Ukraine
Department of Human Genetics, Institute of Molecular Biology and Genetics, National
Academy of Sciences of Ukraine, Kyiv
Biocompatibility of advanced titanium-carbon surfaces for human mesenchymal stem cells

Mykola Dergai
Institute of Molecular Biology and Genetics of National Academy of Sciences of
Ukraine, Kyiv, Ukraine
Novel isoform of intersection 1 with new 3’ end

Bridges in Life Sciences Annual Scientific Review Meeting

Oleksii Nikolaienko

Institute of Molecular Biology and Genetics of National Academy of Sciences of Ukraine, Kyiv, Ukraine and Palladin Institute of Biochemistry of National Academy of Sciences Ukraine, Kyiv, Ukraine

Adaptor protein intersection 1: Searching for new protein partners

Olga Martsenyuk

Institute of Molecular Biology and Genetics, National Academy of Science of Ukraine, Kyiv, Ukraine and Slovak Medical University, Bratislava, Slovak Republic

Determination of aminothiols in human placenta samples

Solomiya Paryzhak

Institute of Cell Biology, National Academy of Science of Ukraine, Lviv, Ukraine

Enzyme- and cells-based bioanalytic approaches for assay of formaldehyde in consumer goods, environment and biological samples

Danylo Kaminsky

Department of Pharmaceutical, Organic and Bioorganic Chemistry, Danylo Halytsky Lviv National Medical University, Lviv, Ukraine

4-Azolidone-3-alkanecarboxylic acids derivatives – perspective «drug-candidates»

Zdenek Šubrt

Department of Field Surgery, Military Health Science Faculty, Hradec Králové, Defense University Brno, Czech Republic

Temporary liver blood-outflow occlusion increases effectiveness of radiofrequency ablation

Renata Varga

Institute of Surgical Research, University of Szeged, Szeged, Hungary

Inflammatory changes after short-term ischemic preconditioning of the rat hind limb

Bence Rethi

Institute of Immunology, University of Debrecen, Debrecen and the Department of Microbiology, Tumor and Cell Biology, Karolinska Institute, Stockholm

Regulation of T cell homeostasis by Fas and IL-7 during HIV-infection

Andrea Kiss

University of Debrecen, Cell Biology and Signaling Research Group of the Hungarian Academy of Sciences, Department of Medical Chemistry and Department of Pediatrics

Role of MYPT1 in the dephosphorylation of retinoblastoma protein

Gabriella Miklóssy

Department of Biochemistry and Molecular Biology, Medical and Health Science Center, University of Debrecen, Hungary

Development of a Microtiter Plate Fluorescent Assay for testing dominant negative inhibitors of HIV-1 protease

Bridges in Life Sciences Annual Scientific Review Meeting

19:00 Closing Remarks

Calvin Hobel

Chairman of RECOOP Consortium Scientific Advisory Board

**19:30 Reception and Announcement of the Young Scientist Competition Results at
University of Pecs Guest House**

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