

CONFERENCE PROGRAM

“CURRENT ISSUES IN BIOCHEMISTRY AND BIOTECHNOLOGY – 2025”

Conference Organizer: Palladin Institute of Biochemistry
National Academy of Sciences of Ukraine

May 5, 2025, Monday

Conference Opening

10.00-10.20 Welcome Address by the Conference Organizers and the Competition Jury
Welcome Address by the Director of the Palladin Institute of Biochemistry of NAS of Ukraine, Academician Serhiy KOMISARENKO

Plenary presentation

10.20-10.40 **Oleksandra PAVLOVA**, Postdoctoral Researcher, Laboratory of Neurophysiology, GIGA-Neurosciences, University of Liege, Liege, Belgium.
hIPSC-differentiated dopaminergic neurons as useful tool to study their neurophysiology and maturation

10.40-11.30 Session I. Biochemistry

8-minute presentation, 4-minute Q&A

1. Olga SUSHKO, lecturer, Krupynskyi Lviv Medical Academy, Lviv, Ukraine
Effect of selenium citrate on the glutathione status and thyroid hormones in rats with experimentally induced hypothyroidism
2. Vira KHOMA, Forensic Expert of the Sector of Physicochemical Research, Department of Materials, Substances, and Products Examination, Ternopil Scientific Research Forensic Center of the Ministry of Internal Affairs of Ukraine, Ternopil, Ukraine
Identification of biochemical targets of rare earth elements in bivalve mollusks under combined exposure conditions
3. Karina HREBENIUK, Assistant of the Department of Animal Physiology and Biochemistry, State Biotechnological University, Zaporizhzhia, Ukraine
Electrolyte status of dog erythrocytes during hypothermic storage with the addition of n-acetylcysteine
4. Anna OKHOVYCH, First-Year Master's Student, Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine
Optimization of conditions for assessing paraoxonase organophosphatase activity in mouse blood plasma using paraoxon-ethyl

11.30-12.00 Coffee break

12.00-13.00 Session II. Biochemistry

1. Ilya FORYS, PhD Student, Palladin Institute of Biochemistry, NAS of Ukraine, Kyiv, Ukraine
Calix[4]arene C-715 modulates mitochondrial functioning and contractile activity of uterine smooth muscle

2. Oleksii TKACHENKO, Student, Poltava State Medical University, Poltava, Ukraine
Effect of inorganic hydrogen sulfide donor and nimesulide on lipid peroxidation and nitrogen reactive species content in the soft tissues of rat periodontium under conditions of systemic inflammatory response syndrome
3. Oleh Platonov, PhD student, Palladin Institute of Biochemistry, NAS of Ukraine, Kyiv, Ukraine
Evaluating the effect of disintegrin on tumor growth
4. Maksym SKRYPNYK, Graduate of the PhD Program, Poltava State Medical University, Poltava, Ukraine
The effect of probiotic treatment on obesity-related changes in the periodontium of obese rats
5. Tamara KOZAK, PhD student, Institute of Experimental Pathology, Oncology, and Radiobiology, R.E. Kavetsky Institute, NAS of Ukraine, Kyiv, Ukraine
Modification of breast cancer cell sensitivity to metformin during co-cultivation with Bifidobacterium animalis

13.00-14.00 Lunch break

14.00-15.30 Session III. Medical Biochemistry

1. Maryna URSATYI, PhD student, Department of Biochemistry and Biotechnology, Educational and Scientific Institute of Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine
Adenine nucleotide content in liver mitochondria of rats with acetaminophen intoxication after partial hepatectomy
2. Alina LYTVYNENKO, Researcher, O.O. Bohomolets Institute of Physiology, NAS of Ukraine, Kyiv, Ukraine
Effect of resveratrol on regulated cell death of enterocytes under conditions of oxidative stress in vitro
3. Anastasiia HALINSKA, Researcher, Institute of Gastroenterology, NAMS of Ukraine / PhD student, O. Honchar Dnipro National University, Dnipro, Ukraine
Metabolic characteristics of gastric contents under conditions of neuromuscular dysfunction of the esophagogastric junction
4. ÖZDEMİR Deniz, PhD student of Molecular Biology and Genetics Department at Bingöl University, Bingöl, Turkey
The Anticancer Effect of RAD51-IN-1 in MDAH-2774 (CVCL_0420) Cells
5. Khrystyna PARTSEI, Assistant of the Department of Biological and Medicinal Chemistry named after Academician G.O. Babenko, Ivano-Frankivsk National Medical University, Ivano-Frankivsk, Ukraine
Blood metalloproteins in rats under conditions of energy drink consumption

6. Anna MOROZ, PhD student, Ivan Franko National University of Lviv, Lviv, Ukraine

Effect of fruit extracts from the Uholok and Korolovyi cultivars of Cornus mas L. and the hybrids of Cornus mas × Cornus officinalis Jerzy and Tomasz cultivars on the content of oxidative stress metabolites in erythrocytes of rats with type 1 diabetes

7. Maksym TYMOFIEIEV, PhD student, O.O. Bohomolets National Medical University, Kyiv, Ukraine

Efficacy of combined rectal cream “Dilatil” (diltiazem/lidocaine/methyluracil) in pre-clinical study on a model of acute complicated anal fissure in comparison with rectal cream nifecain



May 6, 2025, Tuesday

Plenary presentation

- 10.00-10.20** Olha RUDNYTSKA, Researcher at the Palladin Institute of Biochemistry, NAS of Ukraine, Kyiv, Ukraine
The multifaceted role of endoplasmic reticulum stress in the regulation of gene expression in normal astrocytes and glioblastoma cells

10.20-11.00 **Session IV. Molecular Biology**

8-minute presentation, 4-minute Q&A

1. Iryna HORAK, Researcher, Masaryk University, Brno, Czech Republic / Senior Researcher, Palladin Institute of Biochemistry, NAS of Ukraine, Kyiv, Ukraine
Adaptor protein CIN85 potentiates the motility of osteosarcoma cells
2. Oleksii CHUK, PhD student at the Palladin Institute of Biochemistry, NAS of Ukraine, Kyiv, Ukraine
Virtual screening strategy for identifying new small-molecule antagonists of integrin $\alpha IIb\beta 3$
3. Lesia SISHCHUK, Immunologist, Laboratory of Medical Genetics, National Specialized Children's Hospital "Okhmatdyt", Kyiv, Ukraine
Limitations of human leukocyte antigen molecular typing methods for patients with main disease relapse after hematopoietic stem cell transplantation

11.00-11.30 Coffee break

11.30-13.00 **Session V. Biotechnology**

1. Vitalii MOSKALENKO / Nazar FOMENKO, Students at the State University "Kyiv Aviation Institute", Kyiv, Ukraine
Biotechnological approaches in construction of drones for medical purposes
2. Daryna MRUHA, PhD student, Institute of Molecular Biology and Genetics, NAS of Ukraine, Kyiv, Ukraine
Laboratory prototype of electrochemical biosensor for quantitative analysis of alanine aminotransferase activity
3. Ksenia KOSHCHAVKO, Student, Institute of biology and medicine Taras Shevchenko National University of Kyiv, Kyiv, Ukraine, Україна
*"Hairy" root culture of *scutellaria altissima* for flavonoid production*
4. Maksym SOBOLEVSKY, PhD student, Institute of Molecular Biology and Genetics, NAS of Ukraine, Kyiv, Ukraine
*Synthesis of monodisperse nanospheres by citrate reduction of *aucl3* for their usage in dna hybridization biosensors*
5. Dmytro KIIV, PhD student, National University "Lviv Polytechnic", Lviv, Ukraine
*Effect of b vitamin addition on the biosynthesis of lactic acid by *lactobacillus delbrueckii**

12.30- 13.00 Presentation by the Co-Sponsors of the Bionics Lab Competition
Yuliia Chyzhyk
Overview of the Nanopore Sequencing Method

13.00-14.00 Lunch break

14.00-15.15 **Session VI. Biotechnology**

1. Ksenia BERKETA, Lead Engineer, Institute of Molecular Biology and Genetics, NAS of Ukraine, Kyiv, Ukraine

Development and adaptation of a biosensor based on lactate oxidase and poly-m-phenylenediamine for the determination of l-lactate in real biological samples

2. Kateryna HUTSKO, PhD student, National University "Lviv Polytechnic", Lviv, Ukraine

Obtaining in vitro callus biomass of Amaranth variety "Lera"

3. Kateryna BAIDAKOVA, Engineer, Palladin Institute of Biochemistry, NAS of Ukraine, Kyiv

Collagen matrix with increased hemostatic properties: comparative analysis of hemostatic efficacy

4. BULUT Esmat Nur, PhD student of Food Engineering Department at Necmettin Erbakan University, Konya, Turkey

Cherry laurel (Prunus laurocerasus) extract and liposome encapsulation

5. Dmytro PROKHORENKO, PhD student at the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Deputy Head of the Research and Development Department at LLC "HEMA", Kyiv, Ukraine

Evaluation of nucleic acid extraction methods for pathogen detection using PCR

6. Veronika BAKHMAT, Lead Engineer at the Institute of Molecular Biology and Genetics, NAS of Ukraine, Kyiv, Ukraine

Developing a new electrochemical enzyme biosensor for highly sensitive determination of heavy metal ions

15.15-15.45 Coffee break / The Competition Jury meeting

Announcement of competition results

15.45-16.20 **Group photo**

Closing of the conference

