**7th Congress of the All-Ukrainian Public Organization**

**«Ukrainian Society of Cell Biology»**

 **with international representation**

**CONGRESS PROGRAM**



11 – 13 September 2024, Lviv, Ukraine

**7th Congress of the All-Ukrainian Public Organization**

**«Ukrainian Society of Cell Biology»**

**with international representation**

Program – Lviv, 2024.

**Program contains the materials of the**

**7th Congress of the All-Ukrainian Public Organization «Ukrainian Society of Cell Biology» with international representation,**

which focus on novel insights in Cell Biology and Biotechnology in Ukraine and abroad. The authors are solely responsible for the content of the abstracts.

**Edited by:**

Prof. Sibirny A.A.

D.Sc. Stasyuk N.

Dr. Manko N.

Dr. Barska M.

Desktop publishing and cover design by Dr. Manko N.

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**7th Congress of the All-Ukrainian Public Organization «Ukrainian Society of Cell Biology» with international representation**

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7. Dmytruk Kostyantyn Vasylovych, D.Sc., Corresponding Member of NAS of Ukraine, Institute of Cell Biology National Academy of Science of Ukraine, Lviv.
8. Stoika Rostyslav Stefanovych, D.Sc., Prof., Corresponding Member of NAS of Ukraine, Institute of Cell Biology National Academy of Science of Ukraine, Lviv.
9. Gonchar Mykhailo Vasyliovych, D.Sc., Prof., Corresponding Member of NAS of Ukraine, Institute of Cell Biology National Academy of Science of Ukraine, Lviv.
10. Stasyk Oleh Volodymyrovych, D.Sc., Senior Scientist, Institute of Food Biotechnology and Genomics of the National Academy of Sciences of Ukraine, Lviv.

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1. Head of Secretariat: Stasyuk Nataliya Yevhenivna, D.Sc., Deputy Director for Science, Institute of Cell Biology of the National Academy of Science of Ukraine, Lviv.
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3. [Kapustiak Kostiantyn](https://www.nas.gov.ua/EN/PersonalSite/Pages/default.aspx?PersonID=0000005263) Vasyliovych, Ph.D., Deputy Director for scientific and technical work, Institute of Cell Biology of the National Academy of Science of Ukraine, Lviv.
4. Head of the Branch of the Ukrainian Society of Cell Biology in Lviv: Vovk Olena Ivanivna, Ph.D., Junior Research Scientist, Institute of Cell Biology of the National Academy of Science of Ukraine, Lviv.
5. Chairman of the Council of Young Scientists of the Institute of Cell Biology of the National Academy of Science of Ukraine: Manko Nazar Olegovych, Doctor of Philosophy, Junior Research Scientist.

# PROGRAM

**of the** **7th Congress of the All-Ukrainian Public Organization**

**«Ukrainian Society of Cell Biology» with international representation**

**Lviv, September 11-13th, 2024 (USCB)**

**http://www.cellbiol.lviv.ua/ 2024**

# Sept. 11th (Wednesday)

**09:00 – 10:00 Registration of participants, Conference hall of the Scientific Library of Ivan Franko National University of Lviv**

# 10:00 – 10:30 Congress opening, press release for the media

Speakers: A. Sibirny (Chair of the Organizing Committee), R. Hladyshevsky (Vice-Rector of Lviv National University), Lviv city council and Lviv regional administration

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| 10:30 – 13:50 Session "**Cell signaling mechanisms, autophagy and apoptosis**"***Chair: Rostyslav Stoika (Lviv)*** |
| (Conference hall of the Scientific Library of Ivan Franko National University of Lviv) |
| 10:30 – 10:50 | Lecture 1. Andriy Sibirny (Lviv). Non-conventional yeasts in cell biology and biotechnology.  |
| 10:50 – 11:10  | Lecture 2. [Alex Rayevsky](https://www.researchgate.net/profile/Alex-Rayevsky-2?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19) (Kyiv). Structural preconditions for the ATG8 functioning and the effect of lipidation and acetylation on its regulatory mechanism. |
| 11:10 – 11:30 | Lecture 3. Kostyantyn Dmytruk (Lviv). Specific degradation of cytosolic proteins in the methylotrophic yeast *Komagataella phaffii* upon carbon source replacement. |
| 11:30 – 11:50 | Lecture 4. Oleh Stasyk (Lviv). Anticancer therapy based on arginine deprivation: old cons and new developments. |
| 11:50 – 12:10  | Lecture 5. Yurii Bandura (Lviv). Mitophagy as an adaptive process in streptozotocin-induced diabetes mellitus.  |
| 12:10 – 12:30 | **Coffee break** |
| 12:30 – 12:50 | Lecture 6. Rostyslav Panchuk (Lviv). Functional reactivation of mutant *TP53* gene by novel thiosemicarbazones leads to enhanced cell death induction in colon cancer cells. |
| 12:50 – 13:10 | Lecture 7. Olena Kravets (Kyiv). Autophagic flux detection in angiosperm microsporogenesis.  |
| 13:10 – 13:30 | Lecture 8. Rostyslav Horbay (Ottawa, Canada). SMAC mimetics and macrophage-derived exosomes eradicate tumor cells. (*online*)  |
| 13:30 – 13:50 | Lecture 9. Natalya Finiuk (Lviv). New efficient waterborne systems for delivery of water-insoluble thiazolidinone derivatives based on branched polymeric surfactants with side polyoxazoline chains. |
| 13:50 – 14:50 | **Lunch** (see the nearest possible locations at the end of the Program, marked \*). |
| 14:50 – 15:20 | *Presentation of conference sponsors: ТОВ* *«Шимюкрейн», ТзОВ «АЛСІ» ЛТД* |
| 15:20 – 16:20 Session **«Biology of eukaryotic and prokaryotic cells»*****Chair: Kostyantyn Dmytruk (Lviv)*** |
| 15:20 – 15:40 | Lecture 1. Yaroslav Blume (Kyiv). Paradigma for eukaryotic cell division: lucky 13 protofilaments of microtubules |
| 15:40 – 16:00 | Lecture 2. Oksana Stoliar (Ternopil). Metallothionein related redox shift as the strategy of stress response in facultative anaerobes on the model of bivalve molluscs. |
| 16:00 – 16:20 | Lecture 3. Yurii Yusypovych (Lviv). Identification of ophiostomatoid fungi vectored by *Ips acuminatus* infesting *Pinus sylvestris* in the Lviv region (*online*) |
| 16:20 – 17:40 Session **«Biology of animal and plant cells»**, ***Chair:******Yaroslav Blume (Kyiv)***  |
| 16:20 – 16:40 | Lecture 1. Rostyslav Blume (Kyiv). Genetic heterogeneity and population structure of *Camelina microcarpa* cytotypes in Ukraine, a hotspot of the species genetic diversity. (*online*) |
| 16:40 – 17:00 | Lecture 2. Dmytro Novozhylov (Kyiv). Development of molecular markers for identification stem rust resistance gene *SR39* |
| 17:00 – 17:20 | Lecture 3. Galina Shevchenko (Kyiv). Photosynthetic apparatus of Chernobyl plants is tolerant to heavy metal stress. (*online*) |
| 17:20 – 17:40 | Lecture 4. Юлія Білоножко (Kyiv). Цитогенетичні особливості *Viscum album* L., що зростає на різних видах рослин-господарів. (*online*) |
| 17:40 – 18:40 | **Poster session №1** (sections: “*Cell signaling mechanisms, autophagy and apoptosis”, “Biology of eukaryotic and prokaryotic cells”, “Biology of animal and plant cells”)* |
| 18:40 – 20:30 | **Get together party** (cafeteria of Scientific Library of Ivan Franko National University of Lviv, Drahomanov Str. 5) |

# Sept. 12th (Thursday)

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| 09:00 – 15:40 Session **«Medical problems of cell biology»**, ***Chair: Oleh Stasyk (Lviv)***(Conference hall of the Scientific Library of Ivan Franko National University of Lviv) |
| 09:00 – 09:20 | Lecture 1. Ihor Shymanskyi (Kyiv). Mechanisms of neuroprotective action of vitamin D3 in glucocorticoid-induced neurotoxicity. |
| 09:20 – 09:40 | Lecture 2. Valentyna Chopyak (Lviv). Long-covid: the role of nk cells and herpes virus type 6 activation |
| 09:40 – 10:00  | Lecture 3. Sergiy Shulga (Kyiv). Application of liposomal form curcumin and microRNA in Alzheimer's disease therapy.  |
| 10:00 – 10:20 | Lecture 4. Igor Kaidashev (Poltava). PPAR- *γ* Agonist Pioglitazone Restored Mouse Liver, kidney medulla and lung mRNA Expression of Clock Genes and Inflammation-Related Genes Disrupted by Reversed Feeding. |
| 10:20 – 10:40 | Lecture 5. Anna Havrylyuk (Lviv). Changes of expression of regulatory and inhibitory receptors on CD8 T cells in long-COVID patients. |
| 10:40 – 11:00 | Lecture 6. Valeriia Ustymenko (Kyiv). Morphological and quantitative analysis of conduit for 3d scaffolds to repair injured peripheral nerves. |
| 11:00 – 11:20 | **Coffee break** |
| 11:20 – 11:40  | Lecture 7. Arsen Ishchuk (Kyiv). The role of TRPV4 in the colon of rats with 6-OHDA-induced parkinsonism. |
| 11:40 – 12:00  | Lecture 8.Mariya Sabadashka (Lviv). Corrective effect of grape pomace extract in oxidative-nitrative stress in diabetes mellitus. |
| 12:00 – 12:20 | Lecture 9.Maya Vergolyas (Kyiv). Toxic effect of drinking water by using *in vitro* methods. |
| 12:20 – 12:40 | Lecture 10.Anna Moroz (Lviv). Functional state of erythrocytes in rats with streptozotocin-induced diabetes mellitus and its’ correction under administration of fruit extract of hybrid *Cornus mas* $× $*Cornus officinalis* |
| 12:40 – 13:00 | Lecture 11. Віталій Шейко (Nizhyn). Вплив набутої короткозорості на системний імунітет та показники нейродинамічних функції.  |
| 13:00 – 13:20 | *Presentation of conference sponsor: ПРАТ "КОМПАНІЯ ЕНЗИМ"* |
| 13:20 – 14:20 | **Lunch** (see the nearest possible locations at the end of the Program, marked \*). |
| 14:20 – 14:40 | Lecture 12. Iryna Byelinska (Kyiv). Hematopoiesis and chemical skin burns: what is the difference in the blood markers of the healing process?  |
| 14:40 – 15:00 | Lecture 13. Maksym Hutsaliuk (Kyiv). Effect of translocation t(8;21) on cytomorphological characteristics of blasts and neutrophils of pediatric acute myeloid leukemia. |
| 15:00 – 15:20 | Lecture 14. Halyna Hachkova (Lviv). Redistribution of sialylated membrane glycoconjugates and erythrocyte stabilization with biologically active compounds *G. officinalis* in type 1 diabetic rats. |
| 15:20 – 15:40 | Lecture 15. Tetiana Petryn (Lviv). Functional state of erythrocytes after the administration of the medicinal mushroom *Ganoderma lucidum* (*Agaricomycetes*) to animals with experimental metabolic syndrome.  |
| 15:40 – 16:20  | **Reporting and election meeting of the All-Ukrainian Public Organization «Ukrainian Society of Cell Biology»** |
| 16:20 – 17:20 | **Poster session №2** (section “*Medical problems of cell biology”).*  |
| 17:20 – 18:00 | Lviv tour or walking excursion in Library |
| 18:00 – 22:00 | **Dinner or Banquet (**Vienna Coffee House Lviv, 12 Svobody Ave., Lviv, Ukraine) |
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**Sept. 13th (Friday)**

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| 09:00 – 11:40 Session **«Biotechnology and metabolic engineering»*****Chair: Dariya Fedorovych (Lviv)***(Conference hall of the Scientific Library of Ivan Franko National University of Lviv) |
| 09:00 – 09:20 | Lecture 1. Rostyslav Stoika (Lviv). Structure-function interrelations in drug design and activity: Novel hybrid benzoisothiazole-1,2,3-triazole-4-carboxamides for treatment of human breast carcinoma. |
| 09:20 – 09:40 | Lecture 2. Dariya Fedorovych (Lviv). *Candida famata* cell factories for production of vitamin B2.  |
| 09:40 – 10:00  | Lecture 3. Roksolana Vasylyshyn (Lviv). Development of *Ogataea polymorpha* strains сapable of high-temperature cellobiose alcohol fermentation.  |
| 10:00 – 10:20 | Lecture 4. Justyna Ruchala (Rzeszów, Poland). Non-traditional yeast in the pursuit of sustainable development - microbial production of riboflavin from renewable resources.  |
| 10:20 – 10:40 | Lecture 5. Olena Tigunova (Kyiv). Metabolomic analysis of the *Clostridium* sp. Ucm b-7570 deletion mutant model (*online*) |
| 10:40 – 11:00 | **Coffee break** |
| 11:00 – 11:20 | Lecture 6. Andriy Zakalskiy (Lviv). Recombinant creatinine deiminase from *Corynebacterium glutamicum*: overexpression, isolation, characterization, and bioanalytical application |
| 11:20 – 11:40  | Lecture 7. Oleksandr Petrenko (Kharkiv). Three-dimensional constructs based on MSCs with different cell organization: bioengineering and safe storage.  |
| 11:40 – 12:20 Session **«Bioanalytics»**, ***Chair Mykhailo Gonchar (Lviv)*** |
| 11:40 – 12:00 | Lecture 1. Mykhailo Gonchar (Lviv), Microbial enzymes and recombinant cells coupled with nanozymes as sensing elements of amperometric biosensors.  |
| 12:00 – 12:20 | Lecture 2. Nataliya Stasyuk (Lviv), Bioanode based on genetically engineered bacterial cells enriched with creatinine deiminase and N-methylhydantoin-sensitive bionanocomposite in construction of self-powered biosensors |
| 12:20 – 12:40 | *Presentation of conference sponsor* ***ТОВ «Логіклабгрупа»*** |
| 12:40 – 13:40 | **Lunch** (see the nearest possible locations at the end of the Program, marked \*).  |
| 13:40 – 14:40 | **Poster session №4** (sections *“Bioanalytics”, "Biotechnology and metabolic engineering")* |
| 14:40 – 15:40 | Short oral presentations of 6 best posters of young scientists (under 35 years) - 5 min presentations. |
| 15:40 – 16:30  | Conference closing ceremony. Young Scientists Award for the best poster presentation. |

**\*Lunch** – the nearest possible locations:

* Restaurant “Puzata Khata”, Shevchenka Ave., 10, Lviv;
* Restaurant “SteakHause”, Lviv, Львів, Shevchenko Ave., 25, Lviv;
* Restaurant “Beer Garden”, Ivan Franko Str. 29, Lviv;
* Restaurant "Budmo", Stefanyka Str. 19, Lviv;
* Restaurant “Caucasus”, Shota Rustaveli Str. 2, Lviv;
* “PastaCafe” – Dudayeva Str. 3, Lviv;
* Cafe “Lviv Croissants”, Shota Rustaveli St, 6, Lviv,
* McDonald's, Shevchenka Ave., 7, Lviv;
* Bussines Hub “Black Honey”, Shota Rustaveli Str., 12, Lviv.