### 7<sup>th</sup> Congress of the All-Ukrainian Public Organization «Ukrainian Society of Cell Biology» with international representation

## **CONGRESS PROGRAM**



11-13 September 2024, Lviv, Ukraine

Program – Lviv, 2024.

# Program contains the materials of the 7<sup>th</sup> Congress of the All-Ukrainian Public Organization «Ukrainian Society of Cell Biology» with international representation,

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

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## **Sponsors:**



















#### Organizing committee of the

## 7<sup>th</sup> Congress of the All-Ukrainian Public Organization «Ukrainian Society of Cell Biology» with international representation

- 1. Head of the organizing committee Sibirny Andriy Andriyovich, D.Sc., Prof., Academician of the National Academy of Sciences of Ukraine, Institute of Cell Biology, National Academy of Sciences of Ukraine, Lviv.
- 2. Co-chairman of the organizing committee Gladyshevskii Roman Yevhenovych, D.Sc., Prof., Academician of the National Academy of Sciences of Ukraine, Ivan Franko National University of Lviv, Lviv.

#### Members of the organizing committee:

- 1. Blume Yaroslav Borisovich, D.Sc., Prof., Academician of the National Academy of Sciences of Ukraine, Institute of Food Biotechnology and Genomics, National Academy of Sciences of Ukraine, Kyiv.
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#### **Secretariat:**

- 1. Head of Secretariat: Stasyuk Nataliya Yevhenivna, D.Sc., Deputy Director for Science, Institute of Cell Biology, National Academy of Sciences of Ukraine, Lviv.
- 2. Director of Scientific Library of Ivan Franko National University of Lviv: Oleksandr Volodymyrovych Sedlyar, PhD.
- 3. Executive Secretary of Ukrainian Society of Cell Biology: Maryna Leonidivna Barska, Ph.D., Institute of Cell Biology, National Academy of Sciences of Ukraine, Lviv.
- 4. Deputy Director for scientific and technical work: Kapustiak Kostiantyn Vasyliovych, Ph.D., Institute of Cell Biology, National Academy of Sciences of Ukraine, Lviv.
- 5. 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, National Academy of Sciences of Ukraine, Lviv.
- 6. Chairman of the Council of Young Scientists of the Institute of Cell Biology, National Academy of Sciences of Ukraine: Manko Nazar Olegovych, Doctor of Philosophy, Junior Research Scientist.

#### **PROGRAM**

of the 7<sup>th</sup> Congress of the All-Ukrainian Public Organization «Ukrainian Society of Cell Biology» with international representation Lviv, September 11-13<sup>th</sup>, 2024 (USCB) <a href="http://www.cellbiol.lviv.ua/2024">http://www.cellbiol.lviv.ua/2024</a>

#### 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

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 (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 <i>Komagataella phaffii</i> 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 <i>TP53</i> 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. ( <i>online</i> )	
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	<b>Lunch</b> (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 <i>Ips acuminatus</i> infesting <i>Pinus sylvestris</i> 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 <i>Camelina microcarpa</i> 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)

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

- Restaurant "Puzata Khata", Shevchenka Ave., 10, Lviv;
- Restaurant "SteakHause", 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.

Sept. 12th (Thursday)

09:00 - 15:40	Sept. 12th (1 nursday) Session «Medical problems of call biology»
09.00 - 13:40	Session «Medical problems of cell biology»  Chair: Oleh Stasyk (Lviv)
(Conformed hell	· · · · · · · · · · · · · · · · · · ·
·	of the Scientific Library of Ivan Franko National University of Lviv)
09:00 – 09:20	Lecture 1. Ihor Shymanskyi (Kyiv). Mechanisms of neuroprotective
00.20 00.40	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 <i>in vitro</i> 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 – 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.
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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 - 16:00	Presentation of conference sponsor: ПРАТ "КОМПАНІЯ ЕНЗИМ"
16:00 - 16:40	Reporting and election meeting of the All-Ukrainian Public
	Organization «Ukrainian Society of Cell Biology»
16:40 – 17:40	Organization «Ukrainian Society of Cell Biology»  Poster session №2 (section "Medical problems of cell biology").
16:40 – 17:40 17:40 – 18:10	
	Poster session №2 (section "Medical problems of cell biology").

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

- Restaurant "Puzata Khata", Shevchenka Ave., 10, Lviv;
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- Restaurant "Beer Garden", Ivan Franko Str. 29, Lviv;
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- 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.

Sept. 13th (Friday)

Sept. 13th (Friday)		
09:00 - 11:40	Session «Biotechnology and metabolic engineering»	
Chair: Dariya Fedorovych (Lviv)		
	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 <i>Ogataea</i>	
	polymorpha strains capable 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 TOB «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.	

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- Restaurant "SteakHause", 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;
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