



# **30th Anniversary of the ISP**

**Festive Program**

**Centre of Experimental Medicine  
Slovak Academy of Sciences, Bratislava, Slovakia**

**November 2021**

## November 29, 2021

9:00 – 9:30	Olga Pechanova, Slovakia	<i>30th Anniversary of the ISP, opening of the meeting</i>
9:30 – 10:00	Pavel Hamet, Canada	<i>How precision medicine will help to advance medicine from pathophysiology to therapy and prevention</i>
10:00 – 10:30	Jianzhi Wang, China	<i>New strategies for diagnosis and drug development in Alzheimer disease - with predictions for the future of Pathophysiology</i>
10:30 – 11:00	Danina Muntean, Romania	<i>The role of monoamine oxidase in cardiometabolic diseases: An ongoing saga</i>
11:00 – 11:30	Dragan Djuric, Serbia	<i>Homocysteine and related B vitamins as target for cardioprotection in experimental cardiometabolic models</i>
11:30 – 12:00	Leonid P. Churilov, Russia	<i>Biological imperfection of Homo as a central concept of Pathophysiology and fundament of humanism: Problem of controversies between clinical and scientific reasoning</i>
12:00 – 12:30	Alina Parvu, Romania	<i>Phytotherapy in inflammation</i>
<b>Lunch time</b>		
13:30 – 14:00	Rhian Touyz, Canada	<i>A new look at the mosaic theory of hypertension</i>
14:00 – 14:30	Artem Grigorian, Armenia	<i>Sensing the impaired homeostasis: from known mechanisms to challenges of the future</i>



## Short Oral Presentations

### Regulation of cardiovascular system

Chair: Andrea Berenyiova

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| 14:30 – 14:40 | Ioana Mozos, Romania   | <i>Arterial stiffness in hypertension</i>  |
| 14:40 – 14:50 | Bochuan Li, China  | <i>Inhibition of soluble epoxide hydrolase attenuates bosutinib-induced blood pressure elevation</i>                                     |
| 14:50 – 15:00 | Martina Cebova, Andrej Barta, Olga Pechanova, Slovakia   | <i>HMGB1: A potential target in experimental myocardial infarction</i>   |
| 15:00 – 15:10 | Yunqi Jiang, Yuhui Qiao, Zijian Li, China  | <i>The protection of AKT/HIP-55/MAP4K1 signalling pathway in myocardial infarction injury</i>  |
| 15:10 – 15:20 | Han Xiao, Guomin Hu, Youyi Zhang, China  | <i>Targeting inflammatory paracrine network via inhibiting galectin-3 alleviates acute sympathetic activation-induced cardiac injury</i> |
| 15:20 – 15:30 | Wenbin Fu, Hongmei Ren, Jialing Shou, Qiao Liao, Liangpeng Li, Yu Shi1, Chunyu Zeng and Wei Eric Wang, China | <i>Loss of NPPA-AS1 promotes heart regeneration by stabilizing SFPQ-NONO heteromer-induced DNA repair</i>                                |
| 15:30 – 15:40 | Magdalena Drobna, Andrea Berenyiova, Sona Cacanyiova, Slovakia   | <i>The effect of inhibition of hydrogen sulphide production on the reactivity of the cardiovascular system.</i>                          |
| 15:40 – 15:50 | Dragan Radovanovic, Serbia   | <i>Resistance Exercise-induced Cardiac Remodelling</i>   |

### Coffee break

### Pharmacological model of COVID-19: Cardiovascular complications

Chair: Sona Cacanyiova

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| 16:30 – 16:40 | Sona Cacanyiova, Andrea Berenyiova, Magdalena Drobna, Stefan Zorad, Katarina Krskova, Iveta Bernatova, Slovakia | <i>The effects of low dose ACE2 inhibitor MLN-4760 on blood pressure, adiposity and renin-angiotensin system in spontaneously hypertensive rats</i> |
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<b>16:40 – 16:50</b>	Andrea Berenyiova, Magdalena Drobna, Anna Zemancikova, Basak G. Aydemir, Samuel Golas, Zuzana Valaskova, Sona Cacanyiova, Slovakia	<i>The effect of an angiotensin-converting enzyme 2 inhibitor on the blood pressure and vasomotor responses in experimental hypertension</i>
<b>16:50 – 17:00</b>	Michal Kluknavsky, Andrea Micurova, Martina Cebová, Iveta Bernatova, Soňa Čáčányiová, Slovakia	<i>Different effect of MLN-4760 on mRNA expression of genes associated with oxidative stress, inflammation and nitric oxide production in the heart and liver of spontaneously hypertensive rats</i>
<b>17:00 – 17:10</b>	Andrea Mičurová, Michal Kluknavský, Soňa Čáčányiová, Iveta Bernátová, Slovakia	<i>The effect of (±)-taxifolin on behaviour and oxidative state in spontaneously hypertensive rats treated with MLN-4760, an inhibitor of angiotensin converting enzyme 2</i>
<b>17:10 – 17:20</b>	Marta Kollarova, Dominika Radosinska, Peter Balis, Stefan Zorad, Iveta Bernatova, Sona Cacanyova, Jana Radosinska, Slovakia	<i>The Consequences of MLN-4760 and Zofenopril Administration on MMP Activities and Oxidative Stress in Spontaneously Hypertensive Rats</i>
<b>17:20 – 17:30</b>	Katarína Valachová, Ladislav Šoltés, Slovakia	<i>Investigation of free radical scavenging capacity of taxifolin, zofenopril and MLN- 4760</i>
<b>17:30 – 18:00</b>	<b>Overall discussion and glass of wine</b>	



## November 30, 2021

Chair: Martina Cebova

9:00 – 9:30	Yoshihiro Ishikawa, Japan	<i>Physiology, pathophysiology, and disease; suggestion from bench top to bed</i>
9:30 – 10:00	Maria Bloksgaard, Denmark	<i>Oxidative stress and microvascular dysfunction. Any hope for the future?</i>
10:00 – 10:30	Zdenko Kovac, Croatia	<i>The first century of Zagreb School of Pathophysiology achievements and upcoming steps</i>
10:30 – 11:00	Claudia Borza, Romania	<i>Pathophysiology - present and future in the international context</i>
11:00 – 11:30	Antonio Rendas, Portugal	<i>Why invest in pedagogical innovations to teach Pathophysiology</i>
11:30 – 12:00	Daniela Miladinova, North Macedonia	<i>Methodology of integrative teaching of pathophysiology</i>
12:00 – 12:30	Vladimir Jakovljevic, Serbia	<i>9th Congress of ISP: organization challenge in COVID-19 pandemic</i>
Lunch time		
13:30 – 14:00	Jonathan Steven Alexander, USA	<i>Pathophysiology—The Flagship Journal of the ISP</i>
14:00 – 14:30	Zdenko Kovac, Croatia	<i>Complexity and nonlinearity of whole-body reactivity - How to improve understanding of etiopathogenesis and efficiency of clinical interventions</i>



## Short Oral Presentations

### Regulation of higher brain functions

Chair: Dominika Besterciova

- 14:30 – 14:40 Fedor Jagla, Olga Pechanova, Jan Lakota, Slovakia *May cellular memory be stored by means of the extracellular vesicles?*
- 14:40 – 14:50 Dominika Besterciová, Rastislav Rovný, Martin Marko, Igor Riečanský, Slovakia *The effect of cerebellar transcranial direct current stimulation on semantic memory*
- 14:50 – 15:00 Stanislava Vrankova, Zuzana Galandakova, Jakub Benko, Martina Cebova, Igor Riecansky and Olga Pechanova, Slovakia *The activity of nitric oxide synthase in the rat brain depends on the duration of social isolation*
- 15:00 – 15:10 Zhi-Hao Wang, Yiyuan Xia, Zhourui Wu, Jian-Zhi Wang, Keqiang Ye, China *Neuronal ApoE4 Stimulates C/EBP $\beta$  activation, Promoting Alzheimer's Disease Pathology in a Mouse Model*
- 15:10 – 15:20 Bulboaca Adriana Elena, Romania *Pain: on the borderline between physiology and pathophysiology*

### Coffee break

### Respiration and mitochondrial dysfunction

Chair: Iveta Bernatova

- 16:00 – 16:10 Juliana Hanusrichterova, Maros Kolomaznik, Jana Adamcakova, Daniela Mokra, Juraj Mokry, Andrea Calkovska, Slovakia *Relaxant effect of pulmonary surfactant on the airway smooth muscle of albumin-sensitized guinea pigs*
- 16:10 – 16:20 Maros Kolomaznik, Pavol Mikolka, Juliana Topercerova, Petra Kosutova, Daniela Mokra, Andrea Calkovska, Slovakia *N-acetylcysteine in mechanically ventilated rats with lipopolysaccharide-induced acute respiratory distress syndrome: the effect of intravenous dose on oxidative damage and inflammation*
- 16:20 – 16:30 Theia Lelcu, Anca M. Bînă, Maria D. Dănilă, Călin M. Popoiu, Oana M. Aburel, Smaranda T. Arghirescu, Claudia Borza, Danina M. Muntean, Romania *Assessment of platelet mitochondrial respiration and role of permeable succinate in children diagnosed with acute lymphoblastic leukemia*

16:30 – 16:40      Anca M. Bîcă, Oana M. Aburel, Adrian Sturza, Adelina G. Mocanu, Dana Chiriac, Elena Bernad, Claudia Borza, Zoran L. Popa, Marius L. Craina, Danina M. Muntean, Romania      *Evaluation of mitochondrial dysfunction and oxidative stress in the setting of preeclampsia*

**Redox signalling and antioxidant properties    Chair: Ezgi Dayar**

16:40 – 16:50      Ramona-Niculina Jurcău, Ioana-Marieta Jurcău, Nicolae-Alexandru Colceriu, Dong Hun Kwak      *The Ginseng value in stress and its use in the current context*

16:50 – 17:00      Ezgi Dayar, Martina Cebova, Olga Pechanova, Slovakia      *Antioxidant effects of Lonicera caerulea L. on cardiometabolic parameters and NO/ROS balance in obese Zucker rats*

17:00 – 17:10      Oana-Maria Aburel, Adrian Sturza, Adrian P Merce, Laurentiu Braescu, Anca Bina, Cristian Mornos, Claudia Borza, Danina M Muntean, Romania      *Methylene Blue Reduces MAO-Related Oxidative Stress in Human Epicardial Tissue*

17:10 – 17:20      Adrian Sturza, Anca Bîcă, Simona Popescu, Borza Claudia, Danina M. Muntean, Romania      *Monoamine oxidase and metabolic memory: Repositioning MAO inhibitors as potential vasculoprotective agents in experimental diabetes*

**Different metabolic aspects**

**Chair: Stanislava Vrankova**

17:20 – 17:30      Iveta Bernatova, Andrea Micurova, Michal Kluknavsky, Peter Balis, Martin Skratek, Ludmila Okruhlicova, Jan Manka, Slovakia      *Fe<sub>3</sub>O<sub>4</sub>@PEG nanoparticles alter iron metabolism and nitric oxide production in the liver of spontaneously hypertensive rats*

17:30 – 17:40      Yu Han, Zhengfan Gong, Zhi Chen, Chunyu Zeng, China      *Membrane-delimited signaling and cytosolic action of MG53 preserve hepatocyte integrity during drug-induced liver injury*

17:40 – 17:50	Samuel Golas, Andrea Berényiová, Soňa Čáčányiová, Slovakia	<i>The effect of perivascular adipose tissue and endogenous hydrogen sulphide in vasoactive responses of isolated thoracic arteries in normotensive and spontaneously hypertensive rats</i>
17:50 – 18:00	Cheng-Lin Zhang, Lei He, Qinghua Chen, Li Wang, Yu Huang, China	<i>Endothelial Transcription Factor EB Attenuates Vascular Inflammation of Diabetic db/db Mice through Restraining IKK (I<math>\kappa</math>B Kinase)-p65 Pathway</i>
18:00 – 18:10	Xiangyi Wang, Mengchen Zhou, Mengru Wang, Chenguang Yu, Dan Jiang, Qiang Guo, Xin Tu, China	<i>Molecular Mechanism of PAFAH1B2 on Atherosclerosis Formation</i>
18:10 – 18:20	V.G.Zolotykh, A.Y.Kim, L.P.Churilov, V.I. Utehin, Yu.I. Stroevev, P.K.Yablonskiy	<i>Silicone prosthetics and autoimmune pathology of thyroid</i>
18:20 – 19:00	Overall discussion and glass of wine Closing of the meeting	

