

June 5, 2024 Wednesday

- 10:00 Registration – Hotel Lobby
- 12:00-13:00 Lunch - Mátra Restaurant
- 13:00-13:45 **Opening of the Conference**
Issekutz Presentation and Award Ceremony
Knoll-Szolcsányi Award Ceremony
Award ceremony of the Young Pharmacologist Researcher competition
- 13:45-14:15 W-K1 **KEYNOTE 1 - András Perczel - Sponsored by Auro-Science Consulting Ltd.**
Laboratory of Structural Chemistry and Biology, Institute of Chemistry, Eötvös Loránd University, Budapest, Hungary
A drug-drug interaction (valproate and a carbapenem) explained by the first cryo-EM determined 3D structures of the mammalian acylaminoacyl peptidase
- 14:15-15:45 W-K2 **Epigenetics and human disease**
Chair: Gábor Szabó
- W-K2-1 ¹Viktória Tisza, ²Laura Vízkeleti, ¹Csaba Kiss, ¹**Sándor Spisák 15'+3'**
¹HUN-REN TTK, Institute of Molecular Life Science, Epigenetics and Genome Editing Research Group, Budapest, Hungary
²Semmelweis University, Department of Bioinformatics, Budapest, Hungary
Identification of Epigenetic Mechanisms Influencing Cell Differentiation Block in Colorectal Cancer Development
- W-K2-2 ¹**Dalma Müller**, ^{1,2}Balázs Gyórfy **15'+3'**
¹Semmelweis University, Department of Bioinformatics, Budapest, Hungary
²TTK Oncology Biomarker Research Group, Budapest, Hungary
EpigenPlot: a tool for the gene-level methylation analysis of colorectal tumors
- W-K2-3 ¹Márton Dániel Tóth, ¹Muhyiddeen Muazu, ²Dóra Kóvári, ²Andrea Kadar, ³Tamatey Virgil, ¹Mária Ashaber, ⁴Klára Lévy, ⁵András Budai, ⁴András Fülöp, ²Csaba Fekete, ³Flora Szeri, ^{1,3}**Tamás Arányi 15'+3'**
¹Department of Molecular Biology, Semmelweis University, Budapest, Hungary
²Institute of Experimental Medicine, Budapest, Hungary
³Research Centre for Natural Sciences, Institute of Molecular Life Sciences, HUN_REN, Budapest, Hungary
⁴Department of Surgery, Transplantation and Interventional Gastroenterology, Semmelweis University, Budapest, Hungary

⁵2nd Department of Pathology, Semmelweis University, Budapest, Hungary

Hepatocyte-specific Dnmt3a and DNMT3b mice develop pre-cancerous phenotype

W-K2-4 ¹**Gábor Szabó**, ¹Péter Nánási, ¹László Imre **15'+3'**

¹Department of Biophysics and Cell Biology, University of Debrecen
Nucleosomes: old and new pharmacological targets

W-K2-5 ¹**Lóránt Székvölgyi** **15'+3'**

¹Genome Architecture and Recombination Research Group, Faculty of Pharmacy, University of Debrecen
The role of one-carbon metabolism in R-loop-associated transcriptional changes and mutagenesis

15:45-16:15

Coffee break

16:15-16:30

W-K3 **KEYNOTE 2- Igor Pongrác - Sponsored by Merck Life Science Ltd. 15'**

Merck Life Science | Science and Lab Solutions, Croatia
Experience the next generation multiplexing with luminex® xmap® intelliflex system and milliplex® multiplex assays

16:30-17:15

W-K4 **PLENARY LECTURE - Sir Mark Caulfield 45'**

Faculty of Medicine and Dentistry, Queen Mary University of London, UK
Transforming Pharmacogenomics in Healthcare

17:15-18:00

W-K5 **KEYNOTE 3- David A. Kendall 45'**

PharmNovo AB/ Nottingham University, UK
Development of PN6047, a novel delta opioid receptor agonist for neuropathic pain therapy

18:00-18:10

Break

18:10-20:00

W-K6 **Young Investigator Session**

Chairs: Éva Szőke, Zoltán Varga

W-K6-1 **Barbara Takács**, Wachal Zita, Szilágyi Anna, Szabó Adrienn Mónika, Prikosz Dániel, Bombicz Mariann, Pelles-Taskó Beáta, Juhász Béla, Szilvássy Zoltán, Varga Balázs **10+5'**

Department of Pharmacology and Pharmacotherapy, University of Debrecen, Debrecen

Key findings from bgp-15 treatment on retinal function improvement in zdf and sprague-dawley rat models

- W-K6-2** ^{1,2}**Márton Kocsis**, ^{1,2} Sayour Viktor Nabil, ^{1,2}Tóth Viktória, ^{1,2}Gergely Tamás, ^{1,2}Kovács Tamás, ^{1,2}Szabó Lilla, ^{1,2}Varga Zoltán **10+5'**
¹Semmelweis University, Budapest
²HCEMM, Szeged
Thymic modulation of immune checkpoint inhibitor-induced cardiotoxicity: new perspectives in immunotherapy
- W-K6-3** **Angelika Bodó**^{1,2,3} Bali ZK^{1,3}, Bruszt N^{1,2,3,4}, Reisinger Cs^{1,3,4}, Hernadi J^{1,2,3,4} **10+5'**
¹Translational Neuroscience Research Group, Grastyán Translational Research Centre, ²Medical School ³Szentágotthai Research Centre, ⁴Institute of Biology, Faculty of Sciences, University of Pécs, Pécs, Hungary
A pilot study using dREADT technology to develop a novel model of cognitive impairment
- W-K6-4** ^{1,2}**Zita Képes**, ^{1,2}Csaba Csikos, ¹Fekete Anikó, ³Vágner Adrienn, ³Nagy Gábor, ^{1,4}Gyuricza Barbara, ^{1,5}Arató Viktória, ⁶Kárpáti Levente, ⁷Mándity István, ⁸Bruchertseifer Frank, ⁹Halmos Gábor, ¹Szikra Dezső, ^{1,2}Trencsényi György **10+5'**
University of Debrecen
¹Division of Nuclear Medicine and Translational Imaging, Department of Medical Imaging, Faculty of Medicine, University of Debrecen, Nagyerdei St. 98, H-4032 Debrecen, Hungary.
²Gyula Petrányi Doctoral School of Clinical Immunology and Allergology, Faculty of Medicine, University of Debrecen, Nagyerdei St. 98, H-4032 Debrecen, Hungary.
³Scanomed Ltd., Debrecen, Nagyerdei St. 98, H-4032 Debrecen, Hungary.
⁴Doctoral School of Chemistry, Faculty of Science and Technology, University of Debrecen, Egyetem square 1, H-4032 Debrecen, Hungary.
⁵Doctoral School of Pharmaceutical Sciences, University of Debrecen, Nagyerdei St. 98, H-4032 Debrecen, Hungary.
⁶Department of Organic Chemistry, Faculty of Pharmacy, Semmelweis University, Hőgyes Endre St. 7, H-1092 Budapest, Hungary.
⁷Artificial Transporters Research Group, Research Centre for Natural Sciences, Magyar tudósok Boulevard 2, H-1117 Budapest, Hungary.
⁸European Commission, Joint Research Centre (JRC), Karlsruhe, Germany.
⁹Department of Biopharmacy, Faculty of Pharmacy, University of Debrecen, Nagyerdei St. 98, H-4032 Debrecen, Hungary.
Evaluation of the therapeutic efficacy of ²¹³Bi-labelled dota-conjugated alpha-melanocyte stimulating hormone peptide analogues in melanocortin-1 receptor positive preclinical melanoma model

- W-K6-5** ^{1,2}**Szonja Anna Kovács**, ³Kovács Tamás, ³Hegedűs Zsombor, ³Paál Ágnes, ^{1,2}Fekete János Tibor, ³Varga Zoltán, ^{1,2}Gyórfy Balázs **10+5'**
¹Semmelweis Egyetem, Bioinformatika Tanszék, Budapest
²HUN-REN Természettudományi Kutatóközpont, Enzimológiai Intézet, Budapest
³Semmelweis Egyetem, Farmakológiai és Farmakoterápiás Intézet, Budapest
Yap1 inhibitor verteporfin potentiates the effects of anti-pd-1 immunotherapy in melanoma
- W-K6-6** **Emese Ritter**¹, Kata Csekő^{1,2}, Péter Mátyus^{5,6}, Ágnes Kemény¹, András Garami⁷, Eszter Pákai⁷, Zsuzsanna Helyes^{1,2,3,4} **10+5'**
University of Pécs
¹Department of Pharmacology and Pharmacotherapy, University of Pécs, Medical School
²National Laboratory for Drug Research and Development, Budapest;
³HUNREN-PTE Chronic Pain Research Group; ⁴PharmInVivo Hungary Ltd, Pécs; ⁵Veterinary University, Budapest; ⁶E-Group Ltd, Budapest;
⁷Department of Translational Medicine, University of Pécs, Medical School
The novel multi-target drug candidate szv-1287 inhibits inflammatory lung function alterations in the optimized endotoxin-induced acute pneumonitis mouse model
- W-K6-7** **Brigitta Bernát**, Vécsei Vencel, Garami Gréta, Bombicz Mariann, Tarjányi Vera, Óvári Ignác, Szilvássy Zoltán, Juhász Béla, Priksz Dániel **10+5'**
Department of Pharmacology and Pharmacotherapy, Debrecen
Investigation of the cardiac effects of ertugliflozin utilizing high-resolution echocardiography in SHR rat model

20:00-21:00

Dinner - Mátra Restaurant

June 6, 2024 Thursday

8:00

Registration- Hotel Lobby

9:00-10:00 T-KA

PLENARY LECTURE Thomas Wieland 60'

Medical Faculty, Mannheim Heidelberg University, Germany
New Avenues to Increase Cardiac Contractility in Heart Failure

10:00-10:30

Coffee break

10:45-12:30 T-KA1

Fusion Pharmacology: cardio-inflammation in focus

Chairs: Clive Page, Soraia Costa

T-KA1-1 Gilberto De Nucci 50'

Faculty of Medical Sciences Unicamp (Campinas-SP, Brazil)
Pharmacological Actions of Novel Endogenous Catecholamines

T-KA1-2 Aisah A Aubdool,¹ Kristen J Bubb, PhD,^{1,2} Amie J Moyes, PhD,¹ Sarah Lewis, MD,³ Jonathan P Drayton, MD,¹ Owen Tang, PhD,² Vedanta Mehta, PhD,⁴ Ian C Zachary, PhD,⁴ David J Abraham, PhD,³ Janice Tsui, MD,³ and Adrian J Hobbs, PhD¹. 30'

¹William Harvey Research Institute, Barts & The London School of Medicine & Dentistry, Queen Mary University of London, Charterhouse Square, London EC1M 6BQ, UK

²University of Sydney, Kolling Institute of Medical Research, St Leonards, 2065, Australia

³Centre for Rheumatology and Connective Tissue Diseases, University College London Medical School, Royal Free Campus, London, NW3 2PF, UK

⁴Centre for Cardiovascular Biology and Medicine, Division of Medicine, The Rayne Building, University College London, London WC1E 6JJ, UK

Endothelium-derived C-type natriuretic peptide is a critical regulator of angiogenesis and vascular remodelling

T-KA1-3 ^{1,2}Elizabeth S. Fernandes, ²Liziane C. M. da Silva, ³Catielen P. Pavi, ³Beatriz P. Savi, ⁴Seigo Nagashima, ⁵Samara Damasceno, ⁵Ayda H. Schneider, ³Izabella T. Silva, ³Gislaine Fongaro, ⁶Maria R. Q. Bomfim, ⁷Adara Aurea, ⁸Sérgio J. Macedo Júnior, ⁹João Valente, ⁵Thiago M. Cunha, ⁴Lucia de Noronha, ⁷Joao B. Calixto, ⁹Susan D. Brain 30'

¹Faculdades Pequeno Príncipe, Curitiba, Brazil

²Instituto de Pesquisa Pelé Pequeno Príncipe, Curitiba, Brazil

³Universidade Federal de Santa Catarina, Florianópolis, Brazil

⁴Pontifícia Universidade Católica Paraná, Curitiba, Brazil

⁵Universidade de São Paulo, Ribeirão Preto, Brazil

⁶Universidade CEUMA, São Luis, Brazil

⁷Centro de Inovação e Ensaios Pré-clínicos, Florianópolis, Brazil

⁸Universidade Federal do Paraná, Curitiba, Brazil

⁹King's College London, London, UK

Unveiling the mechanisms of Chikungunya-induced pain

- 10:30-12:30 T-KB1 Opioid research: past, present and future**
Chairs: Mahmoud Al-Khrasani, Pál Riba
- T-KB1-1 ¹Michael Schaefer, ¹Mohammed Shaqura, ¹Shaaban Mousa 15'**
¹Dep. of Anaesthesiology, Campus Benjamin Franklin, Charite University Berlin, Hindenburgdamm 30, 12203 Berlin, Germany
Distinct expression and functional profile of Mu-, Delta-, and Kappa-Opioid receptors in human dorsal root ganglia
- T-KB1-2 ¹Carmela Parenti, ²Simona Denaro, ²Nunzio Vicario, ²Rosalba Parenti, ¹Rita Turnaturi, ^{1,2}Annamaria Fidilio, ¹Margherita Grasso, ¹Lorella Pasquinucci 15'**
¹Department of Drug and Health Sciences, University of Catania, Italy
²Department of Biomedical and Biotechnological Sciences, University of Catania, Italy
Dual-target ligands and pain: our experience
- T-KB1-3 ¹Shaaban Mousa, ¹Mohammed Shaqura, ¹Michael Schaefer 15'**
¹Dep. of Anaesthesiology, Campus Benjamin Franklin, Charite University Berlin, Hindenburgdamm 30, 12203 Berlin, Germany
Peripheral analgesic effects of opioids for painful diabetic neuropathy
- T-KB1-4 ¹Sanzio Candeletti, ¹Laura Rullo, ¹Camilla Morosini, ¹Loredana M. Losapio, ¹Antonio Lacorte, ¹Marco Cristani, ¹Patrizia Romualdi 15'**
¹Dept. of Pharmacy and Biotechnology, Alma Mater Studiorum – University of Bologna, Bologna, Italy
The affective component of chronic pain and the opioid system
- T-KB1-5 ¹Patrizia Romualdi, ¹Laura Rullo, ¹Camilla Morosini, ¹Loredana M. Losapio, ¹Antonio Lacorte, ¹Marco Cristani, ¹Sanzio Candeletti 15'**
¹Dept. of Pharmacy and Biotechnology, Alma Mater Studiorum- University of Bologna, Bologna, Italy
Opioids in chronic pain treatment and risk of OUD
- T-KB1-6 Tibor Soós 15'**
HUN-REN Research Centre for Natural Sciences, Institute of Organic Chemistry, Budapest
Dawn of a novel pain treatment: Synthesis and structural plasticity of the most potent atypical opioid kratom alkaloid
- T-KB1-7 ¹Al-Khrasani Mahmoud, ¹Galambos Anna Rita, ¹Karádi Dávid Á., ¹Nariman Essmat, ¹Sarah K. Abbood, ¹Király Kornél, ²Lakatos Péter P., ^{1,4}Zádor Ferenc, ³Köles László, ²Tábi Tamás, ¹Riba Pál, ¹Ifj. Hársing G. László, ¹Fürst Susanna 15'**

¹ Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, Semmelweis University, Nagyvárad tér 4, H-1445 Budapest, Hungary

² Department of Pharmacodynamics, Faculty of Pharmacy, Semmelweis University, Nagyvárad tér 4, Budapest, Hungary

³ Department of Oral Biology, Semmelweis University, H-1089 Budapest, Hungary

⁴ Pharmacological and Drug Safety Research, Gedeon Richter Plc, H-1475 Budapest, Hungary

Glycine transporter 1 and AT1 receptor inhibitors: novel strategies to decrease morphine analgesic tolerance

10:30-12:30 T-KC1 Beyond technicality: analytical science as an attitude

Chairs: Csaba Szántay, Pál Szabó

Chairmen's introductory remarks 10'

T-KC1-1 Zoltán Béni 20'

Spectroscopic Research Department, Gedeon Richter Plc.

NMR at the frontier: structure elucidation of mysterious trace components

T-KC1-2 Pál Szabó 10'

HUN-REN Research Centre for Natural Sciences, Budapest

The role of high resolution mass spectrometry in the identification of 5-F-cumylpegaclon metabolites

T-KC1-3 László Valkai 20'

In vitro Metabolism Laboratory, Gedeon Richter Plc, Budapest

Behind the scenes: light absorption-based detection on in vitro ADME test samples

T-KC1-4 ¹Tibor Renkecz, ^{1,2,3}Aliz Széles, ¹Károly Schöll, ¹Ilona Pasics, ⁴Scopchanova Sirma, ¹Gábor Hirka, ²Katalin Monostory 20'

¹Toxi-Coop Toxicological Research Center, Budapest,

²HUN-REN Research Center for Natural Sciences, Budapest,

³Semmelweis University, Budapest,

⁴SCC Scientific Consulting Company, Bad Kreuznach

Different derivatization approaches to enable toxicokinetic analysis of curious analytes

Panel discussion 30'

12:30-13:30 Lunch - Mátra Restaurant

13:30-14:00 T-KA2 KEYNOTE 4 - Sönke Behrends 30'

¹Pharmacology, University of Braunschweig, Germany

²Semmelweis University Budapest, Asklepios Campus Hamburg, Germany

Precision pharmacology: targeting enzyme isoforms for tailored therapeutics

13:30-14:00 T-KB2 KEYNOTE 5 - Soraia Costa 30'

¹Jorge L Dallazen, PhD, ¹Larissa G Santos, MSc, ¹Simone A Teixeira, PhD, ²John Wallace, PhD, ¹Marcelo N Muscará, PhD, **¹Soraia K P Costa, PhD.**

¹Departamento de Farmacologia, Instituto de Ciências Biomédicas, Universidade de São Paulo, Av. Prof Lineu Prestes, 1524 São Paulo/SP, 05508-000, Brazil

²Department of Physiology and Pharmacology, University of Calgary, Calgary, AB, T2N 1N4, Canada.

Exploring opportunities and challenges of hydrogen sulfide-releasing non-steroidal anti-inflammatory drugs for effective pain control and gastric integrity

14:00-15:30 T-KA3 Novel approaches to treat gastrointestinal and pancreatic diseases
Chairs: Zoltán Zádori, József Maléth

T-KA3-1 ^{1,2,9}**Viktória Venglovecz**, ^{2,3}Anna Grassalkovich, ^{2,3,4}Emese Tóth, ¹Attila Ébert, ¹Eleonóra Gál, ¹Marietta Margaréta Korsós, ^{3,5,6}József Maléth, ⁷Zoltán Rakonczay Jr., ⁸Zsolt Galla, ⁸Péter Monostori, ^{2,9,10,11}Péter Hegyi **15+3'**

¹Department of Pharmacology and Pharmacotherapy, University of Szeged, Hungary,

²Translational Pancreatology Research Group, Interdisciplinary Center of Excellence for Research Development and Innovation, University of Szeged, Hungary,

³Department of Medicine, University of Szeged, Hungary,

⁴Department of Health Sciences, Department of Theoretical and Integrative Health Sciences, University of Debrecen, Hungary,

⁵HCEMM–SZTE Molecular Gastroenterology Research Group, University of Szeged, Hungary,

⁶ELKH–USZ Momentum Epithelial Cell Signaling and Secretion Research Group, University of Szeged, Hungary,

⁷Department of Pathophysiology, University of Szeged, Hungary,

⁸Metabolic and Newborn Screening Laboratory, Department of Paediatrics, University of Szeged, Hungary,

⁹Institute for Translational Medicine, Medical School, University of Pécs, Hungary,

¹⁰Centre for Translational Medicine, Semmelweis University, Hungary,

¹¹Institute for Pancreatic Disorders, Semmelweis University, Hungary
Orkambi is a potential therapeutic option for acute pancreatitis

T-KA3-2 ¹**Eszter M. Horváth**, ¹Máté Bencsics, ¹Ke Haoran, ¹Bálint Bányai, ¹Roland Csépanyi-Kömi, ¹Péter Sasvári, ²Dantzer Françoise, ²Hanini Najat, Rita Benkő **15+3'**

¹Department of Physiology, Semmelweis University, Budapest, Hungary, ²UMR7242, Biotechnology and Cell Signaling, CNRS/Université de Strasbourg, Strasbourg, France

T-cell specific PARP-2 downregulation in LPS induced inflammation of the large intestine

T-KA3-3 ¹**Zoltán S. Zádori**, ^{1,2}Barbara Hutka, ¹Arezoo Haghghi, ¹András S. Tóth, ¹Szilvia B. László, ¹Zsuzsanna Demeter, ¹Gerda Wachtl, ¹Klára Gyires **15+3'**

¹Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest, Hungary,

² Pharmacological and Drug Safety Research, Gedeon Richter Plc, Budapest, Hungary

Searching for new targets for treatment of NSAID enteropathy

T-KA3-4 ¹**Edyta Korbut**, ¹Głowacka Urszula, ¹Krukowska Kinga, ^{1,2}Wierdak Mateusz, ³Vignane Thibaut, ¹Magierowska Katarzyna, ^{1,4}Bakalarz Dominik, ³Filipovic Milos R, ¹Magierowski Marcin **15+3'**

¹Department of Physiology, Jagiellonian University Medical College, Cracow, Poland

²2nd Department of Surgery, Jagiellonian University Medical College, Cracow, Poland

³Leibniz-Institut für Analytische Wissenschaften-ISAS e.V. Dortmund, Germany

⁴Department of Forensic Toxicology, Institute of Forensic Research, Cracow, Poland

Controllable gaseous mediators delivery, pathway-specific proteins persulfidation and translational insights into Barrett's esophagus pathogenesis

T-KA3-5 ^{1,2}**József Maléth** **15+3'**

¹Department of Medicine, University of Szeged, Szeged, Hungary; ELKH-USZ Momentum Epithelial Cell Signaling and Secretion Research Group, University of Szeged, Szeged, Hungary;

²HCEMM-USZ Molecular Gastroenterology Research Group, University of Szeged, Szeged, Hungary

Novel therapeutic targets in chronic pancreatitis: preclinical findings and translational possibilities

14:00-15:30 T-KB3

Advances in the pharmacotherapy of pain and inflammation

Chairs: Valéria Tékus, Zsuzsanna Helyes, Peter Bai

T-KB3-1 Henrietta Papp^{1,2,*}, Judit Bóvári-Biri^{3,*}, Krisztina Bánfai^{3,*}, Tóth Emese^{8,*}, Péter Juhász⁴, Mohamed Mahdi⁵, Lilian Cristina Russo⁶, Dávid Bajusz⁷, Adrienn Sipos^{8,9}, László Petri⁷, Tibor Viktor Szalai⁷, Ágnes Kemény^{2,10,11}, Gyula Batta¹², Orsolya Mózner¹³, Dorottya Vaskó¹⁴, Edit Hirsch¹⁴, Péter Bohus¹⁵, Gábor Méhes⁴, József Tőzsér⁵, Nicola J. Curtin¹⁶, Zsuzsanna Helyes^{2,10}, Attila Tóth¹⁷, Nicolas C. Hoch⁶, Ferenc Jakab^{1,2}, György M. Keserű⁷, Judit E. Pongrácz², **Péter Baj**^{8,9,18,19} **15+5'**

¹National Laboratory of Virology, University of Pécs, 7624, Pécs, Hungary and Institute of Biology, Faculty of Sciences, University of Pécs, 7624, Pécs, Hungary

²Szentagothai Research Centre, University of Pécs, 7624, Pécs, Hungary

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⁴Department of Pathology, Faculty of Medicine, University of Debrecen, 4032, Debrecen, Hungary;

⁵Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of Debrecen, 4032, Hungary;

⁶Department of Biochemistry, Institute of Chemistry, University of São Paulo, São Paulo, Brazil;

⁷Medicinal Chemistry Research Group, Research Centre for Natural Sciences, 1117, Budapest, Hungary

⁸Department of Medical Chemistry, Faculty of Medicine, University of Debrecen, 4032, Debrecen, Hungary;

⁹MTA-DE Cell Biology and Signaling Research Group ELKH, Debrecen, 4032, Hungary;

¹⁰Department of Pharmacology and Pharmacotherapy, Medical School; Centre for Neuroscience, 7624, Pécs, Hungary

¹¹Department of Medical Biology, Medical School, Pécs, 7624, Hungary

¹²Department of Organic Chemistry, Faculty of Science and Technology, University of Debrecen, 4032, Debrecen, Hungary

¹³Doctoral School of Molecular Medicine, Semmelweis University, 1094, Budapest, Hungary and Institute of Enzymology, Research Centre for Natural Sciences, 1117, Budapest, Hungary

¹⁴Department of Organic Chemistry and Technology, Faculty of Chemical Technology and Biotechnology, Budapest University of Technology and Economics, 1111, Budapest, Hungary

¹⁵Erzsébet Hospital, Sátoraljaújhely, 3980, Hungary

¹⁶Translational and Clinical Research Institute, Newcastle University Centre for Cancer, Faculty of Medical Sciences, Newcastle University, NE2 4HH, Newcastle upon Tyne, UK

¹⁷Section of Clinical Physiology, Department of Cardiology, University of Debrecen, Debrecen, 4032, Hungary;

Repurposing PARP inhibitors for treating COVID-19-related inflammation

T-KB3-2 ¹Ivica Matak 15+5'

¹University of Zagreb School of Medicine, Zagreb

Antinociceptive action of botulinum toxin A and recombinant botulinum toxin-based molecules

T-KB3-3 ^{1,2,3}Valéria Tékus, ^{1,3,4}Nikolett Szentes, ^{1,3,4}Barbara Fülöp, ¹Jenett Pirkulyeva, ^{1,3}Éva Borbély, ⁵Ádám Dénes, ^{6,7}Andreas Goebel, ^{1,3,4,8}Zsuzsanna Helyes 15+5'

¹Department of Pharmacology and Pharmacotherapy, Medical School, University of Pécs, Pécs, Hungary,

²Faculty of Health Sciences, Department of Laboratory Diagnostics, University of Pécs, H-7624, Pécs, Hungary;

³Hungarian Research Network, University of Pécs, Pécs, Hungary,

⁴National Laboratory for Drug Research and Development, Budapest, Hungary,

⁵Momentum Laboratory of Neuroimmunology, Institute of Experimental Medicine, Budapest, Hungary,

⁶Pain Research Institute, University of Liverpool, Liverpool, United Kingdom,

⁷Department of Pain Medicine, The Walton Centre National Health Service Foundation Trust, Liverpool, United Kingdom,

⁸PharmInVivo Ltd., Pécs, Hungary

Fractalkine (CX3CR1) and Interleukin-1 (IL-1) receptors mediate neuroinflammation and related hypersensitivity in mouse models of chronic primary pain

T-KB3-4 ¹Göntér Kitti, ²László Szabolcs, ²Wagner Ödön, ¹Pozsgai Gábor, ¹Pintér Erika, ¹Zsófia Hajna 10+5'

¹Department of Pharmacology and Pharmacotherapy, Medical School, University of Pécs, Pécs

²Department of Inorganic and Analytical Chemistry, Faculty of Chemical Technology and Biotechnology, Budapest University of Technology and Economics, Budapest

In vivo investigation of combined capsaicin-diclofenac containing transdermal patch in rat models of acute pain

T-KB3-5 ^{1,3}Patrik Szekér, ¹Anna Hajdara, ¹Gábor Rácz, ¹József Murányi, ¹Ágota Csóti, ¹Nikoletta Ngo Hahn, ¹Márton Megyeri, ¹Tamás Kitka, ¹Attila Brunyánszki, ²Ágnes Kemény, ²Erika Pintér, ²Zsuzsanna Helyes, ⁴György Panyi, ¹Sándor Farkas, ¹Zalán Péterfi, ¹Péter Hornyák, ³Norbert Gyöngyösi 10+5'

¹VRG Therapeutics Ltd., Budapest,

²PharmInVivo Ltd., Pécs,

³Semmelweis University, Institute of Biochemistry and Molecular Biology Department of Molecular Biology, Budapest,

⁴Pharmion LP., Debrecen

Developing selective KV1.3 inhibitors for the treatment of chronic inflammatory diseases

- 14:00-15:30 T-KC3 Heart failure - remodeling - seeking answers to open questions - From bench to bedside**
Chair: Przemysław Leszek
- T-KC3-1 Przemysław Leszek 5'**
Heart Failure and Transplantology Department; Mechanical Circulatory Support and Transplant Department, National Institute of Cardiology, Warsaw, Poland
Clinical need for rhythm optimization
- T-KC3-2 Michał Mączewski 10'**
Department of Clinical Physiology, Medical Centre of Postgraduate Education, Kielpin, Poland
Experimental studies - what they suggest to clinicians
- T-KC3-3 ^{1,2,3}Zoltán V. Varga, ^{1,2,3}Márk E. Jakab, ^{1,2,3}Al-Haddad R. Ayham, ^{1,2,3}Zsófia Onódi, ^{1,4}Péter Ferdinandy 7,5'**
¹Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest,
²HCEMM-SU Cardiometabolic Immunology Research Group, Budapest,
³MTA-SE Momentum Cardio-oncology and Cardio-immunology Research Group, Budapest,
⁴Pharmahungary Group, Szeged, Hungary
Antidiabetic drugs repurposed for heart failure
- T-KC3-4 ^{1,2,3}Zsófia Onódi, ^{1,4}Péter Ferdinandy, ^{1,2,3}Zoltán V. Varga 7,5'**
¹Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest, Hungary,
²HCEMM-SU Cardiometabolic Immunology Research Group, Budapest, Hungary,
³MTA-SE Momentum Cardio-Oncology and Cardioimmunology Research Group, Semmelweis University, Budapest, Hungary,
⁴Pharmahungary Group, Szeged, Hungary
Anti-gout medications repurposed for heart failure
- T-KC3-5 Przemysław Leszek 5'**
Heart Failure and Transplantology Department; Mechanical Circulatory Support and Transplant Department, National Institute of Cardiology, Warsaw, Poland
Iron deficiency - a clinician's perspective
- T-KC3-6 Aleksandra Paterek 10'**
Centre of Postgraduate Medical Education, Warsaw, Poland
What basic research teaches us about iron deficiency?
- T-KC3-7 Michał Mączewski 7,5'**
Department of Clinical Physiology, Medical Centre of Postgraduate Education, Kielpin, Poland
Epicardial fat - how it affects the myocardium

T-KC3-8 Aleksandra Paterek 7,5'

Centre of Postgraduate Medical Education, Warsaw, Poland
Intramyocardial fat - a novel proarrhythmic factor

T-KC3-9 ^{1,2,3}Tamás Kovács, ^{1,2,3}Ágnes Paál, ^{1,2,3}Zsombor Hegedűs, ^{1,2,3}Lilla Szabó, ^{1,2,3}Zoltán Varga 7,5'

¹Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest,

²SE Momentum Cardio-Oncology and Cardioimmunology Research Group, Budapest,

³HCEMM-SU Cardiometabolic Immunology Research Group, Budapest

Melanoma subtype-dependent cardiotoxicity to immune checkpoint inhibitor therapy

T-KC3-10 ^{1,2}Zsombor I. Hegedűs, ^{1,2,3}Gergely G. Tamás, ^{1,2,3}Tamás Kovács, ^{1,2,3}Zsófia Onódi, ⁴Bálint Barta, ⁴Sayour Alex Ali, ⁴Tamás Radovits, ⁴Béla Merkely, ^{1,5}Péter Ferdinandy, ^{1,2,3}Zoltán V. Varga 7,5'

¹Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest,

²HCEMM-SU Cardiometabolic Immunology Research Group, Budapest,

³MTA-SE Momentum Cardio-oncology and Cardio-immunology Research Group, Budapest,

⁴Heart and Vascular Center, Semmelweis University, Budapest, Hungary,

⁵Pharmahungary Group, Szeged, Hungary

Expression of key immune checkpoints in end-stage heart failure

15:30-15:50

Coffee break

15:50-17:50

T-KA4 Innovative models in pharmacological research

Chair: Dóra Zelena

T-KA4-1 ¹Dávid Czimer, ¹Panna Kaluzsa, ²Krisztina Fülöp, ²Viola Pomozi, ²András Váradi, ¹Máté Varga 15+5'

¹Department of Genetics, ELTE Eötvös Loránd University, Budapest,

²Institute of Molecular Life Sciences, HUN-REN Research Centre for Natural Sciences, Budapest

From tank to bed in PXE? Using zebrafish to search for pseudoxanthoma elasticum treatments

T-K4-2 ¹Zoltán Veréb 15+5'

¹ Regenerative Medicine and Cellular Pharmacology Laboratory, Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary;

3D tissue printing in toxicology research

T-K4-3 István Fodor, Réka Svigruha, Éva Molnár, Tibor Kiss, and **Zsolt Pirger** **15+5'**

¹Ecophysiological and Environmental Toxicological Research Group, HUN-REN Balaton Limnological Research Institute, Tihany, 8237, Hungary

„Top-down” effects of psychoactive compounds on a defined simpler nervous system encoding associative memory

T-K4-4 ¹**Judit Hargitai** **15+5'**

¹Charles River Laboratories Hungary Kft, Veszprém, Hungary

The use of in vitro models in toxicology studies

T-K4-5 ¹**Dávid Szép**, ¹Ferenc Budán, ²Kristóf Csepregi, ¹Kinga Dávid, ¹Bianka Pál-Dittrich, ¹Attila Sik **15+5'**

¹University of Pécs, Medical School, Institute of Physiology, Pécs,

²University of Pécs, Faculty of Natural Sciences, Institute of Biology, Pécs

The power of zebrafish: swimming to success to find plant-based antiepileptic drug candidates

T-K4-6 ¹**Kornélia Szabéni** **15+5'**

HUN-REN Research Centre for Natural Sciences, Budapest, Hungary

Human induced pluripotent stem cell-derived organoids for disease modeling

15:50-17:50 **T-KB4** **Novel findings of the TRP channel research by the Hungarian scientists**

Chair: Erika Pintér

T-KB4-1 **Attila Tóth**, Róbert Pórszász, Ahem Gerard P.

University of Debrecen, Faculty of Medicine, Department of Physiology

The vascular biological role of TRPV1

T-KB4-2 **István Nagy**

Imperial College London

TRPV1: back on the list of targets for analgesia

T-KB4-3 **András Garami**

Department of Thermophysiology, Institute for Translational Medicine, Medical School, University of Pecs, Pecs, Hungary

Mechanisms of the thermoregulatory effects of TRPV1 antagonists

T-KB4-4 ¹Márk Racskó, ^{1,2}Árpád Kunka, ^{1,2}Judit Bohács, ¹Erika Lisztes, ²Rita Marincsák, ¹**Balázs István Tóth**

¹Department of Physiology, Faculty of Medicine, University of Debrecen, Debrecen,

²Faculty of Dentistry, University of Debrecen, Debrecen

Sensory TRP channels in the human dental pulp and their role in pulpitis

- T-KB4-5** ¹Erzsébet Kövesdi, ¹Laura Mundrucz, ⁷Angela Kecskes, ¹Attila Gyéresi, ¹Máté Deák, ²Balázs Gaszner, ⁴Cecília Szekeres-Paraczký, ⁴Zsófia Maglóczky, ³Rudi Vennekens, ⁷Viktória Kormos, ¹**Miklós Kecskés**
¹ Institute of Physiology, Medical School, University of Pécs, H-7624, Pécs, Hungary,
² Department of Anatomy, Medical School and Research Group for Mood Disorders, Centre for Neuroscience, Szentágotthai Research Centre, University of Pécs, H-7624, Pécs, Hungary;
³ Laboratory of Ion Channel Research, Biomedical Sciences Group, Department of Cellular and Molecular Medicine, VIB-KU Leuven Center for Brain & Disease Research, KU Leuven, 3000, Leuven, Belgium,
⁴ Human Brain Research Laboratory, HUN-REN Institute of Experimental Medicine, H-1083 Budapest, Hungary,
⁷ Department of Pharmacology and Pharmacotherapy, Centre for Neuroscience, Medical School, University of Pécs, H-7624, Pécs, Hungary
TRPM4 in hilar mossy cells, a role in epilepsy

- T-KB4-6** ¹**Péter Sántha**, ²Ivett Kozma-Szeredi, ²Orsolya Oszlács, Anett Somogyi and ^{1,2}Gábor Jancsó
¹University of Szeged, Department of Anatomy, Histology and Embryology, Szeged
²University of Szeged and Department of Physiology
Different contributions of primary sensory neuron subpopulations to the initiation of nerve injury induced spinal microglia activation

15:50-17:50 T-KC4 Translational medicine leading to pharmacology applications

Chair: Zoltán Varga

- T-KC4-1** ^{1,2}**Eszter Farkas**, ^{1,2}Réka Tóth, ^{1,2}Anna Törteli, ³Noémi Kovács, ⁴Ildikó Horváth, ^{3,4}Domokos Máthé, ^{1,2}Ákos Menyhárt **15+5'**
¹HCEMM-USZ Cerebral Blood Flow and Metabolism Research Group, HCEMM Nonprofit Ltd., Szeged,
²Department of Cell Biology and Molecular Medicine, University of Szeged, Szeged,
³HCEMM-SU In Vivo Imaging Advanced Core Facility, Budapest,
⁴Department of Biophysics and Radiation Biology, Semmelweis University-Faculty of Medicine, Budapest
Modulation of Aquaporin-4 Expression by Trifluoperazine Augments Functional Recovery after Experimental Ischemic Stroke
- T-KC4-2** ¹Kolos Nemes, ¹Alexandra Á. Benő, ¹Gabriella Mihalekné Fűr, ^{1,2}Éva Magó, ¹Petronella Topolcsányi, ¹**Lőrinc S. Pongor** **15+5'**

¹Cancer Genomics and Epigenetics Core Group, Hungarian Centre of Excellence for Molecular Medicine (HCEMM), Szeged, Hungary,
²Genome Integrity and DNA Repair Core Group, Hungarian Centre of Excellence for Molecular Medicine (HCEMM), Szeged, Hungary
Predicting Drug Response Using Gene Expression Signatures in Cell Line Models

T-KC4-3 ^{1,2}**Tibor Pankotai 15+5'**

¹ Hungarian Centre of Excellence for Molecular Medicine (HCEMM), Genome Integrity and DNA Repair Core Group, University of Szeged, Szeged, Hungary,
² Department of Pathology, University of Szeged, Szeged, Hungary
The clinical significance of epigenetic, RNAPII and transcriptional variabilities occurring in clear cell renal cell carcinoma as a potential prognostic marker

T-KC4-4 ¹**Karri Lamsa 15+5'**

¹Hungarian Centre of Excellence for Molecular Medicine Research Group for Human neuron physiology and therapy, Szeged, Hungary
How neurons in human brain are different from animal model cells, and why this is important?

T-KC4-5 ^{1,2,3} **Gábor M. Mórotz**, ^{1,2,3}Nabil V. Sayour, ^{1,2,3}Tamás G. Gergely, ^{1,2,3}Viktória É. Tóth, ^{1,2,3}Tamás Kovács, ^{1,2}Barnabás Várad, ^{1,4,5}Bence Ágg, ^{1,4,5}Péter Ferdinandy, ^{1,2,3}Zoltán V. Varga **10+3'**

¹Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest,
²HCEMM-SU Cardiometabolic Immunology Research Group, Budapest,
³MTA-SE Momentum Cardio-Oncology and Cardioimmunology Research Group, Budapest,
⁴MTA-SE System Pharmacology Research Group, Budapest,
⁵Pharmahungary Group, Szeged
Adrenal Inflammation in heart failure

T-KC4-6 ^{1,2}Viktor Szegedi, ¹**Ádám Tiszlavicz**, ¹Szabina Furdan, ¹Abdenour Douida, ^{1,2}Emoke Bakos, ³Pal Barzo, ⁴Gabor Tamas, ⁵Attila Szucs, ^{1,2}Karri Lamsa **10+3'**

¹Hungarian Centre of Excellence for Molecular Medicine Research Group for Human Neuron Physiology and Therapy, Szeged, Hungary,
²Department of Physiology, Anatomy and Neuroscience, University of Szeged, Hungary,
³Department of Neurosurgery, University of Szeged, Hungary,
⁴MTA-SZTE Research Group for Cortical Microcircuits, Department of Physiology, Anatomy and Neuroscience, University of Szeged, Hungary,
⁵Neuronal Cell Biology Research Group, Eötvös Loránd University, Budapest, Hungary
Aging-associated weakening of the action potential in fast-spiking interneurons in the human neocortex

- 17:50-18:20 T-KA5 KEYNOTE 6- Biotech 30'**
- T-KA5-1 Ágnes Angyal 10'**
GeneTiCA Ltd.
The power of multiomics
- T-KA5-2 Josef Uskoba 10'**
BioTech a.s.
BioTech – A Key Partner in Structural Biology Solutions for a Pharmaceutical Industry
- T-KA5-3 Péter Keresztúri 10'**
BioTech Hungary Ltd.
Deeper insights into cell models with Agilent Cell Analysis instruments
- 17:50-18:20 T-KB5 KEYNOTE 7 - Michael Bischoff – PAE GmbH 30'**
- 17:50-19:20 POSTER SESSION- Galya Room on the 1st floor and Foyer on the 1st floor**
- 20:00 Gala Dinner - Mátra Restaurant**
- 22:00 Dance- Music Lounge**

June 7, 2024 Friday

- 8:00** **Registration- Hotel Lobby**
- 9:00-10:00** **F-KA** **PLENARY LECTURE -Wan-Wan-Lin 60'**
Department of Pharmacology, College of Medicine, National Taiwan University
Oxidative stress and cell death: Roles of PARP1 and AMPK
- 10:00-10:30** **Coffee break**
- 10:30-12:30** **F-KA1** **Novel innovative potentials of cyclodextrins in drug formulation and targeted pharmacotherapy**
Chairs: Éva Szőke, Éva Fenyvesi
- F-KA1-1** **¹Lajos Szente, ¹Éva Fenyvesi 20+5'**
¹CycloLab Ltd
Antiviral therapies: Cyclodextrins in dual function
- F-KA1-2** **¹Rita Ambrus, ¹Anett Motzwickler-Németh, ¹Patrícia Varga, ¹Csilla Balla-Bartos, ¹Ildikó Csóka 20+5'**
¹University of Szeged, Institute of Pharmaceutical Technology and Regulatory Affairs, Szeged
Application of cyclodextrin in traditional and alternative drug formulation; case studies
- F-KA1-3** **¹Ágnes Ruzsnyák, ¹Csenge Urgyán, ¹Katalin Réti-Nagy, ²István Hajdu, ²György Trencsényi, ¹Ferenc Fenyvesi 20+5'**
¹Department of Molecular and Nanopharmaceutics, University of Debrecen, Debrecen,
²Division of Nuclear Medicine and Translational Imaging, Department of Medical Imaging, University of Debrecen, Debrecen
Targeting cancer cells by cyclodextrins via endocytosis
- F-KA1-4** **¹Levente Szőcs, ¹Éva Fenyvesi 20+5'**
¹CycloLab Cyclodextrin Research & Development Laboratory, Ltd. Budapest
Methylated cyclodextrins: understanding quality – bioactivity relationships
- F-KA1-5** **^{1,2,3}Andrea Nehr-Majoros, ^{1,2,3}Maja Payrits, ^{1,2,3}Noémi Bencze, ^{1,4}Ágnes Kemény, ^{1,2,3,5}Zsuzsanna Helyes, ^{1,2,3,5}Éva Szőke 15+5'**
¹Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, University of Pécs, Pécs, ²National Laboratory for Drug Research and Development, Budapest, ³Centre for Neuroscience, University of Pécs, Pécs, ⁴Department of Medical Biology, Faculty of Medicine, University of Pécs, Pécs, ⁵HUN-REN PTE Chronic Pain Research Group, Pécs
Analgesia via lipid raft disruption by cyclodextrins

- 10:30-12:30 F-KB1 Searching for new therapies for neurodegenerative diseases**
Chairs: Erika Pintér and Anikó Borbás
- F-KB1-1 Sabina Podlewska**, Bugno Ryszard, Satała Grzegorz, Bojarski Andrzej J., Przewłocki Ryszard **15+5'**
 Maj Institute of Pharmacology Polish Academy of Sciences, Smętna 12, 31-343 Kraków, Poland
Machine learning methods in the serve of new drugs development - case study of biased agonists of mu opioid receptor
- F-KB1-2 Jadwiga Handzlik 20+5'**
 Department of Technology and Biotechnology of Drugs, Faculty of Pharmacy, Jagiellonian University, Medical College, Krakow, Poland
Chalcogen-containing 1,3,5-triazine compounds in search of breakthrough therapy for neurodegenerative diseases
- F-KB1-3 ¹Erika Pintér, ¹Viktória Kormos, ¹Petra Prókay, ¹János Konkoly, ¹Maja Payrits, ¹Éva Borbély, ²Balázs Gaszner, ³Dóra Zelena 20+5'**
¹Department of Pharmacology and Pharmacotherapy, Medical School, University of Pécs, Hungary,
²Department of Anatomy, Medical School, University of Pécs, Hungary,
³Department of Physiology, Medical School, University of Pécs, Hungary
Could the TRPA1 be a promising target in the treatment of CNS diseases?
- F-KB1-4 ¹Dániel Priksz, ²Balázs Harangi, ³Mária Lódi, ⁴Zoltán Ujhelyi, ⁵Dóra Ujvárosy, ¹Rita Erdélyi, ¹Brigitta Bernát, ¹Mariann Bombicz, ¹Vera Tarjányi, ¹Zoltán Szilvássy, ¹Béla Juhász 15+5'**
¹Department of Pharmacology and Pharmacotherapy, University of Debrecen, Debrecen, Hungary, ²Department of Data Science and Visualization, University of Debrecen, Debrecen, Hungary,
³Department of Neuroanatomy and Molecular Brain Research, Ruhr University Bochum, Medical Faculty, Bochum, Germany,
⁴Department of Pharmaceutical Technology, University of Debrecen, Debrecen, Hungary, ⁵Department of Emergency Medicine, University of Debrecen Clinical Centre, Debrecen, Hungary
Assessment of the Effects of a Hydroxamic Acid Derivative Drug Candidate on Cognitive Function of Aged Rats
- F-KB1-5 ^{1,2}Anna Anoir Abbas, ²Jimoh Idris J., ³Anikó Göblös, ⁴Barker A. Roger, ³Zoltán L. Veréb, ⁵Johan Jakobsson, ^{1,3}Lajos Kemény, ²Mária Judit Molnár, ^{1,2,5}Karolina Pircs 10+5'**
¹ HCEMM, Szeged, ²Semmelweis University, Budapest, ³ University of Szeged, Szeged, ⁴ University of Cambridge, Cambridge, ⁵Lund University, Lund
Studying the effect of cariprazine in induced neurons directly reprogrammed from Huntington's disease patient's fibroblasts

F-KB1-6 ¹**Kinga Vörös**, ²Dimitris Apostolopoulos, ¹Anna A. Abbas, ¹Danics Les,
²Fazal Shaline, ²Barker A. Roger, ^{1,3}Karolina Piracs **10+5'**
¹HCEMM-Semmelweis University, Budapest, Hungary, ²University of
Cambridge, Cambridge, UK, ³Lund University, Lund, Sweden.
*Felodipine efficiency analysis on induced neurons derived from
Huntington's disease FELL-HD clinical trial patients*

10:30-12:30 F-KC1 Pharmaceutical Medicine Session

F-KC1-1 Anna Katalin Baráné Gilicze¹, **Viola Bardóczy**¹
National Center for Public Health and Pharmacy Department of
Centralised Procedures and Biologicals
Quality requirements for biologicals in clinical trials

F-KC1-2 ¹**Sandor Kerpel-Fronius**, ²Alexander L Becker
¹Semmelweis University Department of Pharmacology and
Pharmacotherapy
²Consultants in Pharmaceutical Medicine, Dover Heights, Australia
*The value and importance of a professional ethical code for
medicines development*

F-KC1-3 **Krisztina Szabone Nemesy**
National Center for Public Health and Pharmacy
*Clinical trials in Hungary from the perspective of the competent
authority*

F-KC1-4 **Lilla Szabó**
AstraZeneca Kft., Budapest
*The role of medical affairs in pharma - focus on real world evidence
generation*

F-KC1-5 **Kata Mazalin**

12:30-13:30 LUNCH - Mátra Restaurant

13:30-14:00 F-KA2 KEYNOTE 8- Gábor Zacher 30'

14:00-15:30 F-KA3 New concepts in cardiovascular pharmacology

Chair: István Baczkó

F-KA3-1 ¹Attila Kiss **20'**
¹Center for Biomedical Research and Translational Surgery, Medical
University of Vienna, Vienna, Austria
Cardiovascular benefits of SGLT2i

F-KA3-2 ^{1,2}**Péter Bencsik**, ^{1,2}Tamara Szabados, ^{2,3}András Makkos, ^{2,3}Bettina
Benczik, ^{2,3}Barnabás Váradi, ^{2,3}Bence Ágg, ³Zoltán V. Varga, ^{1,2,3}Anikó
Görbe, ^{2,3}Péter Ferdinandy **20'**

¹Cardiovascular Research Group, Department of Pharmacology and Pharmacotherapy, Albert Szent-Györgyi Medical School, University of Szeged, Dóm tér 12, H-6720, Szeged, Hungary,

²Pharmahungary Group, Hajnóczy 6, H-6722, Szeged, Hungary,

³Cardiometabolic and MTA-SE System Pharmacology Research Group, Department of Pharmacology and Pharmacotherapy, Semmelweis University, Nagyvárad tér 4, 1089, Budapest, Hungary
Cardioprotection by exogenous microRNA-125b mimic in a mouse model of acute myocardial infarction*

F-KA3-3 ¹**Tibor Hornyik**, ²Ilona Bodi, ²Lea Mettke, ²Konstantin Michaelides, ⁴Stefan Meier, ³Saranda Nimani, ²Stefanie Perez-Feliz, ⁵Ibrahim el-Battrawy, ⁶Heiko Bugger, ²Manfred Zehender, ⁷Michael Brunner, ^{4,8}Jordi Heijman, ^{2,3}Katja E. Odening **20'**

¹Department of Pharmacology and Pharmacotherapy, University of Szeged Albert Szent-Györgyi Medical School,

²Institute of Experimental Cardiovascular Medicine, Heart Center University of Freiburg, Medical Faculty, Freiburg, Germany;

³Translational Cardiology, Department of Cardiology, Inselspital, Bern University Hospital, and Department of Physiology, University of Bern, Bern, Switzerland,

⁴ Department of Cardiology, Cardiovascular Research Institute Maastricht, Maastricht University and Maastricht University Medical Center, Maastricht, NL,

⁵First Department of Medicine, Faculty of Medicine, University Medical Centre Mannheim, University of Heidelberg;

⁶Department of Cardiology, University Heart Center Graz, Medical University of Graz, Graz, Austria;

⁷Department of Cardiology and Medical Intensive Care, St. Josefskrankenhaus, Freiburg, Germany.

⁸Gottfried Schatz Research Center, Division of Medical Physics and Biophysics, Medical University of Graz, Graz, Austria
Beneficial APD/QT normalizing effects of L-Carnitine in transgenic SQT1 rabbit model

F-KA3-4 ¹**Anikó Görbe**, ¹Zoltán Giricz, ^{1,2}Péter Ferdinandy **20'**

¹Department of Pharmacology and Pharmacotherapy, Semmelweis University, Hungary,

²Pharmahungary Group, Szeged, Hungary

Hidden cardiotoxicity and cardioprotection: development of preclinical test platforms from in vitro to in vivo models

14:00-15:30 F-KB3 Pharmacological aspects of the neurovascular unit

Chairs: Mária Deli, István Krizbai

F-KB3-1 Ádám Dénes 20'

HUN-REN Institute of Experimental Medicine

Role of microglia in modulation of cerebral circulation and neurovascular coupling

F-KB3-2 Imola Wilhelm, Kinga Molnár, Ádám Mészáros, Csilla Fazakas, István Krizbai **20'**

HUN-REN Biological Research Centre, Szeged

Targeting the brain metastatic environment

F-KB3-3 ¹Szilvia Veszelka, ¹Mária Mészáros, ^{1,2}Anikó Szecskó, ^{1,2}Gergő Porkoláb, ¹Koppány Párdi, ¹Janet Adegbite, ¹Mária Deli **20'**

¹HUN-REN Biological Research Centre, Szeged,

²Doctoral School of Biology, University of Szeged, Szeged

Protection of brain endothelial cells as a therapeutic target in central nervous system diseases

F-KB3-4 ¹Mária Mészáros, ²Thi Ha My Phan, ^{1,3}Judit P. Vigh, ^{1,3}Gergő Porkoláb, ¹Anna Kocsis, ¹Emese K. Páli, ^{1,4}Tamás F. Polgár, ¹Fruzsina R. Walter, ²Jeng-Shiung Jan, ⁵Tamás Janáky, ¹Szilvia Veszelka and ¹Mária A. Deli **15'**

¹Institute of Biophysics, HUN-REN Biological Research Centre, Temesvári krt. 62, H-6726 Szeged, Hungary;

²Department of Chemical Engineering, National Cheng Kung University, Tainan 70101, Taiwan;

³Doctoral School of Biology, University of Szeged, Dugonics tér 13, H-6720 Szeged, Hungary;

⁴Theoretical Medicine Doctoral School, University of Szeged, Tisza Lajos krt. 97, H-6722 Szeged, Hungary;

⁵Department of Medical Chemistry, Albert Szent-Györgyi Medical School, University of Szeged, Dóm tér 8, H-6720 Szeged, Hungary

Alanine and glutathione targeting of dopamine- or ibuprofen-coupled polypeptide nanocarriers elevates crossing across the blood-brain barrier and protective effects

F-KB3-5 ^{1,2}Szilvia Kecskés, ^{1,2}Akos Menyhart, ^{1,2}Eszter Farkas **15'**

¹HCEMM-USZ Cerebral Blood Flow and Metabolism Research Group, HCEMM Nonprofit Ltd., Szeged, Hungary,

²Department of Cell Biology and Molecular Medicine, University of Szeged, Szeged, Hungary

Dasatinib and Quercetin are protective in focal cerebral ischemia in aged rats

14:00-15:30 F-KC3 The power of systematic reviews and meta-analyses in the translation of available clinical evidence and to initiate further research

Chair: Gábor Varga

F-KC3-1 ^{1,2,3}Péter Hegyi **40'**

¹Centre for Translational Medicine, Semmelweis University, Budapest,

²Institute of Pancreatic Diseases, Semmelweis University, Budapest, Hungary,

³Institute for Translational Medicine, Medical School, University of Pécs, Pécs, Hungary
Translational Medicine – From bedside to bench and to bedside again

F-KC3-2 ^{1,2}**Dezső Csupor** 25'

¹Institute of Clinical Pharmacy, University of Szeged, Szeged,
²Institute for Translational Medicine, University of Pécs, Pécs
TRANSLATIONAL MEDICINE – Clinical investigations of natural products initiated by meta-analyses

F-KC3-3 ^{1,2}**Gábor Varga** 25'

¹Centre for Translational Medicine, Semmelweis University, Budapest,
²Department of Oral Biology, Semmelweis University, Budapest
Translational Medicine – From molecular physiology to meta-analyses to molecular pharmacology of epithelial ion transport and transport products

15:30-15:50 **Coffee break**

15:50-17:20 **F-KA4** **Cell and gene therapy – the way to clinical application**

Chairs: András Dinnyés, Péter Ferdinandy

F-KA4-1 **András Dinnyés**^{1,2,3}, Anita Fehér¹, Suchitra Muenthaisong¹, Laura Colar Zanjko^{1,3}, Andrea Balogh¹, Kornél Kistamás¹, Krisztina Bánfai¹
15+3'

¹BioTalentum Ltd., Gödöllő, ²Department of Cell Biology and Molecular Medicine, USZ, ³Department of Physiology and Animal Health, Institute of Physiology and Animal Nutrition, MATE, Gödöllő
Progress report on developments towards human cell and gene therapy and xenoorgan transplantation

F-KA4-2 **László Cervenak**, Kajdácsi Erika, Bihari György, Vadicsku Dorina, Kocsis Boglárka, Debreczeni Márta Lídia, Demeter Flóra **15+3'**

Cell Biology and Cell Therapy Group, Department of Internal Medicine and Haematology, Semmelweis University, Budapest
A multipurpose anti-inflammatory therapeutic agent: mesenchymal stem cells

F-KA4-3 ^{1,2}**Bence Ágg**, ^{1,2}Benczik Bettina, ¹Balogh Olivér, ¹Váczy-Földi Máté, ¹Bereczki Zoltán, ¹Pétevári Mátyás, ^{1,2}Ferdinandy Péter **15+3'**

¹Cardiometabolic and HUN-REN-SU System Pharmacology Research Group, Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest,
²Pharmahungary Group, Szeged
Network theoretical and machine-learning-based analysis of the interactome for the development of oligonucleotide therapies in cardiovascular diseases

F-KA4-4 **Zoltán Veréb**^{1,2}, Diána Szűcs^{1,2}, Tamás Monostori^{1,2}, Lajos Kemény^{1,2,3} **15+3'**

¹ Regenerative Medicine and Cellular Pharmacology Laboratory, Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary;

² Centre of Excellence for Interdisciplinary Research, Development and Innovation, University of Szeged, Szeged, Hungary

³ Hungarian Centre of Excellence for Molecular Medicine-USz Skin Research Group, University of Szeged, Szeged, Hungary.

Pre-clinical development of a cell therapy product

F-KA4-5 Péter Ferdinandy 15+3'

MTA-SE System Pharmacology Research Group, Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest, Hungary; and Pharmahungary Group, Szeged, Hungary

Development of small non-coding RNA therapeutics: the example of protectomiR miR-450a mimic

15:50-17:20 F-KB4 Research relationships between industry and academia

Chair: Viktor Román

F-KB4-1 ^{1,2}Balazs Lendvai 20'

¹Gedeon Richter Plc, Pharmacological and Drug Safety Department, Budapest

²Department of Richter, Semmelweis University, Budapest
Ecosystem network around Gedeon Richter Plc.

F-KB4-2 Zsolt Némethy 20'

Gedeon Richter Plc., Laboratory of Systems Biology, Budapest

Optimization of novel $\alpha 7$ nicotinic acetylcholine receptor positive allosteric modulators and the discovery of a preclinical development candidate molecule

F-KB4-3 Szilvia Benkő 20'

Department of Physiology, Faculty of Medicine, University of Debrecen, Debrecen

Intracellular pattern recognition nod-like receptors (NLRs) in different macrophage subpopulations

F-KB4-4 ^{1,2,3}István Hernádi, ^{1,2}Anna Padányi, ¹Evelin Kiefer, ¹Antonietta Vitális-Kovács, ¹Rafaella M. Riszt, ¹Balázs Knakker 20'

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Development of a complex translational test battery for the investigation of cortical excitability in non-human primates

17:20-17:40 F-KA5 Awards Ceremony- Young Investigators- Oral and Poster Closing of the Conference