



88th Hungarian Society of Physiology (MÉT) and
Hungarian Microcirculation and Vascular Biology Society (MMVBT)
2026. Joint Conference

June 10-12, 2026 | Semmelweis University, Basic Medical Science Center



Wednesday, June 10

Szent-Györgyi Albert Lecture Hall	Hevesy György Lecture Hall
10:00-11:00 Hungarian Physiological Society Executive Board and Management Meeting	
11:00-11:30 Opening ceremony	
11:30-12:30 Keynote lecture: János PETI-PETERDI	
12:30-14:30 Poster Session I. and sandwich lunch	
Session I. Nephrology I.: Renal pathophysiology to potential treatment MANET-MÉT Chairs: Gábor Kökény - András Balla <i>10 min + 5 min discussion</i> 14:30 A novel neuronally differentiated endothelial cell subtype regulates organ blood flow in the kidney and brain -Georgina Gyarmati 14:45 Methane improves graft function in a porcine kidney transplantation model -Dániel Érces 15:00 Kidneys of heterozygous dihydrolipoamide dehydrogenase KO mice are partially protected from ischemia-reperfusion injury -Gábor Szénási 15:15 PDE5 inhibition reduces diabetic tubular damage -Julianna Pollok 15:30 Sigma-1 receptor as a novel therapeutic target in diabetic kidney disease -Hanga Kállay 15:45 TIMP1 is a key regulator of diabetic nephropathy progression -Gábor Kökény	Session II. TDK (in Hungarian) Chairs: Ferenc Bari - Zoltán Rakonczay <i>10 min + 3 min discussion</i> 14:30 Hypercholesterolemia-induced lipidomic alterations in the hearts of male and female rats -Gergő Zalán Biró 14:43 Inhibition of L-type amino acid transporters (LATs) impairs thermogenesis in human cervical-derived adipocytes -Nóra Enyedi 14:56 How does TRPV1 contribute to the regulation of body temperature responses during physical exercise? -Borbála Bernadett Gárdos 15:09 The effect of the Syk tyrosine kinase inhibitor lanraplenib on immune complex-mediated inflammation -Tamara Józsa 15:22 Anti-inflammatory and neuroprotective effects of inflammasome inhibitors following contusion spinal cord injury Barnabás Pájer 15:35 Hemokinin-1 as a modulator of thermoregulation -Dávid Vince Simon 15:48 The Role of Metabolic Rhythm in Contact Dermatitis -Bernadett Vendl
16:00-16:30 Coffee break	
Session III. Nephrology II.: Understanding rare kidney diseases MANET-MÉT Chairs: Kálmán Tory - Nóra Ledó <i>10 min + 5 min discussion</i> 16:30 Dent disease: genotype-phenotype correlation and alterations of the endocytotic apparatus of the proximal tubule -Dániel Jakab 16:45 The role of temperature in TMEM260-associated kidney involvement with incomplete penetrance -Tália Magdolna Keszthelyi 17:00 Podocin oligomers regulate the ordering of nephrin chains -Violetta Antal-Kónya 17:15 Src Family Kinases Hck, Fgr, and Lyn Drive Disease Progression in Experimental Immune Complex-Mediated Glomerulonephritis -Dorottya Deli 17:30 Renal DNase I Expression is Associated with Disease Activity in Human Lupus Nephritis -Domonkos Előd Kovács 17:45 Acknowledgements: Hungarian Society of Nephrology -Nóra Ledó - 5 min	Session IV. Revisiting Physiology Education / Élettan oktatás Moderators: Levente Kiss (Semmelweis University), Beatrix Dienes (University of Debrecen), Gyula Sály (University of Szeged), István Szabó (University of Pécs), Zhi Xiong Chen (National University of Singapore) <i>90 min</i> 16:30 Revisiting physiology education: current challenges and structured dialogue for future directions - Levente Kiss
18:30-19:30 Hungarian Physiological Society General Assembly	
19:30-21:30 Welcome reception (aula of the venue)	

Wednesday, June 10		Thursday, June 11		Friday, June 12		
8:00	from 8:00 REGISTRATION	from 8:00 REGISTRATION		from 8:00 REGISTRATION		
8:30		SESSION V. Circadian rhythms from research to clinical practice	SESSION VI. Mechanisms of brain disorders: cellular, vascular and stress-responsive pathways	SESSION XI. Translational cardiology	SESSION XII. Trasnlatonal immunology	
9:00						
9:30						
10:00	Hungarian Physiological Society Executive Board and Management Meeting			Coffee break		
10:30	Opening ceremony	Keynote lecture: Csaba SZABÓ		SESSION XIII. Microcirculation in neurological diseases: MMVBT	SESSION XIV. Signaling pathways in physiological and pathophysiological regulation	
11:00						
11:30	Keynote lecture: János PETI-PETERDI	Poster session II. and sandwich lunch				
12:00						
12:30						
13:00						
13:30	Poster session I. and sandwich lunch	Keynote lecture: Christine R. ROSE				
14:00						
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15:00						
15:30	SESSION I. Nephrology I.: Renal pathophysiology to potential treatments MANET-MÉT	SESSION II. TDK (in Hungarian)	Closing remarks			
16:00	Coffee break					
16:30	SESSION III. Nephrology II.: Understanding rare kidney diseases MANET-MÉT	SESSION IV. Revisiting physiology education	Hungarian Microcirculation and Vascular Biology Society Executive Board Meeting			
17:00						
17:30						
18:00	Hungarian Physiological Society General Assembly		Hungarian Microcirculation and Vascular Biology Society General Assembly			
18:30						
19:00						
20:00	Welcome reception		Conference dinner (with river cruise)			
20:30						

Thursday, June 11

Szent-Györgyi Albert Lecture Hall	Hevesy György Lecture Hall
Session V. Circadian Rhythms from Research to Clinical Practice Chairs: Krisztina Káldi - Péter László Kanizsai <i>10 min + 3 min discussion</i> <i>08:30</i> Adipose tissues on a schedule: the impact of time-restricted feeding on rhythmicity, immune cell trafficking, and inflammation -Krisztina Ella <i>08:43</i> Time-restricted feeding alleviates contact dermatitis -Zsófia Búr <i>08:56</i> Circadian Rythm and Cancer -László Csaba Mangel <i>09:09</i> Circadian rhythms and emergency care Péter László Kanizsai <i>09:22</i> Heart Rate Patterns in Nocturnal Sleep: Identifying Biomarkers of Human Circadian Rhythmicity Róbert Bódzis <i>09:35</i> Associations between chronotype, diurnal cortisol rhythm and insomnia severity among healthcare professionals in shift work -Katalin Fusz	Session VI. Mechanisms of brain disorders: cellular, vascular and stress-responsive pathways Chairs: Erika Pintér - Dóra Zelena <i>08:30</i> Modelling the aging-Parkinson axis using patient-derived cellular systems Janelle Drouin-Ouellet - 20+5 <i>08:55</i> Direct Neural Reprogramming as a Cellular Model of Human Brain Aging and Neurodegeneration Karolina Pircs - 17+3 <i>09:15</i> The role of pericytes in age-related brain disorders István Krizbai - 20+5 <i>09:40</i> Transient receptor potential ankyrin 1 ion channels may modulate the stress responses through glia-mediated mechanisms in the mouse model of posttraumatic stress disorder János Konkoly - 17+3
10:00 – 10:30 Coffee break	
10:30 – 11:30 Keynote lecture: Csaba SZABÓ	
10:30 – 11:30 Poster Session II. and sandwich lunch	
Session VII. Novel mechanisms of cerebral blood flow regulation: from molecules to humans Chairs: Ákos Koller - Péter Tóth <i>13:30</i> Insights on cerebrovascular autoregulation from a piglet cranial window model - Bart Depreitere - 15+5 <i>13:50</i> Molecular bases of the opposite flow-induced responses of pre- and post-circle of Willis arteries Ákos Koller- 10+5 <i>14:05</i> The role of arachidonic acid metabolites in the regulation of cerebral blood flow Ines Drenjančević - 10+5 <i>14:20</i> The significance and mechanism of age-related neurovascular uncoupling: the role of age-dependent IGF-1 deficiency - Péter Tóth - 10+5 <i>14:35</i> Changes in vasomotor responses of extra- and intracranial arteries and placental vascular structure in aged pregnant rats - Bence Varga - 8+2 <i>14:45</i> Regional characteristics of glymphatic dysfunction in aneurysmal subarachnoid hemorrhage Levente Stankovics - 8+2 <i>14:55</i> Association of modifiable risk factors with retinal vascular health and cognitive performance in an occupational cohort (Simmelweis Study) Tamás Csípő - 8+2	Session VIII. Cardiac electrophysiology Chairs: István Baczkó - Balázs Horváth <i>12 min + 5 min discussion</i> <i>13:30</i> Investigation of cardiac repolarization reserve: the importance of ventricular Ikur inhibition Alaa Amin Elmubarak Abdelmagid <i>13:47</i> Assessment of intracellular calcium handling and cardiac alternans in a canine model of elite exercise - Noémi Tóth <i>14:04</i> Reasons for the lack of action potential prolongation by the IKr blocker amsacrine József Óvári <i>14:21</i> β-Adrenergic regulation of L-type Ca2+ current AND Na+/Ca2+ exchange current in canine ventricular cardiomyocytes - Zsigmond Máté Kovács <i>14:38</i> Sex differences in canine ventricular electrophysiology - Norbert Szentandrassy
15:00-15:30 Coffee break	
Session IX. Young Investigators Chair: Zoltán Rakonczay <i>10 min + 5 min discussion</i> <i>15:30</i> The Role of HCN Channels in the Function of the Female Reproductive System in a Rat Model of PCOS Bálint Bányai <i>15:45</i> Kv1.5 channel dysfunction in pulmonary arterial hypertension - Réka Csáki <i>16:00</i> Uncovering an LPA-mediated immune escape mechanism in human melanoma - Enikő Major <i>16:15</i> Neutrophil EVs Modulate Monocyte Viability and Immune Responses - Mátka Nagy <i>16:30</i> Mapping neutrophil migration induced by formyl peptides using novel biosensors - Attila Puskás <i>16:45</i> Improving the outcome of ischemic stroke through the muscle-brain axis - Anna Törteli	Session X. Clinical Cardiovascular Physiology: MHT-MÉT Chairs: Domonkos Cseh - Eszter Mária Horváth <i>12 min + 5 min discussion</i> <i>15:30</i> Evidences supporting the measurement of carotid-femoral and brachial-ankle pulse wave velocity in clinical practice: teaser before the incoming Artery Society guidelines - János Nemcsik <i>15:47</i> Frequency and predictive factors of white-coat hypertension in grade 1 hypertensive patients: results of the Hungarian ABPM Registry Dorottya Tímea Pásztor <i>16:04</i> Cardiovascular Diseases After Kidney Transplantation: Translating Traditional Risks Into Precision Prevention - Orsolya Cseprekál

	<i>16:21</i> Sympathetic Overactivity: Renal Denervation in Resistant Hypertension - Imola Fejes <i>16:38</i> Age- and sex-specific haemodynamic mechanisms underlying different hypertensive phenotypes - Domonkos Cseh
17:00 – 18:00 Hungarian Microcirculation and Vascular Biology Society Executive Board Meeting	
18:00 – 19:00 Hungarian Microcirculation and Vascular Biology Society General Assembly	
20:00 – 22:00 Conference dinner (with river cruise)	

Friday, June 12

Szent-Györgyi Albert Lecture Hall	Hevesy György Lecture Hall
Session XI. Translational cardiology Chairs: Gábor Földes - Tamás Radovits <i>10 min + 5 min discussion</i> <i>08:30</i> Myotropic Ther apy and the Regulation of Myocardial Function - Attila Tóth <i>08:45</i> SGLT2 Inhibitors in Cardioprotection: Evidence Across Species and Underlying Mechanisms Attila Kiss <i>09:00</i> Development of miRNA therapeutics for cardioprotection - Anikó Görbe <i>09:15</i> The Role of Apelin as an Exerkine in Cardiac and Skeletal Muscle Exercise Adaptation - István Szokodi <i>09:30</i> Cell-matrix interactions in cardiovascular disease Gábor Földes <i>09:45</i> Increased Electrical Instability Driven by Action Potential Duration and Amplitude Alternans in Human Heart Failure: Modulation by Selective NCX Inhibition - Gergő Bitay	Session XII. Translational immunology Chair: Zoltán Jakus <i>10 min + 5 min discussion</i> <i>08:30</i> Our recent results regarding the use and mechanisms of modulated electro-hyperthermia (mEHT) in a triple-negative breast cancer (TNBC) mouse model Péter Hamar <i>08:45</i> Study of adverse cardiovascular side effects of Pfizer and Moderna mRNA-LNP COVID-19 vaccines in a rat a hypersensitivity model - László Dézsi <i>09:00</i> Characterization of the role of the local lymphatic vasculature in organ-specific responses induced by the nucleoside-modified mRNA-LNP platforms Gábor Kovács <i>09:15</i> Investigation of the Role of Neutrophil Granulocytes in the Immune Response Induced by Nucleoside-Modified mRNA-LNP Vaccines - Stella M. Sági <i>09:30</i> The circadian rhythm across the body: comparison of the central and peripheral clock functions Zalán Lumniczky <i>09:45</i> Proteolytic products in the background of neutrophil granulocyte impairment in severe human sepsis Csaba Timár
10:00 – 10:30 Coffee break	
Session XIII. Microcirculation in Neurological Diseases: MMVBT Chairs: Zoltán Benyó - Eszter Farkas <i>12 min + 5 min discussion</i> <i>10:30</i> PAQR5 Membrane Progesterone Receptor Regulates the Blood–Brain Barrier during Brain Metastasis Formation - Imola Wilhelm <i>10:47</i> Roles of NOS Isoforms in the Adaptation of the Cerebrocortical Circulation to Unilateral Carotid Artery Occlusion - László Hricisák <i>11:04</i> Alzheimer-stroke continuum: the role of spreading depolarization - Ákos Menyhárt <i>11:21</i> The role of Sigma-1 signalling in the neuroprotective effect of DMT in cerebral ischemia-reperfusion injury Sándor Nardai <i>11:38</i> Disruption of vitamin D signaling impairs cerebrovascular adaptation to carotid artery occlusion - Éva Pál	Session XIV. Signaling Pathways in Physiological and Pathophysiological Regulation Chairs: Márta Balaskó - Gergő Gulyás <i>15 min + 4 min discussion</i> <i>10:30</i> C3a signaling: Bidirectional vasoactive effects in angiotensin II-driven vascular dysfunction and ischemic heart disease - Imre Babay <i>10:49</i> The Role of Phosphatidylinositol Transfer Proteins in Maintaining Sustained Calcium Signaling - Gergő Gulyás <i>11:08</i> Hyperpolarization and cyclic nucleotide operated channel density in the arteries of hyperandrogenic rats; the effects of vitamin D - Rita Benkő <i>11:27</i> The effect of PACAP on testicular peritubular myoid cells - Ferenc Lengyel <i>11:41</i> Treadmill training delays aging-associated suppression in the central anorexigenic effects of leptin, alpha-melanocyte stimulating hormone and urocortin 2 Márta Balaskó
12:30-13:30 Keynote lecture: Christine R. ROSE	
13:30-14:00 Closing remarks	