www.actaphysiol.org

August 2014 • Volume 211 • Supplement 697

ACTA PHYSIOLOGICA

OFFICIAL JOURNAL OF THE FEDERATION OF EUROPEAN PHYSIOLOGICAL SOCIETIES

Abstracts of the Joint meeting of the Federation of European Physiological Societies (FEPS) and the Hungarian Physiological Society
27-30 August 2014
Budapest, Hungary

PUBLICATION HISTORY

Acta Physiologica 2006-

Acta Physiologica Scandinavica 1940–2005

Skandinavisches Archiv für Physiologie 1889–1939

FEPS 2014 27-30 August Budapest, Hungary

Important deadlines:
31 May, 2014 Abstract Submission
1 May, 2014 Early Bird Registration

Venue:
Basic Medical Science Center, Semmelweis University
Tűzoltó utca 37-47, 1094 Budapest, Hungary

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SCIENTIFIC PROGRAMME

27 August, 2014

10:00-19:00 **REGISTRATION**

SZENT-GYÖRGYI ALBERT ROOM

13:00-16:30
S1-A **FEPS European Young Physiologists Symposium**
Chair: **Andrea Tamás,** Hungary

13:00
S1-A1 **Cell type-specific subcellular distribution of ion channels in the central nervous system**
Andrea Lőrincz, Invited speaker
Laboratory of Cellular Neurophysiology, Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary

13:25 S1-A2 **Rapid generation of human neurons for modeling neuropsychiatric disorders**
Tamás Dankó
Department of Molecular and Cellular Physiology, Institute for Stem Cell Biology and Regenerative Medicine, Department of Pathology, Stanford University School of Medicine, Stanford, USA

13:40 S1-A3 **Descending effect on spinal nociception by amygdaloid glutamate varies with the submodality of noxious test stimulation**
Nora Bourbia, B. Sagalajev, A. Pertovaara
Institute of Biomedicine/Physiology, University of Helsinki, Finland

13:55 S1-A4 **The effect of NOS inhibitors on radical signaling and antioxidant response in Wistar rats**
Miroslava Majzúnová, Z. Pakanová, P. Bališ, M. Drobná, I. Dovinová
Institute of normal and pathologigal physiology Slovak Academy of Sciences, Bratislava, Slovakia

14:10 S1-A5 **Quantitative pilomotor axon-reflex test to assess autonomic dysfunction in Parkinson's disease**
Timo Siepmann, E. Frenz, W. Kirch, B. Min-Woo Illigens
Department of Neurology, Carl Gustav Carus University Hospital, Dresden University of Technology, Dresden, Germany

14:25 **BREAK**

14:50
S1-A6 **Reprograming of liver metabolism by alternative p38-mediated modulation of neutrophil migration**
Guadalupe Sabio, Invited speaker
Stress kinases in Diabetes, Cancer and Cardiovascular Disease Department Vascular Biology and Inflammation Centro Nacional de Investigaciones Cardiovasculares Carlos III, Madrid, Spain

15:15 S1-A7 **A hypermuscular mouse model to study SOCE and muscle fatigue**
Mónika Sztretye
Department of Physiology, University of Debrecen, Debrecen, Hungary

15:30
S1-A8 **MiRNA-24 antagonism prevents renal ischemia reperfusion injury**
J .M. Lorenzen, **Tamás Kaucsár** , C. Schauerte, R. Schmitt, S. Rong, A. Hübner, K. Scherf, J. Fiedler, F. Martino, K. Regalla, Malte Kölling, I. Sörensen, H. Hinz, J. Heineke, E. v. Rooij, H. Haller, T. Thum
Institute of Pathophysiology, Semmelweis University, Budapest, Hungary

15:45 S1-A9 **Elevated adipose and liver IRAP/oxytocinase activity may account for increased oxytocin degradation in obesity. Effect of IRAP blockade on obese phenotype**
Lucia Gajdosechova, K. Krskova, M. Suski, S.Y. Chai, R. Olszanecki, S. Zorad
Institute of Experimental Endocrinology, Slovak Academy of Sciences, Bratislava, Slovakia

16:00 S1-A10 **The A+-helix of PCI, which is removed by testisin cleavage, is a cell penetrating peptide and responsible for internalization of PCI by Jurkat cells**
Hanjiang Yang
Department of Vascular Biology and Thrombosis Research, Medical University of Vienna, Austria

16:15 S1-A11 **In vitro studies on the mechanisms involved in chemoprevention using Calluna vulgaris on vascular endothelial cells exposed to UVB**
Elena Diana Olteanu, A. Filip, S. Clichici, B. Ioana, P. Bolfa, C. Mihai, A. Muresan
Department of Physiology, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

16:30 **BREAK**

17:00 **OPENING CEREMONY**

17:30 **PLENARY LECTURE**
FEPS Keynote Lecture
Chair: **David Eisner,** UK
Vascular connexins: cell communication and beyond
Ulrich Pohl, Germany

AULA

18:30 **WELCOME RECEPTION**

HEVESY GYÖRGY ROOM

14:00-16:20
S1-B **History of European Physiological Sciences, Physiology - Origin of Prizes**
Chairs: **Osmo Hänninen,** Finland and **Emil Monos,** Hungary

14:00 S1-B1 **Robert Tigerstedt, Alfred Nobel and The Prizes**
Osmo Hänninen, F. Fyhrquist
Department of Physiology, University of Eastern Finland, Helsinki, Finland

14:20 S1-B2 **From Ivan Pavlov to space Physiology**
Alexander Meigal
Institute of Advanced Biomedical Technologies, Petrozavodsk State University, Petrozavodsk, Russia

14:40 S1-B3 **Female healers in early modern England: medical care for man and beast?**
Louise Hill Curth
University of Winchester,Great Britain

15:00 **BREAK**

15:20 S1-B4 **History of Dutch-Hungarian research platforms emerged from physiological sciences**
Csaba Nyakas, P. GM Luiten
Brain Physiology Research Unit, Semmelweis University, Budapest, Hungary

15:40 S1-B5 **Hungarian heritage in physiological sciences**
Emil Monos, L. Szollár
Institute of Human Physiology Semmelweis University, Budapest, Hungary

16:00 **PANEL DISCUSSION**
OWARDS VIRTUAL EUROPEAN MUSEUM OF PHYSIOLOGY AND MEDICINE: STEPS OF PROGRESS

16:20 **BREAK**

BÉKÉSY GYÖRGY ROOM

14:00-16:30

S1-C **FEPS Teaching Physiology Symposium**
Teaching Physiology in the Medical Curriculum: Traditional vs. Problem- based
Chairs: **Tamás Ivanics,** Hungary and **Ger J. van der Vusse,** The Netherlands

14:00 S1-C1 **Traditional medical curriculum in Semmelweis University**
Levente Kiss
Semmelweis University, Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary

14:20 S1-C2 **Problem-based learning in the medical curriculum at Maastricht University**
Mirjam G.A. oude Egbrink
Department of Physiology and Institute for Education at FHML, Maastricht University, Maastricht, The Netherlands

14:40 S1-C3 **Physiology in the medical curriculum, is it really necessary?**
Roger J.M.W. Rennenberg
Department of Internal Medicine Maastricht University Medical Centre and coordinator master in medicine Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands

15:00 **BREAK**

15:20 S1-C4 **Physiology teaching in the traditional curriculum of Semmelweis University**
Zsuzsanna Miklós
Institute of Human Physiology and Clinical Experimental Research, Semmelweis University, Budapest, Hungary

15:45 S1-C5 **Physiology teaching is a fully integrated Medical PBL curriculum in Maastricht**
Ger J. van der Vusse
Department of Physiology, Maastricht University, Maastricht, The Netherlands

16:10 **DISCUSSION**

16:30 **BREAK**

28 August, 2014

SZENT-GYÖRGYİ ALBERT ROOM

9:00 **PLENARY LECTURE**
Chair: **László Csernoch,** Hungary
Molecular Phenotyping in Personalised and Public Healthcare
Jeremy K Nicholson, UK

9:45 **BREAK**

10:15-12:15
S2-A **Acta Review Symposium, Electrical Propagation in Smooth Muscle organs**
Chairs: **Wim J Lammers**, United Arab Emirates and **Ger J. van der Vusse,** The Netherlands

10:15 S2-A1 **Slow wave propagation in the stomach: Advances in experimental and modelling techniques**
Leo Cheng
University of Auckland, New Zealand

10:40 S2-A2 **Normal and abnormal electrical propagation in the small intestine**
Wim J. Lammers
College of Medicine & Health Sciences, United Arab Emirates University, UAE

11:05 S2-A3 **Electrical propagation in the uterine muscle during pregnancy and labor**
Chiara Rabotti, M. Mischi
Eindhoven University of Technology, Eindhoven, The Netherlands

11:25 S2-A4 **Electrical propagation in the renal pelvis, ureter and bladder**
Fayez T. Hammad
United Arab Emirates University, UAE

11:45 S2-A5 **Electrical propagation in the various sites of the pulmonary veins of mammalian**
Vladislav Kuzmin, Y.V. Egorov
Institute of experimental cardiology, Russian Cardiological Research and Production Complex, Moscow, Russia

12:00 S2-A6 **Effects of methane inhalation on the nitrergic myenteric neurons and intestinal myoelectrical activity during mesenteric ischemia-reperfusion in rats**
Marietta Zita Poles, N. Bódi, P. Talapka, G. Varga, A. Pál, M. Bagyánszki, R. Gáspár, J. Kaszaki, É. Fekete, M. Boros
Institute of Surgical Research, School of Medicine; University of Szeged, Hungary

12:15 **BREAK**

AULA & GALERY

13:00-14:30 **POSTER SESSION**

P1; P 16 uneven numbers: P2; - P3; - P4; - P5; - P6; - P8; - P9; - P10; - P12
Detailed programme of the session see below.

SZENT-GYÖRGYİ ALBERT ROOM

14:30-16:30

S3-A **Non-canonical Functions of the Endogenous Opioid Peptides**
Chair: **Oleg Krishtal,** Ukraine and **Erika Pintér**, Hungary

14:30 S3-A1 **Pathophysiological consequences of endogenous opioids in injury and disease**
Kurt F. Hauser
Virginia Commonwealth University, Medical College of Virginia Campus, Richmond, Virginia, USA

14:55 S3-A2 **Glutamate mimicking mutant Dynorphin A causes spinocerebellar ataxia type 23**
Cleo J.L.M. Smeets
University Medical Center Groningen, The Netherlands

15:20 S3-A3 **Opioid neuropeptides make pores in plasma membrane: possible mechanism of signal transduction**
Oleg Krishtal, O. Maximyuk, V. Khmyz, C. Lindskog, V. Vukojević, T. Ivanova, A. Rajnisz, J. Solecka, A. Lipkowski, K. Hauser, G. Bakalkin
Bogomoletz Institute of Physiology Kiev, Ukraine

15:40 S3-A4 **The left-right neurohormonal regulation in the brain: Lateralized endogenous opioid system**
Georgy Bakalkin
Uppsala University, Uppsala, Sweden

16:00 S3-A5 **Investigation of possible interactions of pain modification actions of endogenous enkephalinergic and noradrenergic systems in Zymosan-induced chronic inflammatory pain model**
Ahmet Ayar, A. Kurt, S. Canpolat
Department of Physiology, Karadeniz Technical University, Faculty of Medicine, Trabzon, Turkey

16:15 S3-A6 **Hemokinin-1 is a potent inflammatory and pro-nociceptive peptide in acute and chronic mouse arthritis models**
Éva Borbély, K. Bölcskei, K. Békefi, A. Berger, C. J. Paige, J.J. McDougall, M. Attila, T. Németh, M. Kovács, E. Pintér, J. Szolcsányi, Zs. Helyes
Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, University of Pécs, Pécs, Hungary

16:30 **BREAK**

17:00 **PLENARY LECTURE**
Chair: **Attila Mócsai,** Hungary
Yeast genetics in mammalian stem cells
Josef Penninger, Austria

17:45 **BREAK**

HEVESY GYÖRGY ROOM

10:15-12:15

S2-B **Nutrition and Cardiovascular Health: New Perspectives in Prevention and Therapy**

Chairs: **Grant N. Pierce,** Canada and **Dragan Djuric,** Serbia

10:15 S2-B1 **Homocysteine and homocysteine-thiolactone induce cardiac and vascular damage: interplay with oxygen consumption, oxidative stress, and gasotransmitters**

Dragan Djuric, V. Zivkovic, M. Radenkovic, M. Stanic, D. Krstic, O.Stanojlovic, J. Jakovljevic, V. Jakovljevic

University of Belgrade, Serbia

10:40 S2-B2 **Epigenetic modulation of cardioprotection with plant compounds**

Vincenzo Lionetti

Institute of Life Sciences, Scuola Superiore Sant' Anna, Pisa, Italy

11:05 S2-B3 **Dietary factors for favorable modulation of platelet function**

Judit Barta

UDMHSC Institute of Cardiology, Debrecen, Hungary

11:25 S2-B4 **The use of Dietary Flaxseed to promote Cardiovascular Health**

Grant N. Pierce, A.L. Edel, R. LaVallee, S. Caligiuri, H. Aukema, A. Ravandi, R. Guzman, D.R. Leyva,M. Aliani

Canadian Centre for Agri-food Research in Health and Medicine (CCARM), St. Boniface Hospital, Canada

11:45 S2-B5 **Interaction of clopidogrel and statins in secondary prevention after ischemic stroke**

Timo Siepmann, D. Heinke, J. Kepplinger, K. Barlinn, S. Gehrisch,X. Grählert, U. Schwanebeck, H. Reichmann, V. Puetz, U. Bodechtel, G. Gahn , J. Kepplinger, K. Barlinn, S. Gehrisch,X. Grählert, U. Schwanebeck, H. Reichmann, V. Puetz, U. Bodechtel, G. Gahn

Department of Neurology, Carl Gustav Carus University Hospital, Dresden University of Technology, Dresden, Germany

12:00 S2-B6 **Effects of L-arginine, vitamin C and folic acid on coronary hemodynamics, oxidative stress markers and NO system in isolated rat heart**

Vladimir Jakovljevic, A. Vusanovic, V. Zivkovic, I. Srejovic, N. Barudzic, D. Djuric

Department of Physiology, Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia

12:15 **BREAK**

14:30-16:30

S3-B **Signalling at Membrane Contact Sites**

Chair: **Nicolas Demaurex,** Switzerland and **Péter Várnai,** Hungary

14:30 S3-B1 **Coupling acidic organelles and the endoplasmic reticulum through Ca2+. A role for membrane contact sites?**

Sandip Patel

UCL Research Department of Cell and Developmental Biology, London, UK

14:55 S3-B2 **Calcium and ROS signaling at the ER-mitochondrial interface**
Gyorgy Hajnoczky
MitoCare Center, Thomas Jefferson University, Philadelphia, USA

15:20 S3-B3 **Broadband connections within the cell: How the mitochondria talk to the endomembrane?**
Benoît Kornmann
ETH Zürich- Institute of Biochemstry, Zürich, Switzerland

15:45 S3-B4 **Investigating membrane contact sites between the endoplasmic reticulum and phagosomes**
Paula Nunes
University of Geneva, Switzerland

16:10 S3-B5 **Differential impact of 5-phosphatase-mediated and phospholipase C-induced plasma membrane PtdIns(4,5)P2 depletion on G protein-coupled receptor endocytosis**
Dániel J. Tóth, J.T. Tóth, B. Tallósy, L. Hunyady, P. Várnai
Department of Physiology, Semmelweis University, Budapest, Hungary

16:20 S3-B6 **Glycine modulates membrane potential, cell volume, and phagocytosis in murine microglia**
Marlena Beyreis, B. Komm, M. Kittl, M. Jakab, M. Ritter, H. Kerschbaum
Institute of Physiology and Pathophysiology, Paracelsus Medical University, Salzburg, Austria

16:30 **BREAK**

BÉKÉSY GYÖRGY ROOM

10:15-12:15

S2-C **New Therapeutical Targets in Acute Pancreatitis**
Chairs: **Ole H. Petersen,** UK and **Péter Hegyi,** Hungary

10:15 Opening remarks
Péter Hegyi, Hungary

10:20 S2-C1 **Characterization of pancreatic acinar Ca2+ influx pathway leads topotential new therapy for pancreatitis**
Ole H. Petersen
Cardiff University, Cardiff, UK

10:40 S2-C2 **How to target the inflammatory response in pancreatitis**
Julia Mayerle
Department of Medicine A, University Medicine, Ernst-Moritz-Arndt-University Greifswald, Germany

11:00 S2-C3 **Insulin protects pancreatic acinar cells from pancreatitis-inducing agents**
Jason Bruce,
A. Samad, P.Mankad, J. Whitehouse, W. Patel, M. Alves-Simoes, A. K.Siriwardena Faculty of Life Sciences, The University of Manchester, UK

11:20 S2-C4 **Inhibition of CFTR function is critical in the development of pancreatitis**
József Maléth
University of Szeged, Hungary

11:40 S2-C5 **ER-PM junctions in pancreatic acinar and pancreatic cancer cells: from structure to function**
Alexei Tepikin
The University of Liverpool, UK

12:00 S2-C6 **The effect of taurocholic acid on ryanodine receptor and SR calcium pump activity**
János Almássy, N. Geyer, Gy. Diszházi, I. Jóna
University of Debrecen, Faculty of Medicine, Department of Physiology, Hungary

12:15 **BREAK**

14:30-16:30
S3-C **Epithelial Function and Repair**
Chairs: **Gábor Varga,** Hungary and **Zoltán Rakonczay**, Hungary

14:30 S3-C1 **Epithelial fluid and HCO3- secretion**
Shmuel Muallem
National Institutes of Health/ NIDCR/NIH, Beersheba, Israel

14:55 S3-C2 **HCO3- secretory function of pulmonary epithelial cells**
Mike Gray
Epithelial Research Group, Institute for Cell & Molecular Biosciences, Newcastle University Medical, UK

15:20 S3-C3 **Physiological and pathophysiological roles of pancreatic ducts**
Zoltán Rakonczay Jr.
University of Szeged, First Department of Medicine, Szeged, Hungary

15:40 S3-C4 **Epithelial transport processes of ameloblasts leading to dental enamel formation**
Gábor Varga
Department of Oral Biology, Semmelweis University, Budapest, Hungary

16:00 S3-C5 **Aquaporin-3 (AQP3) in cell proliferation, a potential target for therapeutic drugs**
Miriam Echevarría, A. Galán-Cobo, A. Serna, R.R. Lorca, I.S. Gomar, J.J. Toledo-Aral
Instituto de Biomedicina de Sevilla (IBiS), Hospital Universitario Virgen del Rocío/CSIC/Universidad, Seville, Spain

16:15 S3-C6 **Basal ciliary activity depends on ATP release in respiratory epithelium of mouse trachea**
Manuel J. Villalón, K. Droguett, N. Barrera
Pontificia Universidad Católica de Chile, Santiago, Chile

16:30 **BREAK**

HÁRI PÁL ROOM

10:15-12:15
S2-D **Lipid Homeostasis: What We Learnt from Sex Hormone Estrogens**
Chairs: **Maria Marino,** Italy and **Raquel Marin**, Spain

10:15 S2-D1 **Estrogen more than a sex hormone**
Filippo Acconcia, V. Pallottini, M. Marino
University Roma TRE, Italy

10:40 S2-D2 **Estrogen suppresses lipid synthesis: Role of membrane estrogen receptors**
Ellis R. Levin
University of California, Irvine, USA

11:05 S2-D3 **Complex interplay between estrogens and polyunsaturated fatty acids in hippocampal lipid homeostasis: Relevance for Alzheimer's Disease**
Mario Díaz
University of La Laguna, Tenerife, Spain

11:30 S2-D4 **Bisphenol-A as a potential environmental factor that alters the development**
Alfonso Abizaid
Carleton University, Department of Neuroscience, Ottawa, Ontario, Canada

11:55 S2-D5 **Cholesterol homeostasis in the brain: A sex and age viewpoint**
Valentina Pallottini, M. Segatto, F. Acconcia, M. Marino
University Roma Tre, Italy

12:05 S2-D6 **The determination of sodium salicylate effect to body weights and fatty acid values in the frontal lobe of brain on the immobilized rats**
Alpaslan Dayangaç, S. Citil, M. Bahsi, T. Aktas, O. Yilmaz
Ahi Evran University, Faculty of Art & Science, Department of Biology, Kırşehir, Turkey

12:15 **BREAK**

14:30-16:30
S3-D **Novel Mechanisms Contributing to Aging**
Chairs: **Ákos Koller,** Hungary and **Alexander Bürkle**, Germany

14:30 S3-D1 **Functional, morphological and molecular changes in arteries as a function of age**
Ákos Koller
Department of Pathophysiology and Gerontology, Medical School, and Szentágothai Res. Center, University of Pécs and Department of Physiology, Hungary; New York Medical College, NY, USA

14:50 S3-D2 **Mechanisms of extension of cognitive health span with IGF-1**
William E. Sonntag
University of Oklahoma Health Sciences Center, Oklahoma City, USA

15:15 S3-D3 **Novel model of age-related cognitive impairment and molecular mechanism of synaptic failure**
Ferenc Deák, S. Logan, N. Szarka, A. Orock, C. Giles, M.C. Mitschelen, J. Wren, Á. Koller, W.E. Sonntag
Dept. Geriatric Medicine, Univ. Oklahoma, USA

15:35 S3-D4 **Determination of biological age in humans: Results from the EU FP7 MARK-AGE project**
Alexander Bürkle
University of Konstanz, Germany

16:00 S3-D5 **Age-related changes in response to ischemia and adaptation in male rat hearts: Potential molecular mechanisms behind**
Tanya Ravingerova, L. Griecsova, V. Ledvenyiova, Vinoth KM Khandelwal, I. Gablovsky, I. Bernatova, Z. Tatarkova
Institute for Heart Research, Slovak Academy of Sciences, Bratislava, Slovakia

16:15 S3-D6 **Aging dependent GDNF induction by hypoxia in Carotid Body: Implications for antiparkinsonian cell therapy**
Juan J. Toledo-Aral, A.B. Muñoz-Manchado, R. Ramirez-Lorca, S. Romo-Madero, N. Suárez-Luna, A. Bermejo-Navas, M. Olivares, M. Oliver, M. Echevarría, J. López-Barneo, J. Villadiego
Dep. Physiology. Instituto de Biomedicina de Sevilla. HUVR/CSIC/US, Sevilla, Spain

16:30 **BREAK**

BEZNÁK ALADÁR ROOM

10:15-12:15
S2-E **Regulation of Mitochondrial Function in Heart Failure: From Health to Dysfunction**
Chairs: **Ger JM Stienen**, The Netherlands and **Rob CI Wüst,** The Netherlands

10:15 S2-E1 **Alternations in mitochondrial structure and function in rat myocardium in chronic heart failure**
Rob Cl Wüst, G. JM Stienen
Department of Physiology, VU Medical Center Amsterdam, Amsterdam, The Netherlands

10:35 S2-E2 **Diffusion obstacles shape the environment surrounding mitochondria in heart**
Marko Vendelin, N. Jepihhina, P. Simson, M. Laasmaa, P. Peterson
Institute of Cybernetics at Tallinn University of Technology, Tallinn, Estonia

10:55 S2-E3 **Myocardial mitochondrial respiration in human heart failure**
Flemming Dela, N. Stride, L.B. Christensen, T. Yokota
Center for Healthy Aging, University of Copenhagen, Denmark

11:20 S2-E4 **Ca2+ microdomains and interaction between mitochondria and ER/SR: Open questions**
Marta Giacomello
Venetian Institute of Molecular Medicine, Padova, Italy

11:45 S2-E5 **The effects of Simvastatin on skeletal muscle treated with LPS in rats**
A S. Tamer, **Elif Ozkok** , H. Yorulmaz, G. Ates, P. Oflazer
Istanbul University, Deparment of Neuroscience, The Institute for Experimental Medicine, Istanbul, Turkey

12:00 S2-E6 **Exercise performed before and during sub-chronic Doxorubicin treatment mitigates cardiac mitochondrial alteration**
A. Ascensao, **Inês Marques Aleixo** , E.S. Alves, D.R. Roca, A.I. Padrão, J.R. Torrella, G. Viscor, R. Ferreira, P.J. Oliveira, J. Magalhaes
CIAFEL-Research Centre in Physical Activity, Health and Leisure, Faculty of Sport, University of Portugal, Porto, Portugal

12:15 **BREAK**

14:30-16:30

S3-E **Current Trends in Respiratory Physiology: From Lung Function Towards System Biology Approaches**
Chairs: **Ildikó Horváth,** Hungary and **Peter J. Sterk,** The Netherlands

14:30 S3-E1 **The links between lung function and cardiovascular diseases**
Ildikó Horváth
Semmelweis University, Department of Pulmonology, Budapest, Hungary

14:55 S3-E2 **Oxidative stress pathways as new therapeutic opportunities: from infection to lung ageing**
Kazuhiro Ito
NHLI, Imperial College, London, UK

15:20 S3-E3 **Mast cell biology in the human lung**
Hans Jürgen Hoffmann
Aarhus University , Denmark

15:45 S3- E4 **Systems medicine and big data to phenotype and treat chronic airway diseases**
Peter J. Sterk
Dept. Respiratory Medicine Academic Medical Centre, University of Amsterdam, The Netherlands

16:10 S3- E5 **Bronchoconstriction and alveolar derecruitment following extracorporeal circulation: good by(e)pass?**
Ferenc Peták, Á.L. Balogh, K. Névery, J. Tolnai, B. Babik
University of Szeged, Department of Medical Physics and Informatics, Szeged, Hungary

16:20 S3- E6 **Metabolic risk factors in insulin resistant vs. insulin sensitive asthma patients**
Krisztián Pák, Z. Képes, T. Erdei, M. Bombicz, D. Priksz, B. Varga, B. Juhasz, A. Fodor, M. Szilasi, J. Zsuga, R. Gesztelyi
Department of Pharmacology, Faculty of Pharmacy, University of Debrecen, Hungary

16:30 **BREAK**

POSTER SESSION

AULA & GALERY

13:00-14:30

P1 **Teaching & History of Physiology**
Chair: **Tamás Ivanics,** Hungary

P1.1 **Replacement of animal use in medical physiology**
Beti Dejanova , D.Dewhurst, S. Petrovska, V. Antevska,S. Mancevska, J. Pluncevic Dewhurst, Petrovska, Antevska, Mancevska, Pluncevic
Institute of Physiology, Medical Faculty, University of Skopje, Macedonia

P1.2 **Ivan Petrovitsh Pavlov - the Nobel laureate for Physiology or Medicine**
Elena Chugunova
Faculty of Cell Biology. Division of Cellular and Molecular Neurobiology. University of Salzburg, Salzburg, Austria

P1.3 **Physiology in context of moral and political philosophy: Support of UNO-agenda 21**
Eva Neu, M.Ch. Michailov, L.-P.-Yorck Zebuhr, F. Braun, H. Walsch, A.R. Oswald, S. Molnar, M. Holler, G. Weber
Institute Umweltmedizin c/o ICSD/IAS e.V. Postfach 340316, 80100 München, Germany

P1.4 **On integrative Physiology in education and research (Part II): Summary of systematic investigations**
Eva Neu, M.Ch. Michailov, D. Martin, V. Foltin, U. Welscher, E. Gornik, W. Seidenbusch, H.W. Bauer, A. Hofstetter, G. Staehler
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P1.5 **On integrative Physiology (Part II): Regular congress participation and reports**
Michael Ch. Michailov, U. Welscher, E. Neu, J. Foltinova, G. Werner, G. Weber, M. Schratz
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P2 **Molecular and Cell Physiology**
Chair: **Tibor Zelles,** Hungary

P2.1 **Regulation of a human stem cell specific microRNA cluster C19MC**
Ábel Fóthi, A. Schamberger, Zs. Erdei, Á. Apáti, T.I. Orbán
Institute of Enzymology, RCNS, HAS, Budapest, Hungary

P2.3 **Endometrial oestrogen and progesterone receptors localization in the fat sand rat, Psammomys obesus, a diurnal gerbil**
Amina Boubekri, T.G. Spychalowicz, F. Khammar, E. Jean Marie
USTHB-FSB, Algiers, Algeria

P2.5 **Arrestin binding of the beta2-adrenergic receptor is regulated via heterodimerization with the angiotensin type 1A receptor**
András Tóth, P. Gyombolai, B. Szalai, P. Várnai, L. Hunyady
Physiology Department, Semmelweis University, Budapest, Hungary

P2.7 **The effects of Endothelin-1 on the level of redox proteins in H9c2 cells**
Anikó Barta, A. Czegledi, A. Czompa, A. Tosaki, I. Lekli
University of Debrecen, Faculty of Pharmacy, Department of Pharmacology, Debrecen, Hungary

P2.9 **Physiological effects of ophiobolins on inward rectifier ion channels comparing KAT1 channel in plants to Kir2.x channels in animals**
Balázs Kovács, V. Szuts, O. Bencsik, A. Szekeres, D. Borcsok, M. Horvath, F. Otvos, A. Kovacs, Cs. Vagvolgyi, K. Halasy, I. Tari, A. Ördög
Department of Plant Biology, Faculty of Science and Informatics, University of Szeged, Hungary

P2.11 **Improved methodical approach for quantitative BRET analysis of G protein coupled receptor dimerization**
Bence Szalai, P. Hoffmann, S. Prokop, P. Várnai, L. Hunyady
Semmelweis University and MTA-SE Laboratory of Molecular Physiology, Budapest, Hungary

P2.13 **GPCR-induced paracrine transactivation of CB1 cannabinoid receptors in vascular smooth muscle cells modulates calcium signaling and ERK pathways**
Eszter Soltész-Katona, M. Szekeres, D. Laczkó, A. Tóth, G. Turu, L. Hunyady
Department of Physiology, Semmelweis University, Budapest, Hungary

P2.15 **Endocannabinoid-mediated modulation of GPCR signaling-induced vasoconstriction and hypertension**
Mária Szekeres, Gy. Nádasy, E. Soltész-Katona, Z. Benyó, Zs. E. Tóth, L. Hunyady
Semmelweis University, Department of Physiology, Budapest, Hungary
Chair: **Péter Enyedi,** Hungary

P2.17 **Following the inositol lipid changes upon stimulation of EGF receptor in human HEK 293 fibroblasts**
József T. Tóth, G. Gulyás, D. J. Tóth, L. Hunyady, P. Várnai
Semmelweis University, Budapest, Hungary

P2.19 **Characterization of the inherited I130N substitution in V2 vasopressin receptor revealed a gain-of- function mutation leading to NSIAD**
László Sándor Erdélyi, W.A. Mann, A. Balla, L. Hunyady
MTA-SE Laboratory of Molecular Physiology, Hungarian Academy of Sciences and Semmelweis University, Budapest, Hungary

P2.21 **Effects of apocynin, NADPH oxidase inhibitor, on levels of ADMA, MPO, iNOS and TLR4 induced by myocardial ischemia reperfusion**
Mete Ozcan, A. Uysal, I.M. Ozguler, O. Burma, N. Ilhan, E. Sahna
Firat University, Faculty of Medicine, Department of Biophysics, Elazig, Turkey

P2.23 **Human serum albumin suppresses the angiotensin-converting enzyme activities in human**
Miklós Fagyas, K. Úri, G.Á. Fülöp, V. Csató, I.E. Szentkirályi, T. Maros, T. Szerafin, I. Édes, Z. Papp, A. Tóth
Division of Clinical Physiology, Institute of Cardiology, University of Debrecen, Debrecen, Hungary

P2.25 **The bile acid, taurocholic acid activates ryanodine receptor and inhibits SERCA activity**
Nikolett Geyer, Gy. Diszházi, I. Jóna, J. Almássy
University of Debrecen, Faculty of Medicine, Department of Physilogy, Debrecen, Hungary

P2.27 **Determination of antitumor properties of synthesized chalcone-phosphazenes containing dioxybiphenyl groups against PC-3 and LNCaP cell lines**
Suat Tekin, K. Koran, F. Ozen, S. Sandal, A.O. Gorgulu

Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P2.29 **Function of RasGRP3 in the formation and progression of human breast cancer**
Zsuzsanna Nagy
University of Debrecen Department of Physiology, Debrecen, Hungary

P3 **Skeletal, Smooth and Cardiac Muscle Physiology**
Chair: **Zoltán Benyó**, Hungary

P3.1 **The effect of SERCA 1b shRNA on the differentiation of C2C12 skeletal muscle cells**
Adrienn Tóth, J. Fodor, J. Vincze, T. Oláh, T. Juhász, E. Zádor, L. Csernoch
University of Debrecen, Faculty of Medicine, Department of Physiology, Debrecen, Hungary

P3.3 **Neurokinin A induced contraction of the urinary bladder smooth muscle**
Bernadett Faragó, B. Dér, É. Ruisanchez, P. Őrsy, S. Offermanns, Z. Benyó I nstitute of Human Physiology and Clinical Experimental Research, Semmelweis University, Budapest, Hungary

P3.5 **Different characteristics of diabetic cardiomyopathy in rat models**
Csaba Mátyás, S. Korkmaz, A. Olah, B.T. Nemeth, L. Hidi, E. Birtalan, M. Torok, L. Szabo, M. Ruppert, G. Merkely, D. Kellermayer, A. Meltzer, B. Merkely, G. Szabo, T. Radovits
Heart and Vascular Center, Semmelweis University, Budapest, Hungary

P3.7 **Effects of methionine-enriched diet on the rat heart and aorta**
Dragan Djuric, O. Stanojlovic, D. Hrncic, N. Puskas, A. Rasic - Markovic, M. Colovic, D. Krstic, J.M. Bjekic, Z. Grubac, N. Sutulovic, V. Susic
Belgrade University Faculty of Medicine, Belgrade, Serbia

P3.9 **Impact of ion currents on beat-to-beat variability of action potential duration in canine myocytes**
Kornél Kistamás, F. Ruzsnavszky, B. Hegyi, K. Váczi, B. Horváth, N. Szentandrássy, T. Bányász, P.P. Nánási, J. Magyar
University of Debrecen, Department of Physiology, Debrecen, Hungary

P3.11 **The short term beat-to-beat variability of action potential duration depends on the the length of action potential and intracellular calcium**
Krisztina Váczi, B. Hegyi, F. Ruzsnavszky, K. Kistamás, B. Horváth, N. Szentandrássy, T. Bányász, P.P. Nánási, J. Magyar
Department of Physiology, University of Debrecen, Debrecen, Hungary

P3.13 **Characteristic of ischemic preconditioning under conditions of simulated hyperglycemia hyperglycemia**
Marek Zálešák, P. Blažíček, I. Gablovský, V. Ledvényiová, M. Barteková, A. Ziegelhoffer, T. Ravingerová
Institut e of Heart Research, Slovac Academy of Science, Centre of Excelence SAS NOREG, Bratislava, Slovakia

P3.15 **Selective Na+/Ca2+ exchanger inhibition prevents Ca2+ overload induced triggered arrhythmias**

Norbert Nagy, A. Kormos, Zs. Kohajda, Á. Szebeni, P. Pollesello, J. Levijoki, K. Acsai, L. Virág, P.P. Nánási, J.Gy. Papp, A. Varró, A. Tóth
MTA-SZTE Research Group of Cardiovascular Pharmacology, Hungarian Academy of Sciences, Szeged, Hungary

P3.17 **Cannabinoids and muscle weakness – Investigating the function of CB1 receptors in mammalian skeletal muscle**
Tamás Oláh, D. Bodnár, A. Tóth, J. Fodor, A. Kovács, A. Farkas, B. Nádró, P. Szentesi, L. Csernoch
University of Debrecen, Faculty of Medicine, Department of Physiology, Hungary

P4 Cardiovascular Physiology
Chair: **Eszter Horváth**, Hungary

P4.1 **Poly (ADP-ribose) polymerase (PARP) activation in chronic heart failure correlates with the level of cardiac dysfunction**
Andrea Simon, R. Benkő, G. Szabó, A. Oláh, K.V. Nagy, Cs. Mátyás, Á. Hajas, A. Kosztin, M. Pólos, I. Hartyánszky, E. Zima, T. Radovits, B. Merkely, E.M. Horváth
The Heart and Vascular Center of Semmelweis University, Budapest, Hungary

P4.3 **Angiogenic and positive inotropic effects of apelin fragments on human pluripotein stem cell-derived cardivascular cells**
Annamaria Kosztin, L. Polgár, L. Kőhidai, P. Várnai, E. Gara, J. Skopál, S. Harding, B. Merkely, G. Földes
Semmelweis University, Heart Center, Budapest, Hungary

P4.5 **Carbon monoxide pollution induces heme oxygenase-1 in ischaemic rat heart**
Attila Czompa, G. Meyer, C. Reboul, A. Motko, A. Holup, A. Tosaki, I. Lekli
University Debrecen, Faculty of Pharmacy, Department of Pharmacology, Debrecen, Hungary

P4.7 **Free radicals in civilization diseases – Friends or foe of endogenous protective processes in the myocardium**
A. Ziegelhoffer, M. Ferko, I. Waczulíková, T. Ravingerová, S. Pastoreková, I. Kancirová, M. Jašová, **Martina Muráriková**
Institute for Heart Research, Slovak Academy of Sciences, Centre of Excellence SAS NOREG, Bratislava, Slovakia

P4.9 **Interaction of Ca-sensitiser levosimendan and different catecholamines in chronic heart failure: experimental studies**
Balázs Sax, K.V. Nagy, E.M. Végh, A. Kosztin, G. Szucs, E. Zima, N. Turi-Kovacs, V. Kekesi, B. Merkely
Semmelweis University Heart and Vascular Center, Budapest, Hungary

P4.11 **Using the pulse transit time for calculation of systolic and diastolic pressure**
Calin Corciova, D. Matei, F. Corciova
Department Medical Science, University of Medicine and Pharmacy Grigore T. Popa Iasi, Romania

P4.13 **Role of store operated calcium and L-type calcium channels in coronary artery hypercontraction after ischemia and reperfusion process**
Eva M. Calderón-Sánchez, P. Callejo-García, J. Ávila-Medina, T. Smani-Hajami, A. Ordóñez-Fernández
Institute of Biomedicine of Seville (IBiS), Spain

P4.15 **Cardiovascular effects of beta-carotene are lost when it was applied at high concentration**
Evelin Csepanyi, A. Czompa, I. Lekli, A. Tosaki, I. Bak
University of Debrecen, Faculty of Pharmacy, Department of Pharmacology, Debrecen, Hungary
Chair: **Levente Kiss,** Hungary

P4.17 **Combined effects of chronic partial occlusion and gravitational load on saphenous vein: a new venous varicosity model in rat**
Gabriella Dörnyei, O. Sevcsik, M. Jäckel, E. Monos, Gy.L. Nádasy
Department of Morphology and Physiology, Institute of Basic Health Sciences, Semmelweis University, Budapest, Hungary

P4.19 **Interactions between the enzymes matrix metalloproteinases 2 and 9 and regulatory T-cell immunity in the pathogenesis of atherosclerosis**
Ines Mrakovcic-Sutic, V. Micovic, A. Lekic, A. Bulog, I. Sutic, V. Pavisic, G. Laskarin, M. Kovacevic
Department of Physiology and Immunology, Medical Faculty, University of Rijeka, Croatia

P4.21 **Autophagy and ventricular fibrillation in isolated rat hearts**
István Lekli, A. Czeglédi, A. Gyöngyösi, A. Czompa, Á. Tósaki
Department of Pharmacology and Pharmacodynamics, School of Pharmacy, University of Debrecen, Debrecen, Hungary

P4.23 **Role of the transient receptor potential vanilloid-1 (TRPV1) in the development of hydrogen chloride (HCl)-induced vasomotor response in isolated rodent carotid arteries**
Ivan Ivic, E. Pakai, M.Solymar, A. Koller, A. Garami
Medical School Pécs, Departmeent of Patophysiology and Gerontology, Pécs, Hungary

P4.25 **Functional crosstalk between L-type Ca2+ and Orai1 channels and their regulation of vascular tone**
Javier Avila-Medina, P. Gonzalez, J.A. Rosado, A. Castellano-Orozco, A. Ordoñez-Fernandez, T. Smani
Institute of Biomedicine of Seville (IBiS), Spain

P4.27 **Cardiovascular manifestations of complement activation-related pseudoallergy following administration of liposomal nanomedicines**
László Dézsi, R. Urbanics, T. Mészáros, Cs. Vázsonyi, T. Fülöp, E. Őrfi, L. Rosivall, J. Szebeni, G. Szénási
Nanomedicine Research and Education Center, Semmelweis University, Budapest, Hungary

P4.29 **Beneficial effects of Allium ursinum herbal extract (AUHE) on hypercholesterolemic hearts**
Mariann Bombicz, D. Priksz, B. Varga, R. Gesztelyi, K. Pák, A. Kertész, B. Juhász, Á. Tósaki

University of Debrecen, Faculty of Pharmacy, Department of Pharmacology, Debrecen, Hungary

P4.31 **Comparison of ishemic and omeprazole preconditioning on oxidative stress in isolated rat heart**
Nevena Barudzic, V. Jakovljevic, V. Zivkovic, I. Srejovic, D. Djuric
Department of Physiology, Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia
Chair: **Mihály Boros,** Hungary

P4.33 **The effects of Tarantula cubensis extract on renal ischemia/reperfusion injury in the rats**
Nurettin Aydogdu, E. Tastekin, Z. Cukur, M.D. Poyraz, O. Y. Yavuz, O. Kaya
University Faculty of Medicine Dept. of Physiology, Edirne, Turkey

P4.35 **Pituitary adenylate cyclase-activating polypeptide (PACAP) induces location- and age-related relaxations of isolated arteries**
Péter Cséplő, Z. Vamos, I. Ivic, G. Toth, A. Tamas, D. Reglodi, A. Koller
Univ Pécs Medical School Dept Pathophysiology and Gerontology and PAMOK KAITO Győr, Hungary

P4.37 **Effect of swimming exercise on CO pathway of resistance and conduit arteries in chronic NOS inhibition induced hypertensive rats**
Seher Ülker, G. Koçer, Ü. K. Şentürk
Akdeniz University Faculty of Medicine, Antalya, Turkey

P4.39 **Cardiovascular target-organ damage in women during menopause**
Sunchica Petrovska, B. Dejanova, M. Papazova, S. Mancevska, J. Pluncevic-Gligorovska, V. Antevska
Medical faculty, Department Institute of Physiology, Skopje, Republic of Macedonia

P4.41 **Distinct effect of crowding stress on cardiac ischemic tolerance in borderline and spontaneously hypertensive male and female rats**
Veronika Ledvenyiova, I. Bernatova, P. Slezak, I. Gablovsky, S. Carnicka, M. Bartekova, T. Ravingerova
Institute for Heart Research, Slovak Academy of Sciences, Centre of Excellence SAS NOREG, Bratislava, Slovakia

P4.43 **Conduction of excitation in the rat atria and pulmonary veins under normal condition and after octanol application**
Viktoriya Karimova, V.S. Kuzmin
Biological Department, Moscow State University, Moscow, Russian

P4.45 **The effect of curcumin on mechanical function and monophasic action potential in isolated rat hearts**
Ziya Kaygisiz, B. Kaygisiz, O. Kutlay
Eskisehir Osmangazi University, Medical Faculty, Department of Physiology, Eskisehir, Turkey

P4.47 **Sphingomyelinase induced vasorelaxations in db/db mice depend on nitric oxide and hydrogen sulfide signaling**
Zsuzsanna Straky, D. Korda, A. Párkányi, É. Ruisanchez, Z. Benyó, L. Kiss

Semmelweis University, Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary

P5 **Respiratory Physiology**
Chair: **Ildikó Horváth,** Hungary

P5.1 **Physiological, pulmonary and immunological effects of negatively charged Waterfall-Nanoaerosol**
Arnulf Hartl, M. Winklmayr, J. Prossegger, C. Grafetstätter, P. Hahne, H. Braunschmid, C. Pichler, M. Ritter
Institute of Physiology and Pathophysiology, Paracelsus Medical University, Salzburg, Austria

P5.3 **Anti-inflammatory effect of apelin/ APJ receptor system on ovalbumin induced allergic lung disease**
Bogdan Gurzu, I.L. Gurzu, L. Gorgan, D. Ungureanu
"GRIGORE T. POPA" University of Medicine and Pharmacy IASI, Romania

P5.5 **N-acetylcysteine effectively diminished meconium-induced oxidative stress**
Daniela Mokra, A. Drgova, P. Mikolka, M. Petras, J. Mokry, A. Calkovska
Dep. of Physiology, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Slovakia

P5.7 **Questions in differential diagnosis of bronchial asthma, chronic obstructive pulmonary disease and overlap syndrome**
Gábor Tajti, Cs. Papp, K. Bíró, K. Pák, Z. Képes, T. Erdei, R. Gesztelyi, M. Szilasi, J. Zsuga
Faculty of Pharmacy, University of Debrecen, Hungary

P5.9 **The involvement of local renin angiotensin system in obesity augmentation of pulmonary allergenic disease**
Irina Luciana Gurzu, F.E. Zugun, B. Gurzu
Grigore T. Popa University of Medicine and Pharmacy, Iasi, Romania

P5.11 **Cigarette smoke-induced upregulation of the Transient Receptor Potential Ankyrin 1 ion channel in the mouse lung and in a human pulmonary tissue 3-dimensional model**
József Kun, D. Feller, I. Szitter, Zs.Hajna, Á. Kemény, A. Perkecz, V. Csöngei, D. Ernszt, T. Kovács, J. Pongrácz, Zs. Helyes
Department of Pharmacology and Pharmacotherapy, Medical School, University of Pécs, Hungary

P5.13 **MDR1 C3435T allele and genotype frequency in chronic obstructive pulmonary disease**
Maja Milojkovic, J. Radovic, N. Milacic
Medical Faculty in Nis, Universitiy in Nis, Serbia

P5.15 **Meconium-induced oxidative damage and surfactant/budesonide therapy in experimental meconium aspiration syndrome**
Pavol Mikolka, J. Kopincova, D. Mokra, L. Tomcikova, A. Calkovska
Deparment of Physiology, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia

P5.17 **Gene polymorphisms of surfactant protein B are associated with respiratory distress in neonates**

Silvia Smolárová, V. Holubeková, A. Štanclová, P. Lukáč, M. Škereňová, M. Zibolen, K. Maťašová, Z. Lasabová, A. Čalkovská
Department of Physiology, Jessenius Faculty of Medicine, Comenius University (JFM CU), Department, Martin, Slovakia

P6 **Gastrointestinal Physiology**
Chair: **Gábor Varga,** Hungary

P6.1 **The possible role of Apelin on formation and healing mechanisms of ischemia reperfusion (I/R) induced mucosal lesions in rats**

Burcu Gemici, İ. Eker, V.N. İzgüt-Uysal, M. Aslan
Near East University, Nicosia-TRNC, Turkey

P6.3 **Effect of chronic systemic ozone treatment on endogen level of Nesfatin-1 in intestinal ischemia-reperfusion created rat**

Ceylan Ayada, O. Genç, Ü. Toru, R. Akcılar, S. Şahin, G. Erken, H.A. Erken, G. Turgut, S. Turgut
Dumlupınar University, Medical Faculty, Department of Physiology, Kütahya, Turkey

P6.5 **Involvement of interleukin-24 in the pathogenesis of inflammatory bowel disease**

Erna Sziksz, A. Ónody, D. Pap, L. Himer, A. Veres-Székely, V. Ruszinkó, A. Fekete, G. Veres, A. Arató, T. Tulassay, A. Szabó, Á.Vannay
MTA-SE, Pediatrics and Nephrology Research Group, and 1st Department of Pediatrics, Budapest, Hungary

P6.7 **The Transient Receptor Potential Vanilloid 1,4 (TRPV1, TRPV4) and Ankyrin 1 (TRPA1) receptor mRNAs are expressed in the human gastric mucosa**

Kata Csekő, B. Szalontai, K. Pohóczky, I. Hegedűs, A. Perkecz, A. Illés, Á. Vincze, J. Czimmer, I. Szabó, Zs. Helyes
Department of Pharmacology and Pharmacotherapy, Szentagothai Research Centre, University of Pécs, Hungary

P6.9 **Antizyme (AZ) regulates intestinal cell growth independently of polyamines**

Leonard R. Johnson, R.M. Ray
Department of Physiology, University of Tennessee Health Science Center, USA

P6.11 **Stress-induced modulation of ileal motility in Capsici fructus-intake female rats**

Mari Kimoto, J. L. Zeredo, Z. Nihei, M. S Ota, H. Yamashita, K. Kaida, K. Toda
Japan Women's University, Tokyo, Japan

P6.13 **A novel laparoscopic device for quantifying gastric slow wave activity**

Rachel Berry, N. Paskaranandavadivel, P. Du, G. O'Grady, M.L. Trew, J.A. Windsor, L.K. Cheng
Auckland Bioengineering Institute, University of Auckland, New Zealand

P6.15 **The role of the ICC myenteric plexus network in the anisotropic propagation of intestinal slow wave activity**
Shameer Sathar, M.L. Trew, L.K. Cheng
Auckland Bioengineering Institute, University of Auckland, New Zealand

P6.17 **Possible activation of immunity by chronic peripheral Ozone and Nesfatin-1 application in ischemia-reperfusion**
Ümran Toru, C. Ayada, O. Genç, Ü. Toru, R. Akcılar, S. Şahin, G. Erken, H.A. Erken, G. Turgut, S. Turgut
Dumlupınar University, Medical Faculty, Department of Thoracic Medicine, Kütahya, Turkey

P8 **Physiology of the Immune System**
Chair: **Attila Mócsai,** Hungary

P8.1 **Preventive effects of resveratrol against Schistosoma mansoni-induced liver fibrosis in mice**
Abderrhman Ismeil
Alexandaria University - Faculty of Medicine- Physiology Department, Alexandria, Egypt

P8.3 **Detection of different gene expression in human residual Epithelial cells of anterior lens capsule after manual and femtosecond laser performed capsulorhexis**
Andrea Krisztina Süközd, J. Rapp, D. Feller, J.E. Pongrácz, A. Kerek, B. Gáspár, Zs. Biró
Department of Ophtalmology, Clinical Centre, The Medical School, University of Pécs, Hungary

P8.5 **Detailed characterization of the antibacterial effect of human neutrophilic granulocyte derived extracellular vesicles**
Csaba I. Timár, A. Mak, A. Lorincz, E. Ligeti
Semmelweis Egyetem, Élettani Intézet, Budapest, Hungary

P8.7 **Release of Diphtheria Toxin Fragment A (FA) from early endosomes into the cytosol**
Ebru Hacıosmanoğlu, B. Varol, B.Ö. Edis, M. Bektaş
Istanbul Bilim University, Faculty of Medicine, Department of Physiology, Istanbul, Turkey

P8.9 **Contribution of CD40L/Mac-1 interaction to visceral adipose tissue inflammation in mouse model of high fat diet-induced obesity and obesity-related nephropathy**
Éva Nóra Bukosza, T. Kaucsar, G. Szenasi, D. Wolf, A. Zirlik, P.Hamar
Institute of Pathophysiology, Semmelweis University Budapest, Hungary

P8.11 **Nuclear envelope circularity is related to chromatin textural variance in Feulgen-stained medullar thymocytes: application in apoptosis research**
Igor Pantic, M. Basailovic, J. Paunovic M . Basailovic, J. Paunovic
Institute of Medical Physiology, School of Medicine, University of Belgrade, Serbia

P8.13 **Tadalafil (PDE5 inhibitor) suppreeses inflammation after ovalbumin sensitization in guinea pigs**

Juraj Mokry, I. Medvedova, M. Prso, A. Eichlerova, P. Mikolka, P. Kosutova, A. Fulmekova, D. Mokra
Department of Pharmacology, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia

P8.15 **In the long run hyperbaric oxygen therapy attenuates pro-inflammatory processes in streptozotocin induced diabetes in rats**
Rita Benkő, V. Ágoston, K. Ihionvien, M. Szabó, N.J. Béres, Zs. Benkő, Cs. Répás, B. Bakk-Nurdisány, M. Szepes, L. Kiss, Z. Nagy, E.M. Horváth
Semmelweis University, Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary

P8.17 **Staphylococcus enterotoxin B and thymic stromal lymphopoietin treatment of keratinocytes as a model for atopic dermatitis**
Tamás Bíró, Á. Angyal, A.G. Szöllősi, N. Vasas, E. Lisztes, A. Oláh
DE-MTA "Lendület" Cellular Physiology Research Group, Department of Physiology, University of Debrecen, Hungary

P9 Endocrinology and Metabolism
Chair: **Attila Patócs,** Hungary

P9.1 **The potential contribution of alarin to the regulation of energy balance in rats**
Alexandra Mikó, P. Balla, B. Aubrecht, N. Füredi, Sz. Soós, M. Székely, M. Balaskó, S. Brunner, B. Kofler, E.
Pétervári University of Pécs, Departement of Pathophysiology and Gerontology, Pécs, Hungary

P9.3 **Magnesium status and insulin resistance in subjects at risk for type 2 diabetes**
Ghouini Ahmed, D.E.H. Djoghlaf
Faculté de Médecine de Blida, Blida, Algeria

P9.5 **Academic stress effects food choice in health school students**
Gülsün Memi, Z.N.Ö. Kumral, N.H. Nogay
Kirklareli University, School of Health, Department of Physiology, Kirklareli, Turkey

P9.7 **Effect of different doses of Quercetin supplementation on element levels of brain tissue in diabetic rats**
Enver Ahmet Demir , B. Yazgan, M. Oz, M.I. Alp, H.S. Gergerlioglu, R. Mogulkoc, A.K. Baltaci
Selcuk University, Faculty of Medicine, Konya, Turkey

P9.9 **Age- and nutritional state-related catabolic effects of a central leptin infusion**
Ildikó Rostás, T. Rimai, E. Varga, J. Tenk, Sz. Soós, M. Székely, E. Pétervári, M. Balaskó
University of Pécs, Medical School, Department of Pathophysiology and Gerontology, Pécs, Hungary

P9.11 **The uterine and vascular actions of Estetrol delineate a distinctive profile of Estrogen Receptor ? modulation, uncoupling nuclear and membrane activation**

Jean Francois Arnal, A. Abot, C. Fontaine, J-M. Foidart, G. L. Geoffrey, F. Lenfant
INSERM U1048, Toulouse, France

P9.13 **The electron transport chain component NDUFB8 is required for glucose-stimulated insulin secretion in MIN6 cells**
Julia Parnis, P. L. Chabosseau, G. A. Rutter
Imperial College London, South Kensington Campus, London, UK

P9.15 **Ornithine transcarbamylase deficiency in a young boy with acute liver failure**
Lyece Yargui, D. Berhoune
Biochemistry Central Laboratory, Mustapha Hospital, Algiers, Algeria

P9.17 **Decreased insulin sensitivity in multiple sclerosis**
Miroslav Vlcek, A. Penesova, R. Imrich, L.Krizova, B. Kollar, P. Turcani, D. Jezova
Institute of Experimental Endocrinology & Center for Molecular Medicine, Slovak Academy of Sciences, Bratislava, Slovakia

P9.19 **Effects of cholesterol, FSH and LH on steroidogenic activity in cat granulosa cell culture**
Ozkan Simsek, S. Arikan
Department of Physiology, Faculty of Veterinary Medicine, University of Kirikkale, Turkey Chair: András Balla, Hungary

P9.21 **Asiatic acid improves vascular functions in mesenteric vascular beds isolated from high-carbohydrate, high-fat diets-induced metabolic syndrome rats**
Poungrat Pakdeechote, P. Maneesai, U. Kukongviriyapan, P. Prachaney, P. Tangsucharit
Department of Physiology, Faculty of Medicine, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand

P9.23 **Correlation of visfatin expression in subcutaneous adipose tissue with anthropometrical measures and biochemical parameters of youth male**
Sanja Novak, D. Divkovic, A. Cosic, I. Drenjancevic, K. Selthofer-Relatic
Department of Physiology and Immunology, Faculty of Medicine Osijek, University of Josip Juraj Strossmayer Osijek, Croatia

P9.25 **Effects of application of chlorpyrifos ethyl and rose water on rat pancreas**
Serdal Öğüt
Health School, Turkey

P9.27 **Irisin level in response to the patients with metabolic impairments**
Sermin Algul, S.Ozcan, A. Barutcu, I. Serhatlioglu, S. Berilgen, O.Ozcelik
Fırat University Faculty of Medicine Department of Physiology, Elazig, Turkey

P9.29 **Effects of chronic central administration of irisin on food intake, body weight and body temperature in the rats**
Suat Tekin, Y. Erden, C. Colak, S. Sandal
Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P9.31 **Chronic intracerebroventricular apelin-13 infusion in rats increases daily food intake and body weight by reducing leptin levels**
Suleyman Sandal, S. Tekin, B. Yilmaz
Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P9.33 **Does apelin-13 affect the development of brown fat?**
Ümit Yılmaz, Y. Erden, S. Tekin, E. Etem, S. Sandal
Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P9.35 **Increasing selenium concentration in animal tissues by wheat agrofortification**
Zdenko Lončarić, I. Drenjančević, B. Popović, K. Karalić, V. Ivezić, S. Novak, A. Ćosić, B.R. Singh
Faculty of Agriculture, University of Josip Juraj Strossmayer in Osijek, Croatia

P9.37 **Role of the hypothalamic CRF and AVP in mediating the activation of the HPA axis in alcohol-treated and alcohol-deprived rats**
Zsolt Bagosi, M. Palotai, A. Buzás, P. Bokor, A. Jenei, K. Csabafi, M. Jászberényi, Gy. Telegdy, Gy. Szabó
Department of Pathophysiology, University of Szeged, Hungary

P10 **Neurophysiology**
Chair: **Gábor Pethő,** Hungary

P10.1 **Nociceptive role of hemokinin-I, the newest member of the tachykinin family, in chronic traumatic neuropathy of the mouse**
Ágnes Hunyady, T. Gubányi
University of Pécs, Hungary

P10.3 **Effects of intraamygdaloid microinjections of RFRP-1 on anxiety and positive reinforcement**
Anita Kovács, L. Kristóf, T. Ollmann, L. Péczely, O. Zagoracz, R. Gálosi, N. Bencze, L. Lénárd
Institute of Physiology, Pécs University Medical School, Pécs, Hungary

P10.5 **Role of capsaicin-sensitive nerve terminals in chronic restraint stress induced increase of nociception**
Bálint Scheich, P. Vincze, B. Gaszner, E. Pintér, J. Szolcsányi, Zs. Helyes
Department of Pharmacology and Pharmacotherapy, University of Pécs Medical School; János Szentágothai, Pécs, Hungary

P10.7 **IL-1ß modifies the taste reactivity in the cingulate cortex of the rat**
Bettina Cseténi, E. Hormay, B. Nagy, I. Szabó, M. Bajnok Góré, Z. Karádi
University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary

P10.9 **Complex functional attributes of cingulate cortex glucose-monitoring neurons and their metabolic significance**
Edina Hormay, B. Cseténi, I. Szabó, B. Nagy, B. Hideg, M.B. Góré, Z. Karádi
University of Pécs, Medical School, Institute of Physiology, Pécs, Hungary

P10.11 **New semicarbazide-sensitive amine oxidase (SSAO) inhibitor as a dual antagonist of TRPA1 and TRPV1 ion channels**
Éva Sághy, M. Payrits, É. Szőke, T. Bagoly, P.Mátyus, D. Rúth, Zs. Helyes
Department of Pharmacology and Pharmacotherapy, Szentágothai Research Center, University of Pécs, Pécs, Hungary

P10.13 **Neuroprotective effect of early postnatal environmental enrichment in a rat model of Parkinson's disease**
Gábor Horváth, A. Jungling, Zs. N. Karadi, D.Cs. Farkas, G. Novogradecz, A. Kovacs, P. Kiss, B. Gaszner, D. Reglodi, A. Tamas
Department of Anatomy, University of Pecs Medical School, Pécs, Hungary

P10.15 **Kallikrein 8: a promising novel biomarker in brain tumors**
Gamze Turna, N. Kilic, G. Kurt, F. Dogulu
Ahi Evran University, Faculty of Medicine, Department of Medical Biochemistry, Kirsehir, Turkey

P10.17 **Anterior cingulate responses evoked by mechanical nociceptive stimulation in female rats**
Hiromi Yamashita, J. L. Zeredo, Z. Nihei, K. Kaida, M. Kimoto, M. Umeda, I. Asahina, K. Toda
Nagasaki University, Nagasaki, Japan
Chair: **Gyula Szabó,** Hungary

P10.19 **A possible way to decrease "crowdedness" through functional asymmetry in the hypothalamus**
István Tóth, D. Kiss, G. Jocsak, L. Frenyo, A. Zsarnovszky
SzIE, Faculty of Veterinary Sciences, Dept. of Physiology and Biochemistry, Budapest, Hungary

P10.21 **Surgical level of ketamine anesthesia induces EEG microstructure and respiratory pattern disturbances following pedunculopontine tegmental nucleus lesion in rat**
Katarina Lazic, J. Petrovic, A. Kalauzi, J. Saponjic
University of Belgrade, Department of Neurobiology, Institute for Biological Research - Sinisa Stank, Serbia

P10.23 **Long term consequences of early postnatal domoic acid administration on spontaneous behavior of Wistar rats**
Katerina Jandova, V. Riljak
Institute of Physiology, 1st Faculty of Medicine, Charles University in Prague, Czech Republic

P10.25 **The role of intraamygdaloid oxytocin in reinforcing mechanisms**
Kristóf László, A. Kovács, G.D. Lacy, T. Ollmann, L. Péczely, E. Kertes, Z. Karádi, L. Lénárd
Institute of Physiology, University of Pécs, Pécs, Hungary

P10.27 **Dopamine and serotonin in frog and turtle retina: an immunoflourescent study**
Liliya Vitanova
Desislava Zhekova Dept. Physiology, Medical University, Sofia 1431, Bulgaria

P10.29 **Effect of visual and auditive stimuli in amygdala neurons**

Maria del Pilar Montes Lourido, F.A. Vicente, A.M. Bermudez, M.C. Romero, R. Perez, F. Gonzalez
CIMUS (Department of Physiology), University of Santiago de Compostela, Av. Barcelona, Spain

P10.31 **Intracellular Fe2+ and 4-hydroxynonenal suppresses a swelling-activated chloride current in microglial cells**
Martin Jakab, J. Schmölzer, N. Bresgen, M. Ritter, H.H. Kerschbaum
Institute of Physiology and Pathophysiology, Paracelsus Medical University, Salzburg, Austria

P10.33 **Hedonic impact of sweet taste on food consumption and activation of reward related neurons in intrauterine undernourished rats**
Máté Durst, K. Könczöl, R. Matuska, R. Reichardt, Zs.E. Tóth
Neuroendocrine and In Situ Hybridization Laboratory, Department of Anatomy, Histology and Embryology, Semmelweis University, Budapest, Hungary

P10.35 **The role of the melanocortin system and neuropeptide Y in the regulation of energy homeostasis in SHR rats**
Nóra Füredi, B. Aubrecht, P. Balla, A. Mikó, Sz. Soós, M. Székely, M. Balaskó, B. Gaszner, E. Pétervári
University of Pécs, Departement of Pathophysiology and Gerontology, Pécs, Hungary
Chair: **Dóra Reglődi**, Hungary

P10.37 **CRT and LCD monitors in science**
Péter Csibri, A. Bognár, Gy. Sáry
University of Szeged, Faculty of Medicine Department of Physiology, Szeged, Hungary

P10.39 **Disruption of sensorimotor integration in writer's cramp**
N. Langbour, V. Michel, B. Dilharreguy, D. Guehl, M. Allard, Pierre Burbaud
CHU de Bordeaux, France

P10.41 **The treatment of orofacial pain by using theta burst rTMS stimulation**
Richard Rokyta, F. Jitka
Charles University in Prague, Third Faculty of Medicine, Department of Physiology, Prague, Czech Republic

P10.43 **The role of segmentation interval in detecting seizure from EEG series by using embedding entropy metrics**
Serap Aydin
Bahçeşehir University, Biomedical Engineering Department, Istanbul, Turkey

P10.45 **Complexity and coherence analysis on EEG of patients with obsessive compulsive disorder**
Serap Aydin, E. Ergül, N. Arıca, O. Tan
Bahçeşehir University, Biomedical Engineering Department, Istanbul, Turkey

P10.47 **A role for the neurokinin-1 receptor in endotoxin-induced fever in mice**
Valeria Tékus, E. Pákai, R. Mátics, R. Schipp, Á. Kemény, E. Pintér, A. Garami
Department of Pharmacology and Pharmacotherapy, Medical School, University of Pécs, Hungary

P10.49 **Effect of antioxidants in preventing trimethyltin-induced neurodegeneration**

Veronika Stará, J. Navarová, P. Janega, N. Sedláčková, M. Mach, E. Ujhazy, Z. Gáspárová
Institute of Experimental Pharmacology and Toxicology, Slovak Academy of Sciences, Bratislava, Slovak Republic

P10.51 **Neuronal responses of the rat medial prefrontal cortex during appetitive classical conditioning**

Zoltán Petykó, A. Tóth, R. Gálosi, I. Szabó, K. Máté, I. Szabó, Z. Karádi, L. Lénárd
University of Pécs, Medical School, Institute of Physiology, and Szentágothai Research Centre, Pécs, Hungary

P11 **Exercise Physiology**
Chair: **Gábor Pavlik**, Hungary

P11.1 **The effect of aerobic training on performance and hormonal changes a mong prepubertal female handball players**

Alexandra Cselkó, É. Tékus, M. Váczi, G. Schuth, T. Kőszegi, M. Wilhelm
University of Pécs, Faculty of Health Sciences, Doctoral School of Health Sciences; Pécs, Hungary

P11.2 **Development and complete morphological and functional reversibility of athlete's heart in a rat model**

Attila Oláh, Á. Lux, B. T. Németh, Cs. Mátyás, D. Kellermayer, E. Birtalan, M. Ruppert, L. Szabó, L. Hidi, M. Török, G. Merkely, A. Meltzer, B. Merkely, T. Radovits
Semmelweis University, Heart and Vascular Center, Budapest, Hungary

P11.3 **Periodical changes in the characteristics of the athlete's heart**

Eszter Csajági , I. Szauder, Zs. Major, G. Pavlik
Semmelweis University, Department of Health Sciences and Sports Medicine, Hungary

P11.4 **The effect of exercise on blood plasma markers of skeletal muscle injuries**

Éva Tékus, M. Váczi, A. Cselkó, G. Pintér, T. Kőszegi, M. Wilhelm
Institute of Sport Sciences and Physical Education University of Pécs, Hungary

P11.5 **Amino acid levels, enzyme activity, and lipid peroxidation in smokers and non-smokers after a 6-week long ?-Alanine rich diet**

Gergő Pintér, M. Wilhelm, F. Gallyas Jr.
University of Pécs, Doctoral School of Health Scienses, Pécs, Hungary

P11.6 **Myocardial consequences of a treatment with prolyl-hydroxylase inhibitors used to improve exercise performance**

Gregory Meyer, B. Poncon, F. Favier, S. Gayrard, P. Obert, C. Reboul, G. Py
University of Avignon, Physiology and Physiopathology of Cardiovascular Adaptations to Exercise, Avignon, France

P11.7 **Effectiveness of constant load exercise test on critical power output estimation in sedentary male subjects**

Ihsan Serhatlioglu, S. Algul, B. Yilmaz, O. Ozcelik
Fırat University Faculty of Medicine Department of Biophysics, Elazig, Turkey

P11.8 **Carotid-radial pulse transit time compared to the pulse arrival time to the capillary bed of the finger tip during and after aerobic exercise in young healthy subjects**

N. Potočnik, **Helena Lenasi**
Institute of Physiology, Medical Faculty, University of Ljubljana, Slovenia

P11.9 **Effect of high protein diet and exercise on cardiac Aquaporin 7 expression**

Orkide Palabiyik, A. Karaca, S.A. Vardar, E. Tastekin, B.E. Yamasan, B. Tokuc, T. Sipahi
Trakya University Faculty of Medicine Department of Biophysics, Edirne Turkey

P11.10 **Effects of recreational physical exercise on metabolic and cardiovascular parameters in type 2 diabetic rat model**

Renáta Szabó, A. Pósa, A. Csonka, Z. Szalai, K. Kupai, A. Magyariné Berkó, Sz. Török, L. Daruka, Cs. Varga
Department of Physiology, Anatomy and Neuroscience, University of Szeged, Hungary

P11.11 **Clinical, functional and inflammatory factors associated with muscle fatigue and self-perceived fatigue in elderly community-dwelling women**

LS.M. Pereira, J.P. Silva, D.S. Pereira, L.P. Lustosa, B.Z. de Queiroz, N.M.B. Rosa, A.M. Assumpção, J.M.D. Dias, Ronaldo Luis Thomasini
Institute of Sciences and Technology, Federal University of Jequitinhonha and Mucuri Valleys, Diamantina, Brazil

P11.12 **Correlation between inflammatory mediators with muscular handgrip strength in community-dwelling elderly women**

D.C. Felício, D.S. Pereira, A. M. Assumpção, B.Z. de Queiroz, N.M. de B. Rosa, J.P. Silva, D.M. da C. dos Anjos, J.M.D. Dias, Ronaldo Luis Thomasini, LS.M. Pereira
Institute of Sciences and Technology, Federal University of Jequitinhonha and Mucuri Valleys, Diamantina, Brazil

P11.13 **Right ventricular adaptation of the athlete's heart**

Zsuzsanna Major , E. Csajági, T. Kováts, Zs. Kneffel, G. Pavlik
Semmelweis University, Faculty of Physical Education and Sport Sciences, Budapest, Hungary

P12 **From Cell Signalling to Bioenergetics and Cell Damage**
Chair: **Geiszt Miklós,** Hungary

P12.1 **The combined therapy with melatonine and hypothermia prevents apoptosis and improves oxidative stress in a neonatal rat model of hypoxic-ischemic encephalopathy**

Alina M. Toader, A. G. Filip, G. Dogaru, F. Tabaran, C. Anescu, L. Farcas, O. Grad, A. Muresan
University of Medicine and Pharmacy Iuliu Hatieganu Cluj-Napoca, Romania

P12.3 **The effect of hyperbaric therapy on the levels of oxidative stress**

Anita Ćosić, Z. Mihaljevic, D. Kibel, S. Novak, A. Cavka, I. Grizelj, M. Mihalj, I. Drenjancevic
Faculty of Medidine University of Osijek, Croatia

P12.5 **Possible anti-tumorigenic usage of angiostatin in oncotherapy**
Balint Gergely Szabo, J. Timar, A. Marton, Cs. Vizler, E. Tatrai, J. Tovari, L. Szilak
2nd Department of Pathology, Semmelweis University, Budapest, Hungary

P12.7 **Nitric oxide can serve as indicator for severity injury of polytrauma**
Dana Mikova
2nd Faculty of Medicine, Charles University in Prague, Department of Physiology, Prague, Czech Repub

P12.9 **Sphingosine-1-phosphate enhances the contractile responsiveness of vascular smooth muscle via distinct S1P2 receptor mediated pathways**
Dorottya Móré, É. Ruisanchez, P. Dancs, M. Kerék, S. Offermanns, Z. Benyó
Semmelweis University, Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary

P12.11 **Ruthenium red differentiates between closely related K2P channels**
Gabriella Braun, M. Lengyel, P. Enyedi, T. Hegedűs, G. Czirják
Semmelweis University, Institute of Physiology, Budapest, Hungary

P12.13 **UVB-induced apoptosis signaling cascade and changes of molecular markers expression in a human dermal fibroblast line**
Ioana Zinuca Pavel, C. Dehelean, O. Duicu, D. Muntean, F. Bojin
"Victor Babes" University of Medicine and Pharmacy Timisoara, Romania

P12.15 **Mapping the subcellular localization and activity of the Nox4-p22phox enzyme complex**
Melinda Zana
Department of Physiology, Semmelweis University, Budapest, Hungary

P12.17 **Time- and dose-dependent characteristics of endogenous protoporphyrin IX production from delta- aminolevulinic acid and its derivatives**
Tobias Kiesslich, L. Helander, R. Illig, C. Oberdanner, A. Wagner, H. Lettner, M. Jakab, K. Plaetzer
Department of Internal Medicine I, Paracelsus Medical University / Salzburger Landeskliniken (SALK), Salzburg, Austria

P16 **Aging**
Chair: **Ákos Koller,** Hungary

P16.1 **The evolution of K+-evoked spreading depolarization shortly after carotid occlusion in young and aged rats**
Ákos Menyhárt, B. Szepes, O.M. Tóth, P. Hertelendy, F. Bari, E. Farkas
Department of Medical Physics and Informatics, University of Szeged, Hungary

P16.2 **The effect of recreational physical exercise, caloric restriction and high triglyceride diet in experimental menopause**
Anikó Pósa, R. Szabó, A. Csonka, L. Daruka, Sz. Török, M. Veszelka, A. Magyariné Berkó, K. Kupai, Cs. Varga
GLP Toxicology Lab, Department of Physiology, Anatomy and Neuroscience, Faculty of Science and Informatics, University of Szeged, Szeged, Hungary

P16.3 **Comparison of exfoliated human mammary cells count with demographical and nutritional parameters of lactating mothers**

S. Agus, S.E. Dinc, A. Apaydin, S. Sandal, A. Vitrinel, Bayram Yilmaz
Yeditepe University, Faculty of Medicine, Department of Physiology, Istanbul, Turkey

P16.4 **Quercetin treatment reverse endothelial dysfunction and oxidative stress in patients with rheumatoid arthritis**

Doina Baltaru, A. Mureşan, I.C. Chiş
Constantin Papilian Military Emergency Hospital, Cluj Napoca, Romania

P16.5 **The effects of body mass on CMRgluc-related metabolic activity in mouse joints investigated by in vivo dynamic PET/MRI**

Mariann Semjéni
CROmed Ltd, Hungary

P16.6 **Exposure to static magnetic field induces decrease of antioxidant oligoelements in aging heart**

Marija Stankovic, SR. De Luka, S. Jankovic, S. Stefanovic, DM. Djordjevich, ID. Milovanovich, AM. Trbovich
University of Belgrade, Faculty of Medicine, Institute of Pathophysiology, Belgrade, Serbia

P16.7 **The projected increase of rheumatoid diseases due to an aging population in Austria from 2012 to 2050**

Markus Ritter, A.Moder, W. Hitzl, M. Gaisberger, H. Dobias
Institut of Physiology and Pathophysiology, Gastein Research Institute; Paracelsus Medical University, Salzburg, Austria

P16.8 **Beta-herpesviruses related to aging and frailty**

Ronaldo Luis Thomasini, D.S. Pereira, F.S.M. Pereira, L.S.M. Pereira, M.M. Teixeira, A.L. Teixeira-Jr
Federal University of Jequitinhonha and Mucuri Valleys, Diamantina, MG, Brazil

P16.9 **Poor correlation between handgrip strength and isokinetic performance of knee flexor and extensor muscles in community-dwelling elderly women**

D.C. Felicio, D.S. Pereira, A.M. Assumpção, F.R. de Jesus-Moraleida, B.Z. de Queiroz, J.P. da Silva, N. M.B. Rosa, J.M.D. Dias, Ronaldo Luis Thomasini, L.S.M. Pereira
Institute of Sciences and Technology, Federal University of Jequitinhonha and Mucuri Valleys, Diamantina, Brazil

P16.10 **Aging exacerbates hypertension-induced intracerebral microhemorrhages in mice**

Stefano Tarantini, P. Toth, Zs. Springo, D. Sosnowska, T. Gautam, Zs. Tucsek, C. Giles, J.D. Wren, A. Koller, W.E. Sonntag, A. Csiszar, Z. Ungvari
Reynolds Oklahoma Center on AgingDepartment of Geriatric MedicineUniversity of Oklahoma Health Scien, Oklahoma City, USA

P16.11 **Changes in norepinephrine induced vasomotor response and vascular ?1-receptor expression as a function of age**

Zoltán Vámos, P. Cséplő, I. Ivan, R. Mátics, Á. Koller
Department of Pathophysiology and Gerontology, University of Pécs, Hungary

P16.12 **Age-related impairment of myogenic adaptation to pulsatile pressure in cerebral arteries of Mus musculus**

Zsolt Springo, P. Toth, S. Tarantini, Zs. Tucsek, P. Cseplo, A. Koller, W.E. Sonntag, A. Csiszar, Z. Ungvari

Department of Pathophysiology & Gerontology, Szentagothai Res. Ctr, University of Pécs, Pécs, Hungary

29 August, 2014

SZENT-GYÖRGYİ ALBERT ROOM

9:00 **PLENARY LECTURE**
Chair: **Ole Petersen**, UK
MicroRNAs in pancreatic beta-cell physiology
Lena Eliasson, Sweden

10:00 **BREAK**

10:15-12:15
S4-A **Sodium Signalling in Astroglia**
Chair: **Alexei Verkhratsky,** UK and **Csaba Fekete**, Hungary

10:15 S4- A1 **The mitochondrial 3Na+/Ca2+ exchanger NCLX is a hub for cellular and mitochondrial Ca2+ signaling in astrocytes. or Na+**
Israel Sekler
Ben Gurion University, Beer Sheva, Israel

10:40 S4- A2 **Exocytotic glutamate release from astrocytes: Intracellular Ca2+ and Na+ dynamics**
Vladimir Parpura
Department of Neurobiology, University of Alabama at Birmingham, Birmingham, USA

11:05 S4- A3 **Astrocytic Na+ influences extracellular GABA/glutamate balance in the neocortex**
Sergei Kirischuk
Institute of Physiology, University Medical Center Mainz, Mainz, Germany

11:30 S4- A4 **Sodium signalling in astroglia**
Alexei Verkhratsky
The University of Manchester, UK

11:55 S4- A5 **A putative counter-apoptotic role of the non-gastric H+/K+-ATPASE ATP1AL1 (ATP12A)**
Markus Ritter, N. Ketterl, D. Streif, M. Beyreis, J. Fürst, M. Jakab
Institute of Physiology and Pathophysiology, Gastein Research Institute, Paracelsus Medical University, Salzburg, Austria

12:15 **BREAK**

AULA & GALERY

13:00-14:30 POSTER SESSION
P7; P 11 ; P 13; P 14; P 15
even numbers: P2 ; - P3; - P4; - P5; - P6; - P8 , - P9; - P10; - P12
Detailed programme of the session see below.

SZENT-GYÖRGYİ ALBERT ROOM

14:30-16:30
S5-A **From Macro- to Microvessels: Function, Structure and Molecular Mechanisms**
Chairs: **Ines Drenjančević,** Croatia and **Jozef Dulak,** Poland

14:30 S5- A1 **Role of metabolites of arachidonic acid in regulation of vascular function**
Ines Drenjančević
Department of Physiology and Immunology, School of Medicine Osijek, Josip Juraj Strossmayer University of Osijek, Croatia

14:50 S5- A2 **Angiotensin II and leukocyte trafficking: New insights for an old vascular mediator**
Maria-Jesus Sanz, M-J. Sanz
Department of Pharmacology, Faculty of Medicine, University of Valencia, Research Institute INCLIVA, Valencia, Spain

15:10 S5- A3 **Microvascular mechanisms of age-related cognitive decline**
Zoltan Ungvári, P. Toth, Zs. Tucsek, D. Sosnowska, T. Gautam, M. Mitschelen, S. Tarantini, F. Deak, A. Koller, W. Sonntag, A. Csiszar
Reynolds Oklahoma Center on Aging, Department of Geriatric Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, USA

15:35 S5- A4 **Role of antioxidant genes and microRNAs in revascularisation after hind limb ischemia**
Jozef Dulak
Department of Medical Biotechnology, Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Kraków, Poland

16:00 S5- A5 **A new functional role of Ca2+ sensitization mechanisms in the regulation of vascular smooth muscle contraction**
María del Carmen González-Montelongo, C. Porras-González, A. Castellano, J. Ureña
Institute of Biomedicine of Seville (IBiS) and Department of Medical Physiology and Biophysical, Spain

16:15 S5- A6 **Myeloperoxidase promotes the vasoconstrictive effects of hydrogen-peroxide**
Viktória Csató, A. Pető, G.Á. Fülöp, E. Pásztorné Tóth, I. Édes, A. Tóth, Z. Papp
University of Debrecen, Institute of Cardiology, Division of Clinical Physiology, Hungary

16:30 **BREAK**

17:00 **PLENARY LECTURE**
Chair: **Gyula Sáry**, Hungary
Rhythmic re-distribution of inhibition on pyramidal cells in the hippocampus
Peter Somogyi, UK

17:45 **BREAK**

20:30-23:30 **GALA DİNNER**
Venue: Europe River Cruise

HEVESY GYÖRGY ROOM

10:15-12:15

S4-B **Lipid GPCRs in Physiology and Disease**
Chairs: **Zoltán Benyó,** Hungary and **Stefan Offermanns**, Germany

10:15 S4- B1 **Novel GPCRs for lysophosphatidylserine; their structure and function**
Junken Aoki
Tohoku University, Miyagi, Japan

10:40 S4- B2 **Cannabinoid type 1 receptor in noradrenergic/adrenergic cells and its role in metabolism and stress**
Beat Lutz
Institute of Physiological Chemistry, Mainz, Germany

11:05 S4- B3 **New functions for short chain fatty acid and prostanoid receptors**
Stefan Offermanns
Max Planck Institute for Heart and Lung Research and Goethe University Frankfurt, Germany

11:30 S4- B4 **Control of gastrointestinal epithelial integrity by lysophosphatidic acid GPCR**
Gábor Tigyi
Department of Physiology, University of Tennessee Health Science Center Memphis, USA

11:55 S4- B5 **Signaling pathways of thromboxane receptor-mediated vasoconstriction: Major role of phospholipase C epsilon**
Tamás Németh, É. Ruisanchez, L. Hricisák, A. Iring, B. Merkely, L. Hunyady, A.V. Smrcka, S. Offermanns, Z. Benyó
Semmelweis University Heart and Vascular Center, Budapest, Hungary

12:05 S4- B6 **Mutations in the conserved 'DRY' motif of the CB1 cannabinoid receptor result in functionally selective receptor conformations**
Pál Gyombolai, A.D. Tóth, G. Turu, L. Hunyady
Semmelweis University Department of Physiology; MTA-SE Laboratory of Molecular Physiology, Budapest, Hungary

12:15 **BREAK**

14:30-16:30

S5-B **Physiology and Regulation of K2P Channels**
Chair: **Péter Enyedi,** Hungary and **Florian Lesage**, France

14:30 S5- B1 **Excitability tuning by two-P-domain channels: from inhibitory potassium-selective channels to excitatory cationic channels**
Florian Lesage
Nice Sophia Antipolis University, France

14:55 S5- B2 **The intracellular traffic of the two-pore-domain potassium channel TASK-1**
Jürgen Daut
Institute of Physiology Marburg University, Marburg, Germany

15:15 S5- B3 **Pharmacological and genetic recovery of current through truncated and mutated K2P channels**
Alistair Mathie, E. Veale
University of Kent, UK

15:35 S5- B4 **TRESK background K+ channel is regulated by calcineurin and other interacting proteins**
Gábor Czirják, G. Braun, P. Enyedi
Department of Physiology, Semmelweis University, Budapest, Hungary

15:55 S5- B5 **Amusing functions of TWIK-1 in the brain**
Eun Mi Hwang
Korea Institute of Science and Technology, Seoul, Korea

16:15 S5- B6 **Stable gene silencing of TASK-3 channels in melanoma cells induce intrinsic apoptosis**
Dénes Nagy, M. Gönczi, Zs. Nagy, A. Tóth, B. Dienes, J. Fodor, G. Szücs, Z. Rusznák, Á. Szöőr, L. Csernoch
University of Debrecen, Faculty General Medicine, Department of Physiology, Debrecen, Hungary

16:30 **BREAK**

BÉKÉSY GYÖRGY ROOM

10:15-12:15
S4-C **Physiology and Pathophysiology of Bicarbonatesecretion in the Airways – Key to Therapy of Cystic Fibrosis**
Chair: **Ákos Zsembery,** Hungary and **Mike Gray**, UK

10:15 S4- C1 **Anion secretion by calcium-activated anoctamin chloride channels: A direct or indirect mechanism?**
Karl Kunzelmann
University of Regensburg, Germany

10:40 S4- C2 **HCO3-, fluid, mucus and the structure of small airways**
Paul M. Quinton, A. Shamsuddin, G. Flores
Pediatrics, UC San Diego School of Medicine, and Biomedical Sciences, UC Riverside School of Medicine, San Diego, USA

11:05 S4- C3 **The importance of bicarbonate and proteases for mucin secretion and mucus formation**
Gunnar C. Hansson
Department of Medical Biochemistry, University of Gothenburg, Gothenburg, Sweden

11:30 S4- C4 **Effects of bicarbonate and pH on bacterial growth and MIC of Erythromycin**
Ákos Zsembery
Institute of Human Physiology and Clinical Experimental Research, Semmelweis University, Budapest, Hungary

11:45 S4- C5 **HAT-7 cells, a new model to study the intracellular pH regulation and bicarbonate transport of ameloblasts**

Erzsébet Bori, P. D. Besten, H. Harada, M. Steward, A.L.J.J. Bronckers, G. Varga
Department of Oral Biology, Semmelweis University of Medicine, Budapest, Hungary

12:00 S4- C6 **The role of aquaporins in pancreatic ductal cells**
Viktória Venglovecz
University of Szeged, Department of Pharmacology and Pharmacotherapy, Szeged, Hungary

12:15 **BREAK**

14:30-16:30
S5-C **From Cell Signalling to Bioenergetics and Cell Damage**
Chair: **Alexei Tepikin,** UK and **András Spät,** Hungary

14:30 S5- C1 **Pathways to calcium mediated neuronal injury: Starvation in the midst of plenty**
Michael R. Duchen
Department of Cell and Developmental Biology and UCL Consortium for Mitochondrial Research, University College London, UK

14:55 S5- C2 **The crucial role of mitochondrial damage and consequent breakdown of bioenergetics in acute pancreatitis**
Péter Hegyi, V. Venglovecz, J. Maléth, Z. Rakonczay
First Department of Medicine, University of Szeged, Hungary

15:20 S5- C3 **The mitochondrial calcium uniporter: Molecular identity and physiological role**
Rosario Rizzuto
Department Biomedical Sciences, University of Padua, Italy

15:45 S5- C4 **Imaging incretin-regulated bioenergetics in intact pancreatic islets**
Guy A. Rutter
Imperial College London, UK

16:10 S5- C5 **Cardiac calsequestrin and heart failure**
Joachim Neumann, C. Fahrion, S. Fabian, U. Gergs
Medical Faculty Halle, Germany

16:20 **GENERAL DİSCUSSİON (10')**

16:30 **BREAK**

HÁRİ PÁL ROOM

10:15-12:15
S4-D **Revealing the Prominent Role of Neuroglia in Neurodegeneration**
Chair: **José Julio Rodríguez Arellano**, Spain and **László Lénárd,** Hungary

10:15 S4- D1 **Neuroglial morphological and metabolical alterations during the progression of Alzheimer´s disease and ageing**
José Julio Rodríguez Arellano
IKERBASQUE/University of the Basque Country (UPV/EHU), Spain

10:40 S4- D2 **Dysfunction of AMPA-type glutamate receptors in microglia may cause neurodegeneration**
Mami Noda, K. ABeppu, R. Sprengel
Kyushu University, Graduate School of Pharmaceutical Sciences, Fukuoka, Japan

11:05 S4- D3 **Does innate immunity contribute to the pathogenesis of Alzheimer's disease?**
Michael T. Heneka
Clinical Neuroscience, Dept. Of Neurology, University of Bonn, Bonn, Germany

11:25 S4- D4 **The response of NG2-glia (oligodendrocyte precursors) to aging in an animal model of Alzheimer's Disease**
Arthur M. Butt
University of Portsmouth, UK

11:45 S4- D5 **Release of 4- hydroxynonenal and 4-hydroxyhexenal-modified proteins in exosomes**
Florentina Kopp, N. Bresgen, M. Jakab, M. Ritter, H.H. Kerschbaum
Department of Cell Biology, University of Salzburg, Salzburg, Austria

12:00 S4- D6 **Galanin is a modulator for phagocytosis in microglial cells**
Julia K. Landrichinger, M. Beyreis, S. Wintersteller, B. Kofler, M. Ritter, H.H. Kerschbaum
Department of Cell Biology; University of Salzburg, Institute of Physiology and Pathophysiology, Gastein Research Institute, Paracelsus Medical University, Salzburg, Austria

12:15 **BREAK**

14:30-16:30
S5-D **Pulmonary Surfactant: From Molecule to Function**
Chair: **Andrea Calkovska,** Slovakia and **László Hunyady,** Hungary

14:30 S5- D1 **Exocytosis of the lamellar body, a calcium mobilizing secretory lysosome**
Paul Dietl
Institute of General Physiology, University of Ulm, Germany

14:55 S5- D2 **Misfolding of surfactant protein C and how it is solved by Nature and by rational design**
Jan Johansson
Karolinska Institutet, Stockholm, Sweden

15:20 S5- D3 **The role of surfactant in host defence**
Egbert Herting
Department of Paediatrics University of Lübeck, Germany

15:40 S5- D4 **Surfactant inhibition and its reversal**
Andrea Calkovska
Department of Physiology, Jessenius Faculty of Medicine, Comenius University, Martin, Slovakia

16:00 S5-D5 **Lymphatic function is required prenatally for lung inflation at birth**
Zoltán Jakus, J.P. Gleghorn, D.R. Enis, A. Sen, S. Chia, X. Liu, D.R. Rawnsley, Y. Yang, P.R. Hess, Z. Zou, J. Yang, S.H. Guttentag, C.M. Nelson, M.L. Kahn
University of Pennsylvania, USA; Hungarian Academy of Sciences and Semmelweis University, Budapest, Hungary

16:15 S5- D6 **The N-terminal domain of spider silk proteins for synthetic surfactant production**
Anna Rising
Karolinska Institute, Stockholm, Sweden

16:30 **BREAK**

BEZNÁK ALADÁR ROOM

10:15-12:15
S4-E **Cardiovascular Exercise Physiology**
Chair: **Gábor Pavlik,** Hungary and **Attila Tóth,** Hungary

10:15 S4-E1 **Use of virtual patients in teaching veterinary physiology at the Faculty of Veterinary Science, Szent István University, Budapest**
Mira Mándoki, G. Jócsák, V. Somogyi, D.S. Kiss, I. Tóth, T. Bartha
Department of Pathology, Faculty of veterinary Science, Szent István University, Budapest Hungary

10:30 S4-E2 **The effect of detraining on the characteristics of the athlete's heart**
Gábor Pavlik
Semmelweis University, Fac. Physical Education and Spports Sciences, Budapest, Hungary

10:45 S4-E3 **Effects of Darbepoetin-alpha treatment and TNF-alpha blockage on cardiovascular parameters, blood cCells, and body and kidney weights in L-NAME induced hypertensive rats**
Mete Özkurt, K. Uzuner, N. Erkasap, G. Kus, R. Özyurt, Ö. Kutlay
Physiology Department of Eskisehir Osmangazi University Medical Faculty, Eskisehir, Turkey

11:00 S4-E4 **The effects of provinol on cardiodynamics and coronary flow in isolated rat heart**
Vladimir Zivkovic, V. Jakovljevic, I. Srejovic, N. Barudzic, D. Djuric, O. Pechanova
Department of Physiology, Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia

11:15 S4-E5 **Evolution of cerebrocortical spreading depolarizations in a rat microembolic stroke model**
Eszter Farkas, Zs. Bere, G. Kozák, F. Bari
Department of Medical Physics and Informatics, University of Szeged, Hungary

11:30 S4-E6 **Reduced dietary zinc and selenium levels impairs vascular function via oxidative stress in Sprague- Dawley rats aortas**
Ana Cavka, S. Novak, Z. Mihaljevic, I. Grizelj, A. Cosic, Z. Loncaric, B. Popovic, I. Drenjancevic

Department of Physiology and Immunology Faculty of Medicine University of Osijek, Osijek, Croatia

11:45 S4-E7 **Different expression and localization pattern of MT1 melatonin receptor between conduit and resistant arteries can be involved in positive effects of melatonin on blood pressure control**
Lubos Molcan, P. Svitok, K. Stebelova, A. Vesela, I. Ellinger, M. Zeman
Department of Animal Physiology and Ethology, Faculty of Sciences, Comenius University, Bratislava, Slovak Republic

12:00 S4-E8 **Angiogenic properties of human pluripotent stem cell-derived arterial and venous endothelial cells**
Edit Gara, J. Skopal, B. Merkely, S.E. Harding, G. Foldes
Heart and Vasculat Center, Budapest, Hungary

12:15 **BREAK**

14:30-16:30
S5-E **MicroRNA Networks and Potential Clinical Implications in Cancer, Cardiovascular and Renal Diseases**
Chair: **Péter Hamar**, Hungary and **Dontscho Kerjaschki,** Austria

14:30 S5- E1 **MiRNAs in renal glomerular disease: novel insights into pathogenic Mechanisms and clues for treatment**
Dontscho Kerjaschki
Institute of Pathology, Medical University of Vienna, Austria

14:50 S5- E2 **MicroRNAs in ischemia/reperfusion injury and cardioprotection by ischemic conditioning: ProtectomiRs**
Z.V. Varga; Á. Zvara; N. Faragó; G.F. Kocsis; M. Pipicz; R. Gáspár; P. Bencsik; A. Görbe; Cs. Csonka; L.G. Puskás; T. Thum; T. Csont; **Péter Ferdinandy**
Institute of Pharmacology, Semmelweis University, Budapest, Hungary

15:10 S5- E3 **MicroRNA-25 regulates NOX4 in the hypercholesterolemic heart**
Zoltán Varga
Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest, Hungary

15:25 S5- E4 **miR-200 in extracellular vesicles promotes metastasis of breast cancer cells**
M.T.N. Le, **Peter Hamar**, J. Lieberman
Institute of Pathophysiology, Semmelweis University, Budapest, Hungary

15:45 S5- E5 **Targeting basal-like Triple Negative Breast Cancers and epithelial tumor-initiating cells with aptamer-siRNA chimeras**
Judy Lieberman, A. Gilboa-Geffen, P. Hamar, L.A. Wheeler, A. Wittrup, F. Petrocca
Institute of Immune Diseases, Harvard Medical School, Boston, MA. USA

16:10 S5- E6 **MicroRNA expression might predict prognosis of epithelial hepatoblastoma and sorafenib treated hepatocellular carcinoma**
András Kiss, B. Gyöngyösi, M. Gyugos, G. Lendvai, J. Halász, M. Fassan, É. Végh, B. Járay, E. Székely, Gy. Bodoky, Zs. Jakab, M. Garami, Zs. Schaff
Institute of Pathology, Semmelweis University, Budapest, Hungary

16:30 S5- E7 **Exiqon A/S Symposia Exosomal microRNA in biofluids - Robust biomarkers for disease**
Michael Hansen, A.R. Thomsen, T. Blondal, P. Mouritzen, D. Andreasen, M.W. Teilum, N. Tolstrup, J. Stenvang, C.L. Andersen, H.J. Nielsen, N. Brünner
Exiqon A/S, Vedbaek, Denmark

16:50 **BREAK**

POSTER SESSION
AULA & GALERY

13:00-14:30

P2 **Molecular and Cell Physiology**
Chair: **Norbert Szentandrássy,** Hungary

P2.2 **Beneficial effects of hydrogen sulphide treatment of human adipose derived stem cells in a cell- based model of cell therapy**
Ágnes Csizmazia, E. Dongó, Zs. Benkő, G. Marosi, U. Schumacher, L. Kiss
Semmelweis University, Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary

P2.4 **The effects of angiotensin II on autophagy pathways in H9c2 cells**
András Czeglédi, K. Szőke, A. Barta, Á. Tósak, I. Lekli
University of Debrecen, Hungary

P2.6 **Examination of pituitary adenylate cyclase activating polypeptide (PACAP)-like immunoreactivity in different pathological clinical samples**
Andrea Tamás, A. Javorhazy, P.D. Sarlos, Zs. Sarszegi, I. Zapf, Z. Szanto, B. Faludi, T. Molnar, J. Nemeth, Gy. Reman, Zs. Nagy, Zs. Szabo, A. Kovacs, D. Banyai, D. Reglodi
Department of Anatomy, PTE-MTA Lendulet PACAP Research Group, University of Pécs, Pécs, Hungary

P2.8 **Role of intracellular signalling pathways in the control of transient receptor potential melastatin 3 (TRPM3) channel activity**
Balázs István Tóth, J. Vriens, D. Ghosh, T. Voets
Laboratory of Ion Channel Research, Department of Cellular and Molecular Medicine, KU Leuven, Belgium

P2.10 **NGF-induced neurodifferentiation of PC12 cells is not influencing the expression of Na,K-ATPase genes**
Barbora Kaločayová, J. Vlkovičová, L. Lichvárová, Ľ. Lacinová, N. Vrbjar
Institute of Heart Research, Slovak Academy of Science, Slovakia

P2.12 **Effects of adenosine on human hair follicls and hair follicle deirved outer root sheath keratinocytes**
Erika Lisztes, E. Shitrit, I. L. Szabó, A.G. Szöllősi, A. Oláh, Á. Angyal, E. Hollósi, T. Bíró
DE-MTA "Lendület" Cellular Physiology Research Group, Department of Physiology, University of Debrecen, Hungary

P2.14 **Role of inositol lipids in the localization of peripheral membrane proteins in mammalian cells**

Glória Radvánszki , G. Gulyás, L. Hunyady, P. Várnai
Department of Physiology, Faculty of Medicine, Semmelweis University, Budapest, Hungary
Chair: **Péter Várnai,** Hungary

P2.16 **Frequency of specific methods for the detection of EGFR in lung tumors**

Jasmina Obradovic, V. Jurisic
Univeristy of Kragujevac, Faculty of Sciences, Kragujevac, Serbia

P2.18 **Screening chimique et activité antioxydante des extraits d'écorces de tronc de 3 esp?ces de plantes utilisées par les bonobos, pan paniscus ? Lui-Kotale en R.D.Congo: Massularia acuminata (G. Don) B ullock ex Hoyl (Rubiaceae), Enantia olivacea Robyns & Ghesq (Annonaceae) et Garcinia punctata oliv. (Clusiaceae)**

Kunyima Wa Kunyima Papy, N. Mbomba, J. Lami, P. Mpiana, M. Muganza
Unit of Physiology, Faculty of Medicine, University of Kinshasa, Lemba, D.R. Congo

P2.20 **Infuence of γ-irradiation on properties of Na,K-ATPase in cardiac sarcolemma**

Lucia Mézešová, B. Kaločayová, V. Jendruchová, J. Vlkovičová, M. Barančík, M. Fulop, J. Slezák, P. Babál, P. Janega, N. Vrbjar
Heart Research Institute, Slovak Academy of Science, Slovakia

P2.22 **Regulatory proteins of myocardium in evaluation of cardiotoxicity**

Michaela Adamcova, O. Popelova-Lenčova, E. Jirkovsky, Y. Mazurova, V. Geršl, M. Štěrba
Department of Physiology, Faculty of Medicine in Hradec Kralove, Charles University in Prague, Czech Republic

P2.24 **Investigation of metabolic processes in cultured melanoma cell lines**

Mónika Gönczi, Zs. Nagy, D. Nagy, P. Bai, L. Csernoch
Department of Physiology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary

P2.26 **Spatiotemporal analysis of miR-17 and miR-21 during murine kidney ischemia-reperfusion injury**

Tamás Kaucsár, J. Lorenzen, Cs. Révész, M. Godó, C. Schauerte, M. Albert, T. Krenács, G. Szénási, T. Thum, P. Hamar
Institute of Pathophysiology, Semmelweis University, Budapest, Hungary

P2.28 **New synthesized phosphazenes containing chalcone on human prostate cancer cell lines: An in vitro study**

Suat Tekin, K. Koran, F. Ozen, S. Sandal, E. Cil, A.O. Gorgulu
Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P2.30

Investigation of thefate of type I angiotensin receptor after biased activation

Gyöngyi Szakadáti, A. Balla, L. Hunyady
Department of Physiology, Semmelweis University, Budapest, Hungary

P3 **Skeletal, Smooth and Cardiac Muscle Physiology**
Chair: **János Magyar,** Hungary

P3.2 **Vascular smooth muscle cell functional network. The difficulties and usefulness of graphic representation**
Angela Madalina Lázár
University of Medicine and Pharmacy Carol Davila, Department of Physiology, Bucharest, Romania

P3.4 **Morphological and molecular changes after application of ionizing radiation on the rat myocardium**
Branislav Kura, Cs. Viczenczová, K. Frimmel, T. Ravingerová, N. Tribulová, Ľ. Okruhlicová, A. Lazou, R.C. Kukreja, M. Fulop, J. Slezák
Heart Research Institute, Slovak Academy of Sciences, Slovakia

P3.6 **Beneficial effects of Allium ursinum herbal extract on hyperthrophic hearts**
Daniel Priksz, M. Bombicz, A. Kertész, B. Varga, R. Gesztelyi, K. Pák, Á. Tósaki, B. Juhász
University of Debrecen, Department of Pharmacodynamics, Debrecen, Hungary

P3.8 **Contribution of carbon monoxide on vascular tonus in different vascular beds and segments. A descriptive study**
Günnur Koçer, S. Ülker, Ü.K. Şentürk
Near East University, Lefkoşa, North Cyprus

P3.10 **Expession and estrogen-dependent up-regulation of Transient Receptor Potential Ankyrin 1 (TRPA1) and Vanilloid 1 (TRPV1) ion channels in the rat endometrium**
Krisztina Pohóczky, J. Kun, B. Szalontai, K. Kovács, J. Garai, A. Garami, A. Perkecz, Zs. Helyes
University of Pécs, Medical School, Department of Pharmacology and Pharmacotherapy, Pécs, Hungary

P3.12 **Exogenous nicotinamide adenine dinucleotide (NAD+): effects and mechanisms of action on the mammalian heart**
Ksenia B. Poustovit, V.S. Kuzmin, D.V.Abramochkin
Biological Separtment of Moscow State University, Moskow, Russia

P3.14 **Nicotinic acetylcholine receptors containing the ?7-like subunit mediate contractions of muscles responsible for space positioning of the snail tentacle**
Nóra Krajcs, Zs. Pirger, L. Hernádi, T. Kiss
Balaton Limnological Institute Centre for Ecological Research MTA, Tihany, Hungary

P3.16 **C hronic L-DOPA administration decreases relaxation responses of corpus cavernosum tissue of rabbit**
Şeniz Sırma Yıldırım, G.S. Ozturk Fincan, F. Isli, S. Ercan, Y. Sarioglu
Kırıkkale University Medical Faculty, Department of Medical Pharmacology, Kırıkkale, Turkey

P4 **Cardiovascular Physiology**
Chair: **Violetta Kékesi**, Hungary

P4.2 **Remodelling of coronary artery network during quercetin supplementation**
Anna Monori-Kiss, G. Pásti, E. Monos, Gy.L. Nádasy
Semmelweis Universtiy, Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary

P4.4 **Consumer investigation and toxicological analysis of sour cherry seed kernel extract**
Attila Czompa, A. Nagy, I. Bak, Z. Hendrik, I. Lekli, Z. Csiki, A. Tosaki
University Debrecen, Faculty of Pharmacy, Department of Pharmacology, Debrecen, Hungary

P4.6 **Angiotensin converting enzyme-2 as biomarker of human hypertension and systolic heart failure**
Attila Tóth, K. Úri, M. Fagyas, I. Mányiné Siket, A. Kertész, Z. Csanádi, G. Sándorfi, M. Clemens, R. Fedor, Z. Papp, I. Édes, E. Lizanecz
Division of Clinical Physiology, Institute of Cardiology, University of Debrecen, Debrecen, Hungary

P4.8 **Beta-adrenergic stimulation reverses the IKr-IKs dominant pattern during the cardiac action potential**
Balazs Horvath, T. Banyasz, Z. Jian, L.T. Izu, Y. Chen-Izu
University of Debrecen, Faculty of Medicine, Department of Physiology, Debrecen, Hungary

P4.10 **Two sides of the same coin: integrative role of the calcium-activated chloride channels in the ventricular myocardium**
Bence Hegyi, K. Váczi, F. Ruzsnavszky, K. Kistamás, M. Gönczi, B. Horváth, T. Bányász, J. Magyar, P.P. Nánási, N. Szentandrássy
Department of Physiology, University of Debrecen, Debrecen, Hungary

P4.12 **In vitro effect of apelin on contractions and endothelial-independent relaxation in the human internal mammary artery**
Emine Kacar, O. Burma, N. Ulker, A. Yardimci, A. Uysal, H. Kelestimur
Firat University, Faculty of Medicine, Department of Physiology, Elazig, Turkey

P4.14 **Vasoactive actions of lysophosphatidic acid**
Éva Ruisanchez, P. Dancs, M. Kerék, T. Németh, B. Faragó, R. Panta, A. Balogh, G. Tigyi, Z. Benyó
Semmelweis University, Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary
Chair: **Árpád Tósaki**, Hungary

P4.16 **Effects of Apelin-13 on arterial blood pressure in the epileptic male rats**
G. Gurol , Fatma Burcu Şeker, M. S. Ethemoglu, B. Yılmaz
Yeditepe University, Faculty of Medicine, Department of Physiology, Turkey

P4.18 **PPAR-gamma agonists treatment affected radical and cell signaling, antioxidant response and blood pressure of hypertensive rats**
Ima Dovinova, M. Kvandová, M. Barancik, M. Majzunova, L. Gresova, P. Bališ, L. Gajdosechova, S. Zorad

Institute of Normal and Pathol Physiol, Slovak Acad Sci, Bratislava, Slovakia

P4.20 **Protective effects of Quercetin from oxidative/nitrosative stress under intermittent hypobaric hypoxia exposure in rat heart**
Irina Camelia Chis, D. Baltaru, A. Dumitrovici, A. Coşeriu, B. C. Radu, R. Moldovan, A. Mureşan
"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj Napoca, Romania

P4.22 **Dietary supplementation of zinc increases acethylcholine induced relaxations of isolated rat carotid arteries**
Ivan Ivic, A. Cavka, I. Grizelj, Z. Mihaljevic, Z. Loncaric, A. Koller, I. Drenjancevic
Medical School Pécs, Departmeent of Patophysiology and Gerontology, Pécs, Hungary

P4.24 **The effects of NMDA receptors modulation on cardiodynamic parameters in isolated rat heart**
Ivan Srejovic, V. Jakovljevic, V. Zivkovic, N. Barudzic, D. Djuric
Department of Physiology, Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia

P4.26 **Shift in Na+/Ca2+ exchange balance modulates the inotropic consequences of the NCX inhibition**
Károly Acsai, K. Oravecz, A. Kormos, Z. Márton, J.Gy. Papp, A. Varró
Department of Pharmacology and Pharmacotherapy, University of Szeged, Szeged, Hungary

P4.28 **Autonomic function and cold-induced vasoconstriction in nicotine dependent young people**
Ludmila Gerasimova, T. Guseva, E. Uhanova , A. Fedosova
Petrozavodsk State University, Petrozavodsk, Russia

P4.30 **Innovation of education of cardiovascular physiology with respect to clinical practice**
Michaela Adamcova
Department of Physiology, Faculty of Medicine in Hradec Kralove, Charles University in Prague, Czech Republic
Chair: **Attila Tóth**, Hungary

P4.32 **Asynchronous activation of calcium and potassium currents by beta-adrenergic stimulation in mammalian ventricular myocardium**
Norbert Szentandrássy, B. Hegyi, K. Váczi, K. Kistamás, F. Ruzsnavszky, B. Horváth, T. Bányász, J. Magyar, P.P. Nánási
Department of Dental Physiology and Pharmacology, University of Debrecen, Debrecen, Hungary

P4.34 **Ellagic acid prevents cardiac fibrosis and attenuates high blood pressure in chronic nitric oxide-deficient hypertensive rats**
Parichat Prachaney, P. Boonprom , T. Berkban, P.Pakdeechote, J. Umka Welbat, V. Kukongviriyapan, U. Kukongviriyapan, P. Sretarugsa
Department of Anatomy, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand

P4.36 **Combined modulation of IK, ATP and IKr to reduce reverse use dependency and repolarization heterogeneity**
Richárd Varga, T. Hornyik, Z. Husti, J.Gy. Papp, A. Varró, I. Baczkó
Department of Pharmacology and Pharmacotherapy, University of Szeged, Szeged, Hungary

P4.38 **Hemodynamic effects of Isatin on isolated perfused heart**
Selma Arzu Vardar, Z. Guksu, S.A. Vardar, O. Palabıyık, A. Karaca, E. Taştekin, N. Sut
Department of Physiology, Trakya University Medical Faculty, Edirne, Turkey

P4.40 **Evaluation of Urotensin-II and Urocortin as biomarkers of myocardial damage in an animal model of acute myocardial infarction**
Tarik Smani, I. Diaz, A. Dominguez-Rodriguez, E. Calderon-Sanchez, A. Ordoñez
Institute of Biomedicine of Seville, Spain

P4.42 **Impaired baroreflex-function is not related to deteriorated carotid elasticity in schizophrenic patients**
Viktor László Lakatos, B. Mersich, D. Cseh, A. Sárközi, M.Kollai, A. Pintér
Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary

P4.44 **Assessment of myocardial protection with new biochemical markers during on-pump coronary bypass surgery**
Z. Işık Solak Görmüş, M.C. Çiçek, H. Solak, N. Görmüş, S. Kutlu
University of Necmettin Erbakan, Meram Medical School, Department of Physiology, Konya, Turkey

P4.46 **Estrogens prevent impairment of Ca2+-sequestration and efficiently improve ischemia tolerance of the diabetic heart**
Zsuzsanna Miklós, P.Paragi, G. Dunay, L. Sára, T. Rátkai, K. Takács, N. Ács, T. Ivanics
Institute of Human Physiology and Clinical Experimental Research, Semmelweis University, Budapest, Hungary

P5 **Respiratory Physiology**
Chairs: **Ákos Zsembery,** Hungary

P5.2 **The endocannabinoid system of human bronchial epithelium**
Attila G. Szöllősi, N. Vasas, M. Szilasi, Á. Angyal, E. Lisztes, A. Oláh, T. Bíró
DE-MTA "Lendület" Cellular Physiology Research Group, Department of Physiology, University of Debrecen, Hungary

P5.4 **Effect of radical stress on NO production in rats exposed to chronic hypoxia**
Dana Mikova, O. Vajnerova, V. Hampl, J. Herget
Charles University in Prague, Czech Republic

P5.6 **Administration of exogenous surfactant: global and regional lung functional changes in a rabbit model of surfactant deficiency**
Ferenc Peták, L. Porra, W. Habre, G. Albu, I. Malaspinas, C. Doras, S. Bayat
University of Szeged, Department of Medical Physics and Informatics, Szeged, Hungary

P5.8 **Respiratory effects of acute blood loss and subsequent fluid resuscitation with colloid or crystalloid solutions**

Gergely H. Fodor, B. Babik, D. Czövek, C.Doras, S. Bayat, W.Habre, F. Peták
Department of Medical Physics and Informatics, University of Szeged, Szeged, Hungary

P5.10 **Predictive mouse model of chronic cigarette smoke-induced pulmonary and cardiac pathophysiological alterations**

István Szitter, R. Halmosi, L. Deres, K. Erős, Z.V. Varga, P. Bencsik, K. Kiss, P. Ferdinandy, Zs. Helyes
Department of Pharmacology and Pharmacotherapy, Faculty of Medicine, University of Pécs, Pécs, Hungary

P5.12 **Impact of altered ventilation pattern on capnography phase III slope in patients undergoing elective heart surgery**

József Tolnai, F. Peták, B. Babik
University of Szeged, Department of Medical Physics and Informatics, Szeged, Hungary

P5.14 **Lipopolysaccharide-induced fever elicits changes in lung surfactant proteins**

Maroš Kolomazník, I. Zila, J. Kopincova, D.Mokra, A. Calkovska
Department of Physiology, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia

P5.16 **Changes of pro-inflammatory and apoptotic markers in an experimental model of acute lung injury Petra Košútová,**

D. Mokra, P. Mikolka, S. Balentova, H. Pistekova, L. Tomcikova, A. Calkovska
Department of physiology, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia

P6 **Gastrointestinal Physiology**
Chair: **Péter Hegyi**, Hungary

P6.2 **Effect of chronic systemic Nesfatin-1 treatment in intestinal ischemia/reperfusion**

Ceylan Ayada, Ü. Toru, R. Akcılar, S. Şahin, G. Erken, H.A. Erken, G. Turgut, S. Turgut, O. Genç
Dumlupınar University, Medical Faculty, Department of Physiology, Kütahya, Turkey

P6.4 **The dynamic of non-invasive predictive markers for incipient experimental liver fibrosis**

Cristian Cezar Login, A. Muresan, A. Nagy, S. Clichici
Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Department of Physiology, Cluj-Napoca, Romania

P6.6 **Local poly(ADP-ribose)polymerase activation in children with Crohn's disease**

Eszter M. Horváth, N.J. Béres, K. Borka, G. Szabó, Sz. Heininger, R. Benkő, G. Veres
Semmelweis University, Institue of Human Physiology and Clinical Experimental Research, Budapest, Hungary

P6.8 **Hydrogen sulfide confers protection in TNBS induced colitis in rat: role of heme oxigenase**

Krisztina Kupai, Z. Szalai, M. Korsós, Z. Baláth, Sz. Török, R. Szabó, A. Csonka, L. Daruka, A. Pósa, Cs. Varga
Dept. of Physiology, Anatomy and Neuroscience, Faculty of Science and Informatics, University of Szeged, Szeged, Hungary

P6.10 **Effects of dietary fatty acids on gut microbiota and IRAP activity**

Magdalena Martinez Cañamero, A. B.Segarra, M. Hidalgo, A.B.Villarejo, M.Ramírez, I. Prieto
University of Jaén, Jaén, Spain

P6.12 **How to use PET/MRI to observe metabolic and cellular effects of portal vein ligation in healthy rat liver**

Mariann Semjéni3
CROmed Ltd, Hungary

P6.14 **Contribution of Capsaicin-sensitive sensory nerves and nitric oxide to the protective action of Orexin-A against ischemia/reperfusion-induced gastric mucosal injury in rats**

Ruken Tan, B.Gemici, V.N. İzgüt-Uysal
Near East University Faculity of Medicine Department of Physiology, Nicosia/TRNC, Turkey

P6.16 **Effects of Silymarin on the initiation and progression of liver fibrosis in CCl4-induced experimental model**

Simona Clichici, D. Olteanu, A. Nagy, F. Adriana, M. Petru
Physiology Department, UMF Cluj-Napoca, Romania

P6.18 **Transparent, true 3D qualitative and quantitative microscopic investigation of orofacial histological structures**

Zsolt Lohinai, I. Nagy, M. Gyurkovics, B. Keremi, E. Komarek, Cs. Korom, G. Varga, I. Stuber
Department of Conservative Dentistry, Semmelweis University, Budapest, Hungary

P6.19 **The protective effect of microemulsion of sour cherry (prunus cerasus) kernel extract on carbon tetrachloride -induced hepatotoxicity in mice**

Kalantari Heibatullah , M. Eisa, S. Anayatollah, R. Anahita, G. Mehdi
Department of Pharmacology and Toxicology and Nanotechnology Research Center, School of Pharmacy, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran

P7 **Renal Physiology**
Chair: **Péter Hamar**, Hungary

P7.1 **Influence of crowding stress on properties of renal Na,K-ATPase in young male normotensive and spontaneously hypertensive rats**

Barbora Kaločayová, L. Mézešová, V. Jendruchová, A. Púzserová, P. Bališ, I. Bernátová, N. Vrbjar
Institute of Heart Research, Slovak Academy of Science, Slovakia

P7.2 **Metformin prevents renal ischemia-reperfusion injury: a biochemical and histopathological evaluation of experimental model**

Branislava Medic, D. Jovičić, Z. Todorović, K. Savić-Vujović, R. Stojanović, M. Prostran
Department of Pharmacology, Clinical Pharmacology and Toxicology, Belgrade, Serbia

P7.3 **Less inflammation and oxidative damage is responsible for the resistance of Rowett rats against focal segmental glomerulosclerosis**
Csaba Imre Szalay, G. Kökény, K. Erdélyi, E. Lajtár, M. Godó, M. Sárközy, T. Kaucsár, T.B. Csont, T. Krenács, G. Szénási, P. Pacher, P. Hamar
Institute of Pathophysiology, Semmelweis University, Budapest, Hungary

P7.4 **Knockout of the Tau T gene predisposes C57 BL/6 mice to a ST2-induced diabetic nephropathy**
X. Han, AB Patters, I. J Azuma, SW Schaffer, Russell W. Chesney
University of Tennessee Health Science Center, Memphis, TN USA

P8 Physiology of the Immune System
Chair: **Zsuzsa Helyes**, Hungary

P8.2 **Characterization of extracellular vesicles produced during spontaneous death of neutrophilic granulocytes**
Ákos Márton Lőrincz, M. Schütte, Cs. Timár, E. Ligeti
Department of Physiology, Semmelweis University, Budapest, Hungary

P8.4 **Evidence for the involvement of galanin receptor 3 in an inflammatory arthritis model of the mouse**
Bálint Botz, M. Kovács, T. Németh, A. Mócsai, S. Brunner, B. Kofler, E. Pintér, Zs. Helyes
University of Pécs, Medical School, Dept. of Pharmacology and Pharmacotherapy, University of Pécs, Pécs, Hungary

P8.6 **Direct inhibition of complement c5a has long-term anti-inflammatory effects after partial aortic occlusion**
Dániel Érces, G. Varga, A. Mészáros, Sz. Szűcs, T. Fischer-Szatmári, C. Cao, H. Okada, N. Okada, J. Kaszaki, M. Boros
University of Szeged, Institute of Surgical Research, Szeged, Hungary

P8.8 **The effects of treatment with Simvastatin on liver ghrelin, HIF-1 alpha and trace elements in endotoxemic rats**
Elif Ozkok, H. Yorulmaz, G. Demir, İ. E. Yalcın, G. Ates, A.S. Tamer
Istanbul University, Deparment of Neuroscience, The Institute for Experimental Medicine, Istanbul, Turkey

P8.10 **Effects of 6-hydroxydopamine on fractal complexity of lymphocyte chromatin organization**
Igor Pantic
Institute of Medical Physiology, School of Medicine, University of Belgrade, Serbia

P8.12 **Correlation between fractal and grey level co-occurrence matrix parameters in nuclear structure of toluidine blue - stained thymus cortical lymphocytes**
Igor Pantic, M. Basailovic, J. Paunovic M . Basailovic, J. Paunovic
Institute of Medical Physiology, School of Medicine, University of Belgrade, Serbia

P8.14 **Role of hypoxia inducible factor in cytokine secretion responses to cadmium of rat alveolar macrophages in normoxic and hypoxic conditions**
Nuray Yazihan, F. Sahin, E. Akcil,M. Kacar
Ankara University, Faculty of Medicine, Pathophysiology, Ankara, Turkey

P8.16 **Muscle fatigue index and lactate level in sedentary young and elderly women**
D.C. Felício, D.S. Pereira, D.B. Coelho, B.Z. de Queiroz, J.M.D. Dias, E.S. Garcia, Ronaldo Luis Thomasini , L. S. M. Pereira
Institute of Sciences and Technology, Federal University of Jequitinhonha and Mucuri Valleys, Diamantina, Brazil

P8.18 **CARD9 mediates autoantibody-induced autoimmune diseas by linking the syk tyrosine kinase to chemokine production**
Tamás Németh, K. Futosi, J. Weisinger, K. Csorba, C. Sitaru, J. Ruland, A. Mocsai
Semmelweis University Heart and Vascular Center, Budapest, Hungary

P9 Endocrinology and Metabolism
Chair: **Tibor Bartha**, Hungary

P9.2 **Endocrine distruptor effect of Bisphenol A on the developing cerebellum, through estrogen and thyroid hormone receptor expression level changes**
Gergely Jócsák, V. Somogyi, I. Tóth, G. Goszleth, T. Bartha, A. Zsarnovszky
University of Szeged, Department of Physiology and Biochemistry, Szeged, Hungary

P9.4 **Evaluation of spatial learning and memory, level of serum cholesterol and tryglyceride in caloric restriction applied adolescent female rats**
Gülay Üzüm, Z. Kaptan
Istanbul University, Medical faculty of Istanbul, Dept of Physiology, Istanbul, Turkey

P9.6 **Effects of Quercetin on depression-like behavior**
Hasan Serdar Gergerlioglu, E.A. Demir, M. Oz Selcuk
University, Faculty of Medicine, Konya, Turkey

P9.8 **Exercise and milk-protein supplements: effects on skeletal muscle sirtuins in rats with elevated risk factors for metabolic disorders**
Heikki Kainulainen, S. Lensu, S. Pekkala, A. Mäkinen, J.J. Hulmi, A. Turpeinen, U.M. Kujala, L.G. Koch, S.L. Britton
University of Jyväskylä, Finland

P9.10 **Adipocytokines and inflammation as a link between obesity and related endothelial dysfunction**
Ivana Grizelj, A. Čavka, Z. Ivanović, A. Ćosić, S. Novak, M. Mihalj, I. Drenjančević
Department of Physiology and Immunology, Faculty of Medicine University of Osijek, Osijek, Croatia

P9.12 **Peripheral CCK-1 receptors in age-related regulatory alterations affecting energy balance**
Judit Tenk, E. Varga, T. Rimai, I. Rostás, Sz. Soós, M. Székely, E. Pétervári, M. Balaskó

University of Pécs, Medical School, Department of Pathophysiology and Gerontology, Pécs, Hungary

P9.14 **The effect of obestatin on corticosterone secretion and anxiety behaviour**
Júlia Szakács, K. Csabafi, N. Lipták, K. Bene, B. Kincses, Gy. Szabó
Department of Pathophysiology; Faculty of Medicine; University of Szeged; Hungary

P9.16 **A novel kisspeptin antagonist peptide 234 prevents kisspeptin-induced pubertaladvancement in the female rats**
Mete Ozcan, Z. Sahin, S. Canpolat, B. Yilmaz, H. Kelestimur
Firat University, Faculty of Medicine, Department of Biophysics, Elazig, Turkey

P9.18 **The effects of hyperbaric oxygen therapy (HBOT) on blood viscosity and erythrocyte aggregation in diabetic patients**
Nesrin Zeynep Ertan, M. Sinan, B. Mirasoglu, O. Yalcin, N. Atac, A.S. Toklu
Istanbul University, Istanbul Faculty of Medicine, Dept of Physiology, Turkey
Chair: **Zoltán Rakonczay**, Hungary

P9.20 **Exposure of pregnant rats to angiotensin 2 leads to an increase in blood pressure in their adult male offspring**
Pavel Svitok , L. Molčan, P. Štefánik, A.Vesela, M. Zeman
Department of Animale Physiology and Ethology, Faculty of Natural Sciences, Comenius University in Bratislava, Slovakia

P9.22 **Examination of macrophage migration inhibitory factor(MIF) and pituitary adenylate cyclase- activating polypeptide(PACAP) in human breast milk samples**
Réka Anna Vass, D. Reglodi, J. Garai, A. Kovacs, K. Csanaky, L. Santik, Zs. Helyes, I. Tarcai, A. Tamas
Department of Anatomy, PTE-MTA Lendulet PACAP Research Team, University of Pécs, Hungary

P9.24 **Effect of boron on spontaneous and oxytocin induced contractions in rat myometrium**
Selim Kutlu, M. Akgunlu, H. Solak, Z.I. Solak Gormus, H. Uysal, N. Ergene
Necmettin Erbakan University, Meram Faculty of Medicine, Department of Physiology, Konya, Turkey

P9.26 **Nesfatin-1 levels in response to the patients with different glucose tolerance levels**
Sermin Algul, Y. Ozkan, İ. Serhatlioglu, O. Ozcelik
Fırat University Faculty of Medicine Department of Physiology, Elazig, Turkey,

P9.28 **Can Apelin-13 be a new actor in control of obesity?**
Suat Tekin, Y. Erden, E. Etem, S. Sandal, C. Colak
Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P9.30 **Estimation of the relationships between irisin concentration and food intake, body weight and body temperature using polynomial regression models in the rats**
Suat Tekin , C. Colak, Y. Erden, S. Sandal

Department of Physiology, Faculty of Medicine, University of Inonu, Turkey

P9.32 **Effects of intracerebroventricular infusion of apelin-13 on the metabolism rate and energy expenditure**
Suleyman Sandal, Y. Erden, S. Tekin, E. Etem
Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P9.34 **Changes os C-AMP level during oestrus cycle in normotensive and sponataneous hypertensive rats**
Vaska Antevska, B. Dejanova, S. Petrovska, O.Nikodijevic
Institute of Physiology, Medical Faculty Skopje, Macedonia

P9.36 **Glutathione-S-Transferase induction effect of red mud contaminated food**
Zoltán Attila Godó, Cs. Révész, D. Kocsis
University of Debrecen, Faculty of Informatics – Department of Information Technology, Debrecen, Hungary

P10 **Neurophysiology**
Chair: **Gábor Czirják**, Hungary

P10.2 **Crosstalk between CB1 and TRPV1 receptors in primary sensory neurons**
Ágnes Jenes, A. Varga, L. Csernoch, I. Nagy
University of Debrecen, Hungary

P10.4 **A maternally induced thalamic neuropeptide mediates the effect of suckling to hypothalamic centers of maternal motivation and lactation**
Árpád Dobolyi, É.R. Szabó, I. Bodnár, A. Lékó, M. Palkovits, Gy.M. Nagy, T.B. Usdin, M. Cservenák
MTA-ELTE NAP Laboratory of Molecular and Systems Neurobiology, Hungarian Academy of Sciences and ELTE; Human Brain Tissue Bank and Laboratory of Neuromorphology, Semmelweis University, Budapest, Hungary

P10.6 **How does maternal smoking influence the early neurobehavioral development of rat pups?**
Barbara Mammel, T. Kvárik, P. Kiss, J. Gyarmati, T. Ertl, Zs. Szabó, D. Reglődi
Department of Anatomy, University of Pécs, Hungary

P10.8 **Investigating the retinoprotective effects of PACAP eye-drop in ischemic retinopathy**
Dóra Werling, T. Kvarik, R. Varga, N. Nagy, F. Mayer, A. Vaczy, D. Reglodi, P. Kiss, A.Tamas, Zs. Biro, G. Toth, T. Atlasz
University of Pecs, Dept of Anatomy, Pécs, Hungary

P10.10 **Induction of amylin in the preoptic area of lactating dams depends on TIP39-containing posterior thalamic neurons**
Éva Rebeka Szabó, M. Cservenák, E. Udvari, Á. Dobolyi
Semmelweis University, Department of Anatomy, Histology and Embryology, Budapest, Hungary

P10.12 **Analysis of connexin 26 expression in hearing loss**
J.G. Kiss , J. Jarabin, A. Kovacs, F. Otvos, Hanna Kozak, Cs. Vagvolgyi, V. Szuts, L. Rovo

University of Szeged, Institute of Biochemistry, Biological Research Centre of HAS, Szeged, Hungary

P10.14 **Polysulfide compound dimethyl trisulfide is analgesic in heat-injury-induced hyperalgesia in mice**
Gábor Pozsgai, E. Steen, E. Pintér
Department of Pharmacology and Pharmacotherapy, University of Pécs, Hungary

P10.16 **Caffeine improves MK-801-induced learning and memory deficits**
Gülay Üzüm, A.S. Diler, Y.Z. Ziylan
Istanbul University, Medical faculty of Istanbul, Dept of Physiology, Istanbul, Turkey
Chair: **Gyula Sáry**, Hungary

P10.18 **Complex functional attributes of glucose-monitoring neurons in medial orbitofrontal cortex and their homeostatic significance**
István Szabó, E. Hormay, B. Csetényi, B. Nagy, M. Bajnok Góré, Z. Karádi
Institute of Physiology, Medical School, University of Pécs, and University of Pécs Szentágothai Research Centre, Pécs, Hungary

P10.20 **Putting the fission illusion into a new context**
Júlia Simon, P. Csibri, G. Csifcsák, A. Bognár, Gy. Sáry
University of Szeged, BSc biologist (III.), Department of Physiology, Szeged, Hungary

P10.22 **Synergism between NMDA receptor antagonists ketamine and magnesium in lowering body temperature in rats**
Katarina Savić Vujović, Savić Vujović S. Vuckovic, A. Vujovic, B. Medic, D. Srebro, R. Stojanovic, N. Divac, M. Prostran
Department of Pharmacology, Clinical Pharmacology and Toxicology, Faculty of Medicine, University of Belgrade, Serbia

P10.24 **Acupuncture modifies neuronal activities in the nucleus reticularis lateralis in rats**
Kazuo Toda, J.L. Zeredo, K. Moritaka, H. Yamashita, K. Kaida, M.S. Ota, M.Kimoto
Nagasaki University, Nagasaki, Japan

P10.26 **The effect of kisspeptin on cocaine-evoked behavioral changes**
Krisztina Csabafi, J. Szakács, B. Kincses, K. Bene, Zs. Bagosi, Gy. Telegdy, Gy. Szabó
Department of Pathophysiology, University of Szeged, Szeged, Hungary

P10.28 **Inhibition of transient receptor potential ion channels by endogenous lipid mediators**
Maja Payrits, É. Sághy, É. Szőke, T. Bagoly, Zs. Helyes, J. Szolcsányi
University of Pécs Medical School Department of Pharmacology and Pharmacotherapy, Pécs, Hungary

P10.30 **In vivo imaging of brain after cerebral ischaemia using SPECT/CT in mice**
Mariann Semjéni
CROmed Ltd, Hungary

P10.32 **Median raphe can establishes glutamatergic synapses in the mouse forebrain**
Márton Mayer
Institute of Experimental Medicine of the Hungarian Academy of Sciences, Budapest, Hungary
Chair: **Csaba Fekete**, Hungary

P10.34 **Effects of resveratrol and resveratrol delivered in liposome carrier system on penicillin-induced brain epileptic activity in male rats**
Muhsine Sinem Ethemoğlu, I. Arslan, F. B. Şeker, N. Ekimci, G. Duman, B.Yılmaz, E. Kılıç
Yeditepe University, Medical School, Turkey

P10.36 **Synapse-specific distribution of neuroligin-2 in the hippocampus**
Panna Hegedüs
Institute of Experimental Medicine of the Hungarian Academy of Sciences, Budapest, Hungary

P10.38 **Pharmacological manipulations of striatal interneurons induce a phenotype of dystonia in the monkey**
D. Guehl, E. Cuny, F. Lafourcade, Pierre Burbaud
CHU de Bordeaux, France

P10.40 **The voltage-dependent anion-channel (VDAC) is dephosphorylated by beta-amyloid peptide. Involvement in AD mechanisms of toxicity**
Raquel Marín, C. Fernández, A. Canerina-Amaro, M. Díaz, I. Ferrer
Laboratory of Cellular Neurobiology, School of Medicine, La Laguna 38320, Tenerife, Spain

P10.42 **Cannabinoid agonists evoke Ca2+ transients in spinal astrocytes**
Tamás Oláh, Z. Hegyi, J. Vincze, K. Holló, M. Antal, L. Csernoch
University of Debrecen, Faculty of Medicine, Department of Physiology, Hungary

P10.44 **Effect of intracerebroventricular irisin injection on the uncoupling protein expression in the rat brain**
Suat Tekin, Y. Erden, E. Etem, A. Tektemur, S. Kirbag, S. Sandal
Inonu University, Faculty of Medicine, Department of Physiology, Malatya, Turkey

P10.46 **The role of hemokinin-1 and substance P in acute pain in mice**
Tímea Gubanyi, A. Hunyady
University of Pécs, Medical School, Pécs, Hungary

P10.48 **Temporal characteristics of binocular visual information processing, a VEP study**
Vanda Nemes, G. Horváth, D. Fülöp, G. Jandó
Department of Physiology, Medical School, University of Pécs, Hungary

P10.50 **Protective effect of rasagiline in aminoglycoside ototoxicity**
Viktória Humli, G. Polony, R. Andó, M. Aller, T. Horváth, J. Szepesy, A. Harnos, L. Tamás, E.S. Vizi, T. Zelles
Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest, Hungary

P12 **From Cell Signalling to Bioenergetics and Cell Damage**
Chair: **Bíró Tamás,** Hungary

P12.2 **Effect of intestinal cold preservation in PACAP-38 containing solution**
Andrea Ferenc, Gy. Szabó, D. Csukás, L. Seres, D. Fehér, J. Sándor, D. Reglődi, G. Jancsó, K. Kovács, Gy. Wéber
Semmelweis University Department of Surgical Research and Techniques, Budapest, Hungary

P12.4 **Pharmacological protections against retinal injuries**
Balázs Varga, M. Bombicz, D. Priksz, A. M. Szabó, D. Varga, Á. Kemény-Beke, R. Gesztelyi, Á. Tósaki, B. Juhász
University of Debrecen, Faculty of Pharmacy, Department of Pharmacology, Debrecen, Hungary

P12.6 **Evaluation of the cytotoxic effect of Diphtheria toxin on human umblical vein endothelial cells**
Başak Varol, B. Özerman, E. Hacıosmanoğlu, M. Bektaş, R. Nurten
İstanbul Faculty of Medicine, Biophysics Department, Istambul, Turkey

P12.8 **The effects of Src-family kinase inhibitors on osteoclast development**
Dániel Csete, D. Győri, B. Tél, T. Vántus, Gy. Kéri, Cs. SzántaI-Kis, A. Mócsai
Department of Physiology, Semmelweis University School of Medicine & MTA-SE, Budapest, Hungary

P12.10 **Depletion of 14-3-3? reduces the surface expression of Transient Receptor Potential Melastatin 4 (TRPM4b) channels and attenuates TRPM4b-mediated glutamate-induced neuronal cell death**
Eunju Kim, Y.-S. Lee, J.-Y. Park, E.M. Hwang
Korea Institute of Science and Technology, Seoul, Korea

P12.12 **Effects of methane inhalation on rat liver mitochondria following partial hepatic ischemia**
Gerda Strifler, P. Hartmann, A. Mészáros, E. Kaszonyi, C. Cao, J. Kaszaki, M. Boros
University of Szeged, Institute of Surgical Research, Szeged, Hungary

P12.14 **Antioxidant effects and cytotoxicity of compounds of natural origin**
István Bak, E. Csepanyi, I. Lekli, A. Tosaki
University of Debrecen, Hungary

P12.16 **Anti oxidative effect of Ozone on spinal cord injury**
O. Genç, R. Akcılar, Ceylan Ayada, H. Şimşek, S. Şahin, A. Koçak
Dumlupınar University, Medical Faculty, Department of Physiology, Kütahya, Turkey

P12.18 **Effect of L-alpha glycerylphosphorylcholine on mitochondrial dysfunction and increased endogenous methane production caused by chronic whisky consumption**
Tünde Tőkés, E. Tuboly, R. Molnár, R.N. Turányi, M. Boros
Institute of Surgical Research, University of Szeged, Szeged, Hungary

P13 **Microcirculation**
Chair: **Ferenc Bari** , Hungary

P13.1 **Application of local heat provocation test to assess vascular reactivity on healthy and inflammed human gingiva**
Eszter Molnár, A. Demeter, Zs. Bata, H. Parkonen, Zs. Lohinai, Zs. Tóth, J. Vág
Semmelweis Univerity Department of Conservative Dentistry, Budapest, Hungary

P13.2 **Hyperthyroidism reversibly impacts skin microvascular reactivity**
Helena Lenasi, N. Bedernjak, S. Gaberšček, K. Zaletel
Institute of Physiology, Medical Faculty, University of Ljubljana, Slovenia

P13.3 **Multimodal action of 5'adenosine monophosphate-activated protein kinase (AMPK) in reducing vascular tone of resistance arteries: effects on calcium stores and membrane potential**
Holger Schneider , S. Blodow, K.-M. Schubert, S. Erdogmus, M.M.Schnitzler, T. Gudermann, U. Pohl
Walter Brendel Centre of Experimental Medicine, LMU Munich, Germany

P13.4 **NO-donating oximes relax corpora cavernosa through mechanisms other than those involved in arterial relaxation**
Johan Van de Voorde, B. Pauwels, C. Boydens, K. Decaluwé
Department of Pharmacology, Ghent University, Belgium

P13.5 **Mechanisms involved in resveratrol-induced relaxation of isolated mice corpora cavernosa**
Johan Van de Voorde, C. Boydens, B. Pauwels, K. Decaluwé
Department of Pharmacology, Ghent University, Belgium

P13.6 **Foxo1 subcellular dynamic and its impact on redox homeostasis in endothelial cells**
Omar Porras, J.P.Benitez
Universidad de Chile, Santiago, Chile

P13.7 **Effect of systemic medical Ozone application on oxidative parameters in intestinal ischemia- reperfusion**
O. Genç, Ceylan Ayada , Ü. Toru, R. Akcılar, S. Şahin, G. Erken, H.A. Erken, G. Turgut, S. Turgut
Dumlupınar University, Medical Faculty, Department of Physiology, Kütahya, Turkey

P13.8 **Model-based assessment of blood substitute-induced vasoactivity and red blood cell aggregation**
Péter Mukli, István Portörő, Dario Caccia, Michele Perella, Luca Ronda, Andrea Mozzarelli, Andras Eke
Institute of Human Physiology and Clinical Experimental Research, Budapest, Hungary
Department of Biomedical Science and Technology, University of Milan, Italy
Department of Pharmacy, University of Parma, Italy

P14 **Circadian Rhythm**
Chair: **Krisztina Káldi**, Hungary

P14.1 **Effect of metabolic changes on the circadian clock**
Anita Szőke, K. Káldi, N. Gyöngyösi
Department of Physiology, Semmelweis University, Budapest, Hungary

P14.2 **Social jetlag negatively affects academic performance in medical students**
Krisztina Ella, R. Á. Haraszti, T. Roenneberg, K. Káldi
Department of Physiology, Semmelweis University, Budapest, Hungary

P14.3 **Effects of Apelin-13 administration on food and water intake in different photoperiod in male rats**
Sinan Canpolat, S. Saral, E. Ozcelik, M. Alkanat, Ö. Saral
University of Firat, Faculty of Medicine Deparment of Physiology, Elazig, Turkey

P14.4 **Role of the Transient Receptor Potential Ankyrin 1 (TRPA1) ion channel in the acute and chronic inflammatory pain models using gene-deficient mice**
Valeria Tékus, Á. Horváth, B. Botz, J. Szolcsányi, E. Pintér, Zs. Helyes
Dept. of Pharmacology and Pharmacotherapy, Medical School, University of Pécs, Hungary

P15 **Systems Biology**
Chair: **Miklós Cserző**, Hungary

P15.1 **Insulin-like growth factor binding protein 3 in the brain of mother rats**
András Lékó, Á. Dobolyi
MTA-ELTE Laboratory of Molecular and Systems Neurobiology, Department of Anatomy, Histology and Embryology, Budapest, Hungary

P15.2 **Lifetsyle, hypertension and cancer- a modern reconsidering**
Angela Madalina Lázár
University of Medicine and Pharmacy Carol Davila, Department of Physiology, Bucharest, Romania

P15.3 **Alterations in gene expression patterns of atopic dermatitis patients-derived lesional and non-lesional keratinocytes**
Attila Oláh, N. Vasas, A. G. Szöllősi, E. Lisztes, Á. Angyal, R. Papp, R. Paus, T. Bíró
DE-MTA “Lendület” Cellular Physiology Research Group, Department of Physiology, University of Debrecen, Debrecen, Hungary

P15.4 **Screening of differentially expressed microRNAs in TNBS induced colitis in rat colon**
Csaba Varga, K. Kupai, Sz. Török, Z. Szalai, Z. Baráth, L. Nagy, L.G. Puskás, A. Pósa
Department of Physiology, Anatomy and Neuroscience, Faculty of Science and Informatics, University of Szeged, Szeged, Hungary

30 August, 2014

SZENT-GYÖRGYİ ALBERT ROOM

9:00 **PLENARY LECTURE**
Chair: **László Rosivall**, Hungary
Will it one day be possible to engineer a complete kidney? Problems and perspectives
Giuseppe Remuzzi, Italy

9:45 **BREAK**

10:15-12:15
S6-A **The Calcifying Vessel: New Genetic Findings for Future Patho-physiological Avenues**
Chairs: **Georges Lefthériotis,** France and **András Váradi**, Hungary

10:15 S6- A1 **Mechanisms of arterial calcification: Lessons learned from rare monogenic disorders**
Yvonne Nitschke
Department of General Pediatrics, Münster University Children's Hospital, Münster, Germany

10:40 S6- A2 **The role of ABCC6 in chronic and acute calcification, a tale of 3 diseases**
O. Le Saux, **Chris Brampton**
University of Hawaii, John A. Burns School of Medicine, Honolulu, HI

11:05 S6- A3 **Tissue-wide mineralization: What can we learn from the vasculature**
Olivier M. Vanakker
Center for Medical Genetics, Ghent University Hospital, Belgium

11:30 S6- A4 **Arterial calcifications and cardiovascular diseases: Clinical and therapeutic issues**
Georges Lefthériotis, Prunier, Kauffenstein, Omarjee, Abraham, Willoteau, Martin
Lab Vascular Invest - CHU Angers & UMR CNRS 6214 Inserm 1083, Angers, France

11:55 S6- A5 **Conformation correction therapy in arterial calcification disorders, PXE and GACI**
Viola Pomozi, C.N. Brampton, K. Fülöp, A. Apana, H. Gyergyák, N. Tőkési, O. Le Saux, A. Váradi
Institute of Enzymology, RCNS, Hungarian Academy of Sciences, Budapest, Hungary

12:15 **BREAK**

12:30 **PLENARY LECTURE**
Chair: **Alex Verkhratsky**, UK
Neutrophils: versatile cells of innate immunity
Erzsébet Ligeti , Hungary

13:15 **CLOSING CEREMONY**

HEVESY GYÖRGY ROOM

10:15-12:15

S6-B **Physiology of Interaction Between RAS, IRAP and Glucose Metabolism**
Chairs: **Stefan Zorad,** Slovakia and **Manuel Ramírez-Sánchez,** Spain

10:15 **OPENİNG REMARKS**
Stefan Zorad, Slovakia

10:20 S6-B1 **Does insulin-regulated aminopeptidase play a role in regulating glucose uptake in neurones?**
Siew Yeen Chai
Monash University, Clayton, Australia

10:50 S6-B2 **Presence, regulation and function of insulin-regulated aminopeptidase in macrophages**
Patrick Vanderheyden
Free University Brussels, Belgium

11:10 S6-B3 **Ex vivo assessment of tissue angiotensin metabolism. Focus on Ang I/Ang IV/IRAP axis in various kinds of fat tissue in rat model of obesity and insulin resistance**
Rafał Olszanecki, B. Bujak-Giżycka, M. Suski, L. Gajdosechova, K. Krskova, S. Zorad, R. Korbut
Jagiellonian University Medical College, Department of Pharmacology, Krakow, Poland

11:30 S6-B4 **Activity assays for proteolytic enzymes in complex biological samples - Technical aspects and novel methods for measuring angiotensinase and oxytocinase activities**
Marko Poglitsch
Attoquant Diagnostics, Vienna, Austria

11:45 S6-B5 **Effect of high fat diets on angiotensinase and IRA activities. Their role in blood pressure and glucose homeostasis control**
Isabel Prieto, A. B. Segarra, A.B. Villarejo, F.T. Pérez, L. Gajdosechova, M. Martínez-Cañamero, M.Ramírez
Jaén University, Jaén, Spain

12:00 S6-B6 **Chronic treatment of rats with oxytocin upregulates renin and (pro)renin receptor expression in kidney**
Katarina Krskova, L. Gajdosechova, S. Zorad, D. Jezova, R. Olszanecki
Institute of Experimental Endocrinology SAS, Bratislava, Slovakia

12:15 **BREAK**

BÉKÉSY GYÖRGY ROOM

10:15-12:15

S6-C **Basic Research Meets Clinical Endocrinology**
Chairs: **Károly Rácz,** Hungary and **Attila Patócs,** Hungary

10:15 S6-C1 **Organogenesis in a petridish - How to generate functional thyroid tissue from mouse embryonic stem cells**
Robert Opitz
IRIBHM, ULB Brussels, Belgium

10:40 S6-C2 **Central regulation of hypothalamic-pituitary-thyroid axis under physiological and pathophysiological conditions**
Csaba Fekete
Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest, Hungary

11:00 S6-C3 **Regulation of cell cycle by microRNAs and its implication in the pathogenesis of endocrine tumors**
Attila Patócs Semmelweis University, Budapest and MTA-SE „Lendulet" Hereditary Endocrine Tumors Research Group, Hungarian Academy of Sciences, Hungary
MTA-SE „Lendulet" Hereditary Endocrine Tumors Research Group, Hungarian Academy of Sciences, Hungary

11:20 S6-C4 **The roll of microRNAs in rabbit preimplantation embryos and pluripotent stem cells**
Elen Gócza, P. Maraghechi, B.Bontovics, K. Németh, Zs. Bosze
NARIC, ABC, Gödöllő, Hungary

11:40 S6-C5 **Novel insight in the regulation of the brainrenin-angiotensin system and itsconnectionwith hypertension**
Y. Marc, J. Gao, F. Balavoine, M. Azizi, B. Roques, **Catherine Llorens-Cortès**
INSERM U1050, Collège de France, Paris, France

12:00 S6-C6 **Mutation of the palmitoylation site of Estrogen Receptor ER? in vivo reveals tissue-specific roles for membrane versus nuclear actions**
Francoise Lenfant, M. Adlanmerini, R. Solinhac, A. Abot, A. Fabre, I. Raymond-Letron, F. Boudou, C. Fontaine, A. Krust, P. Chambon, J. Katzenellenbogen, P. Gourdy, P. Shaul, D. Henrion, J-F. Arnal
INSERM U1048, I2MC, Toulouse, France

12:15 BREAK