

Mechanisms of Physiological Homeostasis in Health and Disease

Sponsored by the Hellenic Society of Physiology, the Academy of Athens,
the American Physiological Society and
Physiological Reviews

October 5-6th, 2023

Academy of Athens

October 5th, 2023

Introductions and Welcome 8:30-9:00 AM

Moderators: Sadis Matalon, Ph.D. D.Sc, FAAPS & George Kollias, PhD.

8:30-8:40 AM **Christos S. Zerefos, PhD.**, Secretary General of the Academy of Athens, Head, Research Center for. Atmospheric Physics & Climatology Academy of Athens, Greece

8:40-8:50 **Stavros Taraviras, PhD**, Professor, Department of Physiology, School of Medicine, University of Patras, Greece. President Hellenic Society of Physiology

8:50-9:00 **Willis K. “Rick” Samson, PH.D., D.Sc.**, Professor of Pharmacology and Physiology, Director of Biomedical Science Graduate Programs, School of Medicine, Saint Louis University, President of the American Physiological Society

Session 1; Plenary Lectures 9:00-10:00 AM

Moderators: Michael Koutsilieris, MD, Ph.D and Carol Ann Remme, MD

9:00-9:30 **George Kollias, PhD.** Professor and Head, Department of Experimental Physiology, National and Kapodistrian University of Athens, Greece, Director of Biomedical Science Research Center “Alexander Flemming; Member Academy of Athens, Associate Editor, *Physiological Reviews*

Title: Mesenchymal cells in health and disease

9:30-10:00 **John P.A. Ioannidis, MD, PhD**, Professor of Medicine, Epidemiology, Population Health, Statistics and Biomedical Data Science, Stanford Medicine, Associate Editor, *Physiological Reviews*

Title: Truth in Science: Improving accuracy and reproducibility of high impact findings

Session 2: Energy Metabolism and Diabetes 10:00-11:15

Moderators: Ivana Valenti, PhD and Stavros Taraviras, PhD

10:00-10:30 AM, **Bettina Mittendorfer, PhD**, Professor of Medicine, Division of Geriatrics & Nutritional Science, Associate Editor, *Physiological Reviews*

Title: Obesity and Type 2 diabetes

10:30-11:00, **George P. Chrousos, MD, ScD**, Professor of Pediatrics and Endocrinology Emeritus, Holder, UNESCO Chair on Adolescent Health Care, Director, University Research Institute of Maternal and Child Health and Precision Medicine, National and Kapodistrian University of Athens, Medical School

Title: Adrenal Androgens and Aging OR The hypothalamic–pituitary–adrenal axis and immune-mediated inflammation

11:00-11:15 **Antonios Chatzigeorgiou, MD, PhD**, Associate Professor, Department of Physiology, Medical School, National and Kapodistrian University of Athens, Athens, Greece.

Title: The underestimated role of hepatic endothelium in non-alcoholic fatty liver disease: The paradigm of Robo4.

11:15-11:30 AM Coffee Break

Session 3. Neurophysiology of Sleep and Memory 11:30-12:30

Moderators: Willis K. Samson, PhD PhD, D.Sc. and George P. Chrousos, MD, ScD

11:30 -12:00 **Ian Born, PhD**, Director of the Department of Medical Psychology and Behavioral Neurobiology at the University of Tübingen, Germany.

Title: Sleep- A brain-state serving system for memory consolidation

12- 12:15 **Myrto Denaxa, PhD**, Principal Investigator, Biomedical Sciences Research Centre "Alexander Fleming", Vari, Greece.

Title: The role of the transcription factor and genome organiser Satb1 in cortical development and physiology

12:15-12:30 **Konstantinos Palikaras, MD, Assistant Professor**, Department of Experimental Physiology, Medical School, National and Kapodistrian University of Athens, GR-157 27 Athens, Greece.

Title: The yin and yang of mitophagy in neuronal physiology

Session 3. Cancer Biology and Treatment 12:30-2:00

Moderators: Dr. Mark Donovitz and George Kollias, PhD

12:30-1:00 PM **Professor Meletios-Athanasios C. Dimopoulos, MD**, Professor and Chairman of the Department of Clinical Therapeutics at the National and Kapodistrian University of Athens School of Medicine, Athens, Greece; Rector of the National and Kapodistrian University of Athens

Title: Multiple Myeloma: Etiology and Treatment

1:00-1:30 **Victoria Sanz-Moreno, PhD**. Professor of Cancer Cell Biology. Cancer Research UK Senior Fellow and Cancer Research UK Werth Trust Fellow, Associate Editor *Physiological Reviews*

Title: Rho GTPase signaling in cancer progression and dissemination

1:30-1:45 **Clio P. Mavragani, MD**, Associate Professor of Medicine (Rheumatology), of and of Experimental Physiology, Department of Basic Medical Sciences National and Kapodistrian University of Athens, Editorial Board Member *Physiological Reviews*

Title: From benign autoimmunity to malignant transformation: Lessons from Sjogren's syndrome

11:45-2:00 **Maria Tsoumakidou, MD**; Group Leader, Biomedical Sciences Research Center Alexander Fleming, Athens Greece; Early Career Editorial Board Member, *Physiological Reviews*.

Title: Towards efficient cancer immunotherapies: deciphering the landscape of antigen-presenting cells.

2:00-3:30 PM Lunch with Invited Speakers and Associate Editors

Session 4. Redox Biology and Cell Signalling 3:30-4:30

Moderators: Sergio Grinstein, PhD and Christos Zerefos, PhD

3:30-4:00 **Giovanni E. Mann, PhD**, Professor of Vascular Biology, International School Lead, Kings College, London UK, *Associate Editor Physiological Reviews*

Title: NRF2: An emerging role in neural stem cell regulation and neurogenesis

4:00-4:30 **Konstantina Kaplani**, Department of Physiology, Medical School, University of Patras, Patras, Greece.

Title: Reprogramming cells into the ependymal lineage

Session 5: Emerging Topics-From the Bench to the Bedside 4:30 – 6:00

Moderators. Christoph Handschin, PhD and Ian Born, PhD

4:30-5:00 **Hillary OD Critchley, MD, DSc**, Head, Deanery of Clinical Sciences, Professor of Reproductive Medicine, Edinburgh Medical School, Consultant Gynaecologist, NHS Lothian, Co-Director MRC Centre for Reproductive Health, UK

Title: Pregnancy and the SARS-CoV-2 pandemic

5:00-5:15 **Dimitra Palioura**, Department of Physiology, School of Biology, Aristotle University of Thessaloniki, Thessaloniki, Greece.

Title: The RNA-binding protein AUF1 in heart failure

Sessopm 6: Closing Lecture

Moderators. John Ioannides, MD, PhD and Sadis Matalon, PhD

5:15-5:45 **Sergio Grinstein, PhD** Professor of Biochemistry, University of Toronto, Senior Scientist in the The Hospital for Sick Children Research Institute, Ontario, Canada

Title: The spectrin cytoskeleton integrates endothelial mechanoresponses

5:45 Closing Remarks: Sadis Matalon

(continued next page)

October 6th, 2023

Session 1. Chair, Dr. Michales Koutsilieris

09:00-09:30 Prof Antigoni Lazou, Department of Biology, Aristotle University of Thessaloniki, Greece

Title: **Targeting mitochondrial dysfunction in cardiac disorders**

9:30-10:50 Short Presentations

11:30-1:30 Session 2

Chair **Dr. Rick Samson, President of the American Physiological Society**

11:30-12:00 Dr. Gina Yosten, Associate Professor, Department of Pharmacology and Physiology, Saint Louis, University School of Medicine, Editor in Chief of the American Journal of Physiology-Regulatory Physiology, USA

Title: **Spatial transcriptomic analysis of the human pancreas**

12:00-1:30 Short presentations

3:00-4:30 Session 3

Chair: **E. Spandou**

3:00-3:30 Mark Donowitz, MD, Professor of Medicine and Physiology, Director, Hopkins Center for Epithelial Disorders, Past President, American Gastroenterological Association, The Johns Hopkins University School of Medicine, USA

Title: **Use of Human Organoids to Understand Normal Intestinal Physiology and Pathophysiology of Diarrheal Diseases”**

3:30-4:30 Short presentations

5:00-7:00 Session 4

Chair: **V. Assimakopoulos**

5:00-5:30 Caterina Psarropoulou, Dept of Biological Applications & Technology, University of Ioannina, Greece

Title: **Immature brain insults and possible effects on cholinergic system neuroplasticity**

5:30-6:30 Short presentations

6:30-7:00 Stavros Garantziotis, MD, Medical Director, Clinical Research Unit National Institute of Environmental Health Sciences, USA

Title: **The extracellular matrix as a treatment target in lung disease**