PROGRAMME

(AS OF 22.08.2025)

Wednesday, 10 September 2025, 13:00 - 20:00
Room(s): Plateau

YP | Cutting edge approaches in physiology – at the bench and beyond

Chairs:

Presentations:

Thursday, 11 September 2025, 9:00 - 10:30
Room(s): Plateau

SIG-01 (1) | Cardiac Physiology SIG and Ion Channels group

Chairs:

Presentations:

Thursday, 11 September 2025, 9:00 - 10:30
Room(s): Solar

SIG-02 (1) | Respiratory Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 9:00 - 10:30
Room(s): Satellit

SIG-03 (1) | Vascular Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 9:00 - 10:30
Room(s): Stratus

SIG-04 (1) | Comparative Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 9:00 - 10:30
Room(s): Sirius

SIG-05 (1) | Skeletal Muscle SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 9:00 - 10:30
Room(s): Passat

SIG-06 (1) | Renal Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 9:00 - 10:30
Room(s): Meridian

SIG-07 (1) | Neuroscience SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 10:30 - 10:45
Room(s): Foyer

| Coffee Break (SIG)

Chairs:

Presentations:

Thursday, 11 September 2025, 10:45 - 12:15
Room(s): Plateau

SIG-01 (2) | Cardiac Physiology SIG and Ion Channels group

Chairs:

Presentations:

Thursday, 11 September 2025, 10:45 - 12:15
Room(s): Solar

SIG-02 (2) | Respiratory Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 10:45 - 12:15
Room(s): Satellit

SIG-03 (2) | Vascular Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 10:45 - 12:15
Room(s): Stratus

SIG-04 (2) | Comparative Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 10:45 - 12:15
Room(s): Sirius

SIG-05 (2) | Skeletal Muscle SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 10:45 - 12:15
Room(s): Passat

SIG-06 (2) | Renal Physiology SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 10:45 - 12:15
Room(s): Meridian

SIG-07 (2) | Neuroscience SIG

Chairs:

Presentations:

Thursday, 11 September 2025, 12:15 - 13:45
Room(s): Foyer

| Lunch Break

Chairs:

Presentations:

Thursday, 11 September 2025, 13:45 - 15:15
Room(s): Satellit

OS 01 | Integrative Neuroscience

Chairs:

Presentations:

13:45	OS 01-01	The paraventricular thalamus mediates visceral pain and anxiety-like behaviors via two distinct pathways **Yong-Chang Li** (Suzhou, China)
14:00	OS 01-02	Lateral hypothalamic neurotensin-expressing neurons regulate the prioritization of drinking, feeding and socializing **Chantal Wissing** (Cologne, Germany)
14:15	OS 01-03	Neuropeptide W Alleviates Ischemic Brain Injury In Rats: Short- and Long-Term Outcomes **Sena Eyüpreiso?lu** (?stanbul, Turkey)
14:30	OS 01-04	Impact of voluntary running and environmental enrichment on AD-related symptoms in APP/PS1 mice **Thomas Endres** (Magdeburg, Germany)
14:45	OS 01-05	Wide-field calcium imaging reveals noradrenergic modulation of hippocampal neuronal representations of space **Ozan Yetis** (Bochum, Germany)
15:00	OS 01-06	Autonomic-Cognitive Interactions in Alzheimer’s Disease Models: Role of DMVN Cholinergic Neurons Stimulation **Vagner R. Antunes** (São Paulo, Brazil)

Thursday, 11 September 2025, 13:45 - 15:15
Room(s): Sirius

OS 02 | Blood and Oxygen

Chairs:

Presentations:

13:45	OS 02-01	HIF-2alpha programs oxygen chemosensitivity in paragangliomas **Tammie Bishop** (Oxford, UK)
14:00	OS 02-02	Development of multi-modal live analysis of HIF-dependent erythropoietin gene transcription **Stana M. Burger** (Zürich, Switzerland)
14:15	OS 02-03	Adenosine A2B receptors regulate lactate release during brain hypoxia **Karla Rodrigues** (Ribeirão Preto, Brazil)
14:30	OS 02-04	Targeting HIF-2 improves retinal metabolism: Insights from Seahorse Metabolic Flux Analyses **Yoshiyuki Henning** (Essen, Germany)
14:45	OS 02-05	Spatial transcriptomics reveals region-specific responses to anoxia in the crucian carp brain **Sjannie Lefevre** (Oslo, Norway)
15:00	OS 02-06	Modelling HIF-2α driven immune suppression in CD8+ T cells using hypoxic PDAC-CAF spheroids **Yves Schild** (Essen, Germany)

Thursday, 11 September 2025, 13:45 - 15:15
Room(s): Passat

OS 03 | Exercise and Homeostasis

Chairs:

Presentations:

13:45 OS 03-01 The contribution of oxygen convection and diffusion on VO2max with muscle cooling and heating in humans
Dominique D. Gagnon (Helsinki, Finland)

14:00 OS 03-02 Interoperability of body surface imaging data with targeted physiological measurements
Gregory B. Sands (Auckland, New Zealand)

14:15 OS 03-03 Female Resilience to Autonomic Dysfunction After 24-Hour Sleep Deprivation
Özge Bozer (K?rklareli, Turkey)

14:30 OS 03-04 Pulmonary adaptations to 12 weeks of supervised high intensity interval training in COPD and healthy controls: A non-randomized controlled trial
Iben Elmerdahl Rasmussen (Copenhagen, Denmark)

14:45 OS 03-05 V?CO? rather than V?O? captures the physiological resilience of endurance athletes: a sex-comparative durability study in competitive, sub-elite, triathletes
Marco Morrone (Sassari, Italy)

15:00 OS 03-06 Physical Self-Esteem and Daily Activity in Children with Cerebral Palsy
Julia Starck (Solna, Sweden)

Thursday, 11 September 2025, 13:45 - 15:15
Room(s): Mistral

OS 04 | Cardiac Electrophysiology

Chairs:

Presentations:

13:45	OS 04-01	A Novel and Preventable Mechanisms of Ischaemia-Reperfusion Arrhythmias **Peter Kohl** (Freiburg, Germany)
14:00	OS 04-02	Optogenetic quantification of cardiac excitability in intact hearts to explain cardiac arrhythmia initiation and protection during hypoxia **Judith S. Langen** (Bonn, Germany)
14:15	OS 04-03	Basal O-GlcNAcylation is essential to ensure proper electrical activity and calcium handling in rat ventricular cardiomyocytes **Fabien Brette** (Bordeaux, France)
14:30	OS 04-04	Developmental hypoxia increases susceptibility to ventricular arrhythmia in adult offspring **Gina Galli** (Manchester, UK)
14:45	OS 04-05	EPAC proteins regulate human atrial cardiomyocytes electrophysiology **Arthur Boileve** (Caen, France)
15:00	OS 04-06	A comparison of right and left atrial action potentials in patients with end-stage heart failure **Merten Prüser** (Heidelberg, Germany)

Thursday, 11 September 2025, 13:45 - 15:15
Room(s): Plateau

S 01 | Ion Channel Regulation: Structure, Function and Physiology

Chairs:

Presentations:

13:45 S 01-01 Steroid modulation of voltage-gated Kv7 potassium ion channels
Sara Liin (Linköping, Sweden)

14:15 S 01-02 From head to tail – Molecular basis of long-range coupling from the cytosolic sensor domain to the filter gate in K_{2P} channels
Marcus Schewe (Kiel, Germany)

14:30 S 01-03 Non-substrate PI(4,5)P_2 interaction regulates voltage-sensing phosphatase (VSP)
Natsuki Mizutani (Suita, Japan)

14:45 S 01-04 A photoswitchable inhibitor of TREK channels controls pain in wild-type intact freely moving animals
Guilllaume Sandoz (Nice, France)

Thursday, 11 September 2025, 13:45 - 15:15
Room(s): Meridian

S 02 | Interoceptive Processing at the Heart-Brain Axis: Cellular, Systemic, Behavioural and Clinical Aspects

Chairs:

Presentations:

13:45 S 02-01 Uncovering Neuronal Responses to Vascular Perturbations and Cardiovascular Rhythms in Mouse Cortex.
Pablo Blinder (Tel Aviv, Israel)

14:15 S 02-02 Brain–Heart coupling: arterial pressure pulsations entrain central neuronal activity via mechanosensitive ion channels
Luna Jammal Salameh (Regensburg, Germany)

14:35 S 02-03 Functional integration and segregation of brain-heart networks encode bodily self-mapping
Diego Candia-Rivera (Paris, France)

14:55 S 02-04 Functional Seizure Semiology and the Heartbeat Evoked Potential
Rohan Kandasamy (London, UK)

Thursday, 11 September 2025, 13:45 - 15:15
Room(s): Horizont

S 03 | GLP-1 Receptor Agonists - a Magic Bullet Beyond Diabetes and Obesity?

Chairs:

Presentations:

13:45		Introduction
13:50	S 03-01	Glucagon-like peptide-1 neurons: physiological roles in food intake and beyond **Marie K. Holt** (Coventry, UK)
14:10	S 03-02	The access of GLP-1 receptor agonists to the brain - Current understanding **Anna Secher** (Maaloev, Denmark)
14:30	S 03-03	GLP-1 and alcohol use disorder **Elisabet Jerlhag** (Gothenburg, Sweden)
14:50	S 03-04	GLP-1 as a Signalling Molecule underlying Modulation of Neural Association Encoding **Marc Tittgemeyer** (Cologne, Germany)
15:10		Group Discussion

Thursday, 11 September 2025, 15:15 - 15:45
Room(s): Foyer

| Coffee Break

Chairs:

Presentations:

Thursday, 11 September 2025, 15:45 - 16:15
Room(s): Plateau

KL 01 | Sleep and Consciousness

Chairs:

Presentations:

15:45 KL 01 Sleep-like cortical dynamics during wakefulness and their network effects following brain injury
Marcello Massimini (Milan, Italy)

Thursday, 11 September 2025, 15:45 - 16:15
Room(s): Passat

KL 02 | Critical Brain Rewiring in Early Childhood and Adolescence

Chairs:

Presentations:

15:45 KL 02 Critical Brain Rewiring in Early Childhood and Adolescence
Ileana L. Hanganu-Opatz (Hamburg, Germany)

Thursday, 11 September 2025, 15:45 - 16:15
Room(s): Meridian

KL 03 | IUPS Schmidt-Nielsen-Lecture

Chairs:

Presentations:

15:45 KL 03 The Hunter’s Breath: Understanding the metabolic machinery behind mammalian super-athletes
Terrie Williams (Santa Cruz, USA)

Thursday, 11 September 2025, 15:45 - 16:15
Room(s): Horizont

KL 04 | The Physiological Society Sharpey-Schafer Prize Lecture

Chairs:

Presentations:

15:45 KL 04 *Arteriovenous metabolomics in pigs reveals CFTR regulation of metabolism in multiple organs*
Michael J. Welsh (Iowa City, USA)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

| Poster Session A

Chairs:

Presentations:

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 01 | BLOOD, REGENERATION AND DEVELOPMENT

Chairs:

Presentations:

A 01-01 Association of Serum iron deficiency with lower motor development in Santal children of West Bengal, India
Sutanu Dutta Chowdhury (Basirhat, India)

A 01-02 Potential role of Prebiotics as Fetal haemoglobin Inducing Agent in Sickle Cell Anaemia Paediatric Patients : A randomized, double-blind, placebo-controlled Phase III trial
Lamis A. Kaddam (RABIGH, Saudi Arabia)

A 01-03 Effects of Quercetin on Erythrocyte Function in Normotensive and Hypertensive Rats
Tomas Jasenovec (Bratislava, Slovakia)

A 01-04 Thromboxane A2 or activated platelets slightly lower Fgf23 expression in vitro
Elena Kohm (Stuttgart, Germany)

A 01-05 Acute thrombocyte-dependent clearance of *Escherichia coli* requires D-mannose-sites for bacterial adherence
Emil H. Lambertsen (8200, Denmark)

A 01-06 A Metabolic Profile of Cardiorespiratory Fitness in 327 Robust and Prefrail Older Adults
Dax Houtkamp (Amersfoort, Netherlands)

A 01-07 Effect of Reduced Energy Intake on Blood and Erythrocyte Parameters in a Rodent Model of Metabolic Syndrome
Jana Radosinska (Bratislava, Slovakia)

A 01-08 Precursor B-cell acute lymphoblastic leukemia induced autophagic cell death by novel compound.
Takuya Matsui (Nagakute, Japan)

A 01-09 Enhancing potassium channel function impairs proliferation, differentiation and synaptic wiring of adult-born GABAergic interneurons.
Yury Kovalchuk (Tübingen, Germany)

A 01-10 Elastogenesis in the pregnant uterus as a paradigm to reinstate elasticity in organs
Alicia Schneider (Frankfurt, Germany)

A 01-11 Comprehensive analyses of dorsal forebrain organoids
Christian Wozny (Hamburg, Germany)

A 01-12 Small Open Reading Frames: Emerging regulators in embryonic development.
Zhanhua Xing (Frankfurt am Main, Germany)

A 01-13 Dietary Fortification with Edible Molluscs: Investigating the Antianaemic Effects of crude extract of T*ympanotonus fuscatus, Thias coronata and Ergeria radiata* in Wistar Albino Rats.
Ada A. Akwari (Uburu, Ohaozara Local Government, Ebonyi State, Nigeria)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 02 | CARDIAC PROTECTION AND TREATMENT

Chairs:

Presentations:

A 02-01 An SGLT2 inhibitor and SGLT1/2 inhibitor confer similar benefit on diastolic function male and female diabetic mice
Samuel L. James (Auckland, New Zealand)

A 02-02 Brown Adipose Tissue and its Emerging Cardiovascular Protection.
Tamara Egan Be?ová (Bratislava, Slovakia)

A 02-03 Versican knockout limits adverse cardiac remodeling after myocardial infarction
Lennart Gebert (Düsseldorf, Germany)

A 02-04 Inhibition of the endothelial clearance of natriuretic peptides has blood pressure-independent cardioprotective effects
Franziska Werner (Würzburg, Germany)

A 02-06 Deletion of Endothelial SOX9 Reverses Aging-Induced Cardiac Dysfunction
Felix A. Trogisch (Mannheim, Germany)

A 02-07 Treatment with Atglistatin of diet-induced obesity mice after cardiac I/R normalizes body weight but does not improve cardiac function
Pia Hebar (Düsseldorf, Germany)

A 02-08 Hyperforin enhances calcium transients and fractional shortening but impairs NCX activity in rat cardiomyocytes
David Königstein (Marburg, Germany)

A 02-09 An Interpretable Machine Learning Platform for Genotype-specific Cardiotoxicity Risk Prediction Using Patient-Derived iPSC-CMs
Na Kyeong Park (Seoul, South Korea)

A 02-10 Neuregulin-1/ErbB2 axis-mediated protection of systolic function in the early onset of diabetic cardiomyopathy
Satomi Adachi-Akahane (Tokyo, Japan)

A 02-11 Targeting Metabolic Pathways to Promote Brown Fat Thermogenesis and Cardioprotection in Obese ZDF Rats
Barbara Szeiffová Ba?ová (Bratislava, Slovakia)

A 02-12 Coffee reduces cardiac fibrosis by regulating NCX activity in cardiac fibroblasts
Youakim Saliba (Beirut, Lebanon)

A 02-13 Cannabidiol prevents pathological cardiac hypertrophy via activation of PPARs and preservation of mitochondrial function.
Carolina A. Morales (Monterrey, Mexico)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 03 | CARDIOTOXICITY AND FAILURE

Chairs:

Presentations:

A 03-02 Cardiovascular effects of bismuth nitrate on chlorpromazine induced cardiotoxicity in young adult male Wistar rats
Enivwenaye E.W. Nabofa (Ozoro, Nigeria)

A 03-03 Distinct disruptions of Ca^{2+}homeostasis and mitochondrial function underlie the direct cardiotoxicity of combustible and heated tobacco products
Tomoe Y Nakamura-Nishitani (Wakayama, Japan)

A 03-04 A High-Fructose and High-Salt Diet Combination Promotes Fibrosis and Hypertrophy Through B-Type Natriuretic Peptide (BNP) Inhibition In Rat Hearts
Kenan Selvi (ED?RNE, Turkey)

A 03-05 Acute exposure of Bisphenol S decreases *in-vitro* right atrial contractility in rats involving NO-cGMP independent pathway
Jayanti Pant (Rishikesh, India)

A 03-06 Proteomic and phosphoproteomic profiles of human heart failure with preserved versus reduced ejection fraction
Franziska Koser (Münster, Germany)

A 03-07 Severe Right Heart Failure Resulting from Inducible Cardiomyocyte-specific Titin Deletion
Kimberley Stein (Bochum, Germany)

A 03-08 Impact of DUSP1 on the progression of right ventricular failure in rats
Ling Li (Giessen, Germany)

A 03-09 Adding insult to injury: stressed rat females at greater risk following myocardial ischemia?
Megan Cairns (Cape Town, South Africa)

A 03-10 Assessment of myocardial function and stiffness in isolated hearts of diabetic mice with HFpEF phenotype
Lucas Ballmann (Düsseldorf, Germany)

A 03-11 PIEZO1 Variation in Myofibroblasts Obtained at Open Heart Surgery
Anna McGrane (Leeds, UK)

A 03-12 Localization of ryanodine receptor 2 and mitochondrial calcium uniporter in rat cardiomyocytes during postnatal maturation
Irina ?esnokova (Tallinn, Estonia)

A 03-13 Differential Expression of Somatostatin Receptors in Healthy and Failing Human Hearts
Muhammad Aslam (Giessen, Germany)

A 03-14 Expression levels of microRNAs targeting atheroprotective proteins in patients with chronic coronary syndrome and their correlation with the occurrence of cardiovascular adverse events during a 2-year follow-up period.
Micha? Kowara (Warsaw, Poland)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 04 | COMPARATIVE PHYSIOLOGY

Chairs:

Presentations:

A 04-01 Evolutionary convergence of the heart in Mammals and Cephalopods: shortening of connectin/titin in ventricular myocardium with increased activity
Akira Hanashima (Kurashiki, Japan)

A 04-02 Growing up in the heat: effects of post-hatch temperature changes on physiology and morphology in a wild bird
Elin Persson (Lund, Sweden)

A 04-03 Convergent Evolution of Mitochondrial Physiology in the World's Highest-Dwelling Mammals
Ranim Saleem (Hamilton, Canada)

A 04-04 Powering Life at the Top: Mitochondrial adaptations in high-altitude deer mice (*Peromyscus maniculatus*)
Ranim Saleem (Hamilton, Canada)

A 04-05 Comparing the feline Body Mass Index (fBMI) and X-ray absorptiometry body composition in a feline population in Portugal
Luis Monteiro Rodrigues (Lisboa, Portugal)

A 04-06 Salt loading affects gaping and voluntary thermal limits in *Tropidurus catalanensis* lizards
Melissa Bars-Closel (Jaboticabal, Brazil)

A 04-07 Methodological Advancements in the CAM Model: Yolk-Delivered Tracers, Dual-Tracer Autoradiography, Dynamic PET, *in ovo* Proton Irradiation and OCT Vascular Assessment
Emil L. Villumsen (Aarhus, Denmark)

A 04-08 Continuous sampling of cerebrospinal fluid from the 3rd ventricle of the hypothalamus during hibernation
Fernando Cazarez Marquez (Tromsø, Norway)

A 04-09 Chronic Developmental *in ovo* Hypoxic Exposure Alters Femoral Artery and Vein Contractility in Juvenile Alligators (*Alligator mississippiensis*)
Edward Dzialowski (Denton, USA)

A 04-10 Preserved bile acid signaling in hibernating bear skeletal muscle
Reiko Nakao (Strasbourg, France)

A 04-11 Methods for studying the acute physiological and behavioural effects of keel bone (sternal) fracture in the laying hen (*Gallus gallus*).
Catherine J. Williams (Tjele, Denmark)

A 04-12 Fluorescent Secrets Beneath the Skin: Exploring Bone and Iridophore-Based Fluorescence in *Hemidactylus turcicus* (Squamata: Geckonidae)
Mehmet A. Oguz (Aarhus, Denmark)

A 04-13 Micro Architecture of Mammalian Quills and Comparison of Their Strength by Using Finite Element Analysis
Mehmet A. Oguz (Aarhus, Denmark)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 05 | EDUCATION AND TEACHING (1)

Chairs:

Presentations:

A 05-01 Exploring the Effectiveness of ChatGPT in Physiology: Usability, Reliability, and Educational Impact
Sevtap Kilinc (Ankara, Turkey)

A 05-02 Artificial Intelligence in Healthcare Education: Insights from Undergraduate Health Sciences Students in Karachi, Pakistan
Muhammad Adnan Kanpurwala (Karachi, Pakistan)

A 05-03 Development of a Physiology Learning and Assessment System to Automatically Generate Test Questions Constructed by Deep Learning Model and Aligned with Bloom's Taxonomy
Ke-Li Tsai (Kaohsiung, Taiwan)

A 05-04 Medical Students' Critical Internet Search - An Eye Tracking Study
Anika Kohmer (Frankfurt, Germany)

A 05-05 Evaluation of medical students' academic performance in assignment preparation using ChatGPT: criteria of highly successful prompts
Faten M. Daib (Ajman, United Arab Emirates)

A 05-06 Leveraging technology for impactful gamification in Physiology education
Peace Mabeta-Zwane (Pretoria, South Africa)

A 05-07 Impact of An Integrated Interdisciplinary Team-Based Learning Session of Medicine and Health sector Programs at Galala University
Noha N. Lasheen (Suez, Egypt)

A 05-08 Cap-Biospace a biology/physiology teaching program for human exploration of space and extreme environments.
Jean-Luc Morel (Bordeaux, France)

A 05-09 Education Workshop at the University of Health Sciences Laos through the IUPS International Mentoring Program in Asia
Noriyuki Koibuchi (Maebashi, Japan)

A 05-10 Brand Building:Students'InsightsUsing the Touchpoints Wheel Model at Galala University, Egypt
Noha Lasheen (Suez, Egypt)

A 05-11 $M_{(1)}$ündlich – S(t)imulation of Competency-Oriented Learning
Lisa Eiring (Essen, Germany)

A 05-12 Muscle Physiology Escape Box – An interactive Teaching Resource
Dagmar Kockler (Rheinbach, Germany)

A 05-13 Association Between Chronotype and Learning Motivation in Medical Students in Several Countries
Maki Sato (Nagakute, Japan)

A 05-14 The Impact of Social Skills on Grade Point Average (GPA) Level in Medical Students
Mariani Santosa (Jakarta, Indonesia)

A 05-15 Integrating Research into Teaching: Designing Effective Research-Oriented Learning Sessions
Shahenaz S. Satti (Sohar, Oman)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 06 | EXERCISE: THERMOREGULATION AND TRAINING

Chairs:

Presentations:

A 06-01 Cool-seeking behaviour in older adults and in people with multiple sclerosis during simulated heatwave conditions
Nuno Koch Esteves (Southampton, UK)

A 06-02 Thermoregulatory response during a heat tolerant test: implications in exertional heatstroke
Léa Tuifua (Angers, France)

A 06-03 Exercise regulates the influence of local temperature on microvascular functions in humans
Dominique D. Gagnon (Helsinki, Finland)

A 06-04 Activation of Hypothalamic Q neurons During Exercise: A Possible Role in Defending Against Exercise-Induced Hyperthermia
Youhyang Kang (Tsukuba, Ibaraki, Japan)

A 06-05 A role of central glucose-sensing in thermoregulation
Ming-Liang Lee (Okazaki, Japan)

A 06-06 The maturation of regional sweating patterns during pubertal development in adolescent girls
Hannah Blount (Southampton, UK)

A 06-07 Sweating and cutaneous vasomotor function in para-athletes with various sweating disorders
Naoki Nishimura (Aichi, Japan)

A 06-08 Thermoregulatory response during a heat tolerant test: implications in exertional heatstroke
Léa Tuifua (Angers, France)

A 06-09 Mechanism involved in cold water immersion after exercise: Blood redistribution and increase in energy expenditure during rewarming.
Dorian Giraud (Marseille, France)

A 06-10 The impact of stratum corneum hydration on underarm wetness perception during contact with fluids varying in thermal conductivity
Jade Ward (Southampton, UK)

A 06-11 Investigating heart rate regulation in ultra-endurance cyclists: A pilot study
Success Ajayi (London, UK)

A 06-12 Endurance training increases brain's prefrontal cortex oxygenation indices at submaximal exercise
Ioannis Loukas (Daphne, Greece)

A 06-13 The duration of repeated remote ischemic preconditioning to improve muscular strength and endurance in health young adults.
Jahyun Kim (Bakersfield, USA)

A 06-14 Effects of an oleuropein-based drink on performance and fatigue in elite athletes: a real-life placebo-controlled RCT on perceived and measured efficacy during a high intensity cycling training camp
Caroline I. Le Roy (Lausanne, Switzerland)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 07 | EXERCISE AND CARDIOVASCULAR SYSTEM

Chairs:

Presentations:

A 07-01 Local Negative Pressure Enhances the Venoarteriolar Reflex Activity in Healthy Humans
Henrique Silva (Lisbon, Portugal)

A 07-02 Multimodal Optical Assessment of Vascular Dynamics During Post-Occlusive Reactive Hyperemia
Henrique Silva (Lisbon, Portugal)

A 07-03 Near-Infrared Imaging of Superficial Vein Morphology During Transient Venous Congestion
Henrique Silva (Lisbon, Portugal)

A 07-04 Texture Analysis of Superficial Veins During Post-Occlusive Reactive Hyperemia
Henrique Silva (Lisbon, Portugal)

A 07-05 Stronger vasoconstrictive response to hypovolemic stimuli in males compared to females
Silvestro Roatta (Torino, Italy)

A 07-06 Investigating the effect of transcutaneous vagal nerve stimulation on cardiorespiratory parameters in healthy adults
Feisal Subhan (Plymouth, UK)

A 07-08 Fitness parameters as a marker of cardiac autonomic neuropathy in newly diagnosed diabetes mellitus.
Sandip M. Hulke (Bhopal, India)

A 07-09 Macro- and micro-vascular, renal, and liver function in transgender women
Hirofumi Tanaka (Austin, TX, USA)

A 07-10 Interstitial fluid accumulation and alveolar-capillary permeability after strenuous exercise in COPD and healthy controls
Rie S. Thomsen (Copenhagen, Denmark)

A 07-11 Selective increases in beat volume and blood kinetic energy enhance venous return and cardiac filling during ATP infusion and exercise-induced hyperaemia in humans
Kazuhito Watanabe (London, UK)

A 07-12 Exercise reverses obesity and aging-induced endothelial senescence
Riikka Kivelä (Jyväskylä, Finland)

A 07-13 Hemodynamic Effects of Local Negative Pressure Application on the Human Forearm
Henrique Silva (Lisbon, Portugal)

A 07-14 Reoxygenate the Lungs: The Role of Aquarobics in Improving Cardiopulmonary Fitness Among Smokers
Siti B. Mukarromah (Semarang, Indonesia)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 08 | INFLAMMATORY CELLS AND MECHANISMS

Chairs:

Presentations:

A 08-01 Neutrophil extracellular trap formation in the placenta and peripheral blood in gestational diabetes mellitus
Mia van Rooy (Pretoria, South Africa)

A 08-02 Inflammatory Mediators in the Development and Progression of Peripheral Neuropathy in Male UCD-Type 2 Diabetic Rats
Michelle L. Harrison (Austin, USA)

A 08-03 The pro-inflammatory effects of PAH air pollutant phenanthrene on hepatic transcriptomics and cardiovascular dysfunction at the single cell level
Joseph Morris (Manchester, UK)

A 08-04 Human immunomodulatory endothelial cells contribute to T cell recruitment and activation through antigen presentation on MHC class II
Matteo Cartura (Frankfurt at main, Germany)

A 08-05 Dopamine D2 receptor on CD4+ T cells is protective against inflammatory responses and signs in a mouse model of rheumatoid arthritis
Yi-Hua Qiu (Nantong, China)

A 08-06 Involvement of Pannexin-1/P2X7 Receptor in SARS-CoV-2 ORF3a-Induced Inflammatory Cell Death.
Amit K. Ghosh (CHENNAI, India)

A 08-07 Exploring the Role of Resistin in Inflammatory Pathways in Circadian Rhythm Disruption: A Translational Approach from Animal Models to Shift Workers
Ike R. Alie (Bandung, Indonesia)

A 08-08 Gas6-AIM axis inhibits NLRP3 inflammasome activation and enhances autophagy and efferocytosis in acute lung inflammation in mice
Kyungwon Yang (Seoul, South Korea)

A 08-09 The endocannabinoid anandamide mediates anti-inflammatory effects through activation of NR4A nuclear receptors
Tom Teichmann (Frankfurt, Germany)

A 08-10 Exploring the Role of TGF-β and BMP9 in Modulating HIF-1α Expression in Human Leukocytes
Anna Wrobeln (Essen, Germany)

A 08-11 IL-21 regulates Cathelicidin expression during latent tuberculosis infection
Ester L. Acen (Kampala, Uganda)

A 08-12 Mapping complement C5a-mediated macrophage chemotactic signaling using knockout mouse models: Roles of Pak1 and Pak2
Peter J. Hanley (Potsdam, Germany)

A 08-13 Modulating intracellular Ca^{2+} in activated human $CD4^{+}$ T cells by $GABA_A$ receptor agonists
Sergiy V. Korol (Uppsala, Sweden)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 09 | HORMONES AND ENDOCRINE CELLS

Chairs:

Presentations:

A 09-01 Thyroid hormone induced up-regulation of Na^+/K^+-ATPase and thus of metabolism can be explained as a consequence of enhanced neuronal activity in postnatal rat brain
Irmgard D. Dietzel-Meyer (Bochum, Germany)

A 09-02 Beta-type estradiol receptor modulates *in vivo* and *in vitro* responses to metabolic challenges
Debora S. Rocha (São Paulo, Brazil)

A 09-03 The thyroid hormones are necessary for the stability of circadian rhythms
Iván Villanueva (Mexico City, Mexico)

A 09-04 Serum Phoenixin-14 Levels Correlates Negatively with Serum Follicle Stimulant Hormone in Obese Women
Leyla Semiha ?en (?stanbul, Turkey)

A 09-06 Distribution and regulation of renin expression in adrenal glands of mice
Valentina von Consbruch (Regensburg, Germany)

A 09-07 Calcium signals in the human zona glomerulosa
Gabriel Stölting (Berlin, Germany)

A 09-08 Hormonal Influence on Adipose Health During Menopause: Insights from the HoCa Study Using Surgical Menopause and Adipose Organoids
Eija K. Laakkonen (Jyväskylä, Finland)

A 09-09 Unraveling the Role of LRRC8B in Pancreatic β-Cell Insulin Secretion and Calcium Dynamics
Rudrakant Sharma (chennai, India)

A 09-10 Spatially Organized Heterogeneity Shapes the Modular Architecture and Functionality of Beta Cell Networks
Marko Gosak (Maribor, Slovenia)

A 09-11 Temporal Persistency in Pancreatic Beta Cell Networks: Do Specialized Subpopulations Retain Their Roles?
Jasmina Ker?mar (Maribor, Slovenia)

A 09-12 Effects of Arginine Vasopressin on Pancreatic α and β Cells: Glucose-Dependent Modulation and Receptor-Specific Responses
Marjan Slak Rupnik (Vienna, Austria)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 10 | SMOOTH MUSCLE AND SKELETAL MUSCLE AGING

Chairs:

Presentations:

A 10-01 Basal opening of K_v7 and BK_{Ca} channels provide a hyperpolarizing brake to activation of L-type Ca^{2+} channels in male mouse urethral smooth muscle
Neha Gupta (Dundalk, Ireland)

A 10-02 Prostaglandin E_2 inhibits agonist-induced contractions of mouse urethral smooth muscle
Denzel Thean Kuok Foong (Dundalk, Ireland)

A 10-03 Exploring the function of Orai channels in regulating cholinergic contractions of detrusor
Alexandru Mircea (Dundalk, Ireland)

A 10-04 MicroAge II: Mitochondria as Key Regulators of Muscle Mass in Microgravity and during Ageing
Jonathan Temple (Liverpool, UK)

A 10-05 MicroAge Mission: Effects of Microgravity and HSP10 Overexpression on the Proteome of Human Tissue-Engineered Muscle Constructs.
Samantha W. Jones (Liverpool, UK)

A 10-06 The use of ^{23}Na-MRI and ^{1}H-MRI to quantify damage in the gastrocnemius muscle of young male volunteers
Charles J. Steward (Nottingham, UK)

A 10-07 Lipofuscin as a marker for skeletal muscle biological aging
Jelle Y. Huijts (Amsterdam, Netherlands)

A 10-08 Acute caloric restriction in aged mice influences diaphragm sarcopenia and the circadian clock transcriptome
Harrison T. Gallagher (Leeds, UK)

A 10-09 Potential of Edible Bird Nest Extract as Antioxidant and Anti-Sarcopenia : An In Vitro Analysis
Pipit Pitriani (Bandung, Indonesia)

A 10-10 Like physical activity, phlorotannin-enriched extracts protect against oxidative stress.
Anaïs Marandeau (Brest, France)

A 10-11 β-Hydroxy-β-Methylbutyrate supplementation prevents capillary regression and fiber-type shift in rat soleus muscle during hindlimb unloading
Shion Masuda (Kobe, Japan)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 11 | RENAL TRANSPORT PROCESSES

Chairs:

Presentations:

A 11-01 Kidney sodium handling and blood pressure control orchestrated by renal macrophages in salt sensitive hypertension
Alicja Czopek (Edinburgh, UK)

A 11-02 Link between G-protein-coupled receptor kinase 6 and AQP2 trafficking
Frédéric H. Login (Aarhus N, Denmark)

A 11-03 Aquaporin-2 Trafficking Dynamics: Investigating Protein Kinase A Localization upon cAMP Elevation
Amalie Maria Grønning (Aarhus N, Denmark)

A 11-04 Regulation of the Na-K-2Cl cotransporter NKCC2 by ubiquitylation in a novel MDCKI cell line
Lena K. Rosenbaek (Aarhus C, Denmark)

A 11-05 The molecular mechanism of augmented renal HCO_3^- excretion during respiratory alkalosis
Laura W. Trans (Aarhus, Denmark)

A 11-06 Aquaporin-2 Transport Vesicles: Characterization of Spatial Organization in Cells and Tissue Using Expansion Microscopy
Benjamin B. Green (Aarhus N, Denmark)

A 11-07 Effects of Parathyroid Hormone and Vitamin-Induced Hypercalcemia on Renal Calcium Handling and Metabolic Changes
Emmy Storm Petersen (Odense, Denmark)

A 11-08 Spatial and Temporal Expression of the Calcium-Sensing Receptor in Renal and Extrarenal Tissues
Milos Bogdanovic (Odense, Denmark)

A 11-09 Potassium depletion deactivates β-IC-mediated HCO_3^- excretion
Niklas Ayasse (Mannheim, Germany)

A 11-10 Systemic and renal responses to acetazolaminde do not require functional NHE3 in the kidney
Timo Rieg (Tampa, USA)

A 11-11 Sex differences in the natriuretic response to an acute increase in plasma potassium in Sprague Dawley rats
Atta Arshad (Edinburgh, UK)

A 11-12 Characterising novel transport mechanisms for corticosteroid hormones in the murine collecting duct
Morag F.A Milne (St Andrews, UK)

A 11-13 Empagliflozin-induced microalbuminuria, aminoaciduria and myo-inositol loss: Evidence for a general reduction of proximal tubule reabsorption under SGLT2 blockade?
Philipp Tauber (Regensburg, Germany)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 12 | KIDNEY DISEASE

Chairs:

Presentations:

A 12-01 DNAJB4 Activates NETosis and Exacerbates Inflammation in Chronic Kidney Disease
Wen-Hua Chen (Taipei, Taiwan)

A 12-02 P2Y6-signaling in renal fibrosis
Justina Rötsch (Regensburg, Germany)

A 12-03 Toxicological Mechanisms of Uranium-Induced Damage in HK-2 Cells: A Proteomics and Metabolomics study
Shirong Qiang (Lanzhou, China)

A 12-04 The potential role of secretin and its receptor in kidney disease progression
Jesper F. Andersen (Aarhus C, Denmark)

A 12-05 The pathogenic human variant G165A of claudin-10 compromises tubular function and tight junction assembly
Catarina Quintanova (Kiel, Germany)

A 12-06 Proteasome Dysfunction and Immunoproteasome Induction in Diabetic Nephropathy: Therapeutic Implications beyond SGLT2 Inhibition
Man Wang (Hamburg, Germany)

A 12-07 Preexisting cancer is associated with a higher incidence of acute kidney injury and mortality in the critically ill which is not mediated by neutrophil extracellular traps (NETs)
Bahareh Razmand (Uppsala, Sweden)

A 12-08 Autoantibody-triggered vesicle formation in podocytes as a novel pathomechanism in membranous nephropathy
Karen Lahme (Hamburg, Germany)

A 12-09 Polyamine supplementation partially restores kidney function in adenine-induced nephropathy
Karin M. Kirschner (Berlin, Germany)

A 12-10 Role of the cGAS-STING pathway in the progression of diabetic kidney disease
Alexander Staruschenko (Tampa, USA)

A 12-11 Pathophysiology of the kidney in a mouse model lacking both isoforms of claudin-10
Marah Alhabahbeh (Berlin, Germany)

A 12-12 podocytotic evs influence tubular metabolism and redox state
Johanna Janz (Essen, Germany)

A 12-13 Heterogeneity in lysosomal dynamics and metabolic functions along the kidney proximal tubule
Imene B. Sakhi (Zurich, Switzerland)

A 12-14 Characterization of Vanin-1 Dynamics and Biomarker Potential in a Mouse Model of Proteinuric Kidney Disease
Jean-Claude Kresse (Aarhus, Denmark)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 13 | UTERUS AND PLACENTA PHYSIOLOGY

Chairs:

Presentations:

A 13-01 Distinguishing fetal from maternal macrophages to understand their role in human placental vascular development
Tayla J. James (Auckland, New Zealand)

A 13-02 Effects of Rotenone Exposure on Placental Development and Related Protein Expression in Rats During Pregnancy
Ziwi Deng (Yinchuan, China)

A 13-03 Endocrine-disrupting compounds and their impact on human placental function: Evidence from placenta organ-on-chip studies
Manuel Jr S. Vidal (Manila, Philippines)

A 13-04 Establishment and comparison of human-term placenta-derived trophoblast cells
Manuel Jr S. Vidal (Manila, Philippines)

A 13-05 TGF-β1 disrupts primary ciliary prostaglandin E2-mediated uterine receptivity
Huan-Tzu Hou (Tainan, Taiwan)

A 13-06 Gestational exposure to *Citrus limon* juice and its bioactive components reduce placental lipid metabolism and efficiency in Wistar rats
Taofiqat T. Ahmed-Ibrahim (Ijanikin, Lagos State, Nigeria)

A 13-07 One Health Perspectives on Calcium Carbide-Ripened Banana Consumption during Pregnancy: Potential Risks for Infertility in Female Offspring of Rats
Cordilia O. Iyare (Abakaliki, Nigeria)

A 13-08 Oral Supplementation of Gum Arabic Ameliorates Obesity and Ovarian Oxidative-Nitrosative Stress in Female Rats with Cafeteria Diet-Induced Obesity
Shahenaz S. Satti (Sohar, Oman)

A 13-09 Climacteric symptoms during mid reproductive age-group among women in Lagos, Nigeria: a focus on perimenopause
Adesina P. Arikawe (LAGOS, Nigeria)

A 13-10 The PEPP Study: Pregnancy's Effect on Physical fitness and Pain
Josefine Huus (Aarhus, Denmark)

A 13-11 Linking Serum Ferritin and Hepcidin to Glucose Dysregulation in Pregnancy
Qanita Mahmud (Lahore, Pakistan)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 14 | VASCULAR ENDOTHELIUM

Chairs:

Presentations:

A 14-01 Microparticles and cGMP as Biomarkers of Endothelial Dysfunction and Cardiovascular Risk in Shift Work Employees: From Circadian Disruption to Inflammation
Ike R. Alie (Bandung, Indonesia)

A 14-02 Protective Effects of Physical Activity on Endothelial Function in Healthy Adults: Associations with Endothelial Progenitor Cells, Endothelial Microparticles, and Flow-Mediated Dilation
Sitapa Tangluang (Bangkok, Thailand)

A 14-03 The inflammation-regulated microprotein miP-PSTPIP2 modulates endothelial cell proliferation and endocytosis
Beyza Güven (Frankfurt am Main, Germany)

A 14-04 Identification of long non-coding RNAs that control endothelial regeneration
Diba Rafii (Frankfurt, Germany)

A 14-05 Uncovering the role of two nuclear endothelial cell microproteins encoded by "non-coding" RNAs
Anne Birke (Frankfurt am Main, Germany)

A 14-06 Novel GPCR in the lung endothelium regulates VEGF-mediated angiogenic processes.
Lewis Spurrier-Best (Cambridge, UK)

A 14-07 SECS, drugs and Rac1&Rho: regulation of EnNaC in vascular endothelial cells
Benedikt Fels (Lübeck, Germany)

A 14-08 Endothelial cytochrome P450 reductase-derived cholesterol limits angiogenesis
Pedro Felipe Malacarne (Frankfurt am Main, Germany)

A 14-09 NFAT5-controlled heat shock protein expression limits senescence in hypoxia-exposed lung endothelial cells
Alia Ablieh (Heidelberg, Germany)

A 14-10 Bradykinin-mediated actin cytoskeleton rearrangement drives endothelial barrier disruption
Robin Lochbaum (Ulm, Germany)

A 14-11 SHP-2 inactivation disrupts endothelial barrier integrity under inflammatory conditions via downregulation of tight junction protein expression
Hanna Mannell (Garching bei München, Germany)

A 14-12 Gap junctional interaction of endothelial progenitor cells with endothelial cells induces angiogenic network formation *in vitro*
Kristin Pogoda (Garching bei München, Germany)

A 14-13 The contribution of ceramides accumulating in cerebrovascular endothelial cells towards acute ischemic stroke outcomes.
Sohom Mookherjee (Salt Lake City, USA)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 15 | ENDOTHELIUM AND SMOOTH MUSCLE

Chairs:

Presentations:

A 15-01 Long non-coding RNA-mediated control of the endothelial proliferation–quiescence switch
James A. Oo (Frankfurt am Main, Germany)

A 15-02 Exercise alters circadian clock in skeletal muscle and heart endothelial cells
Aino Männistö (Helsinki, Finland)

A 15-03 Establishing a perfusion system for endothelial cells under physiological flow
Jan-Eric Sydow (Essen, Germany)

A 15-04 *In vivo* chemogenetic generation of hydrogen peroxide by endothelial cells induces cardiac remodelling and vascular dysfunction
Melina López (Frankfurt am Main, Germany)

A 15-05 Kynurenine aminotransferases salvage methionine via glutamine transamination in endothelial cells
Souradeep Chatterjee (Frankfurt am Main, Germany)

A 15-06 Single Nucleotide Polymorphisms and their role in (Epi)genetic Regulation of Human *NOS3* Gene Expression
Mengping Xu (Heidelberg, Germany)

A 15-07 Lipid droplet formation is associated with augmented store-operated Ca^{2+} entry and impaired barrier function in senescent vascular endothelial cells
Katsuya Hirano (Kita-gun, Miki-cho, Japan)

A 15-08 Bradykinin increases endothelial permeability by restructuring tight and adherens junctions
Raphael Möhrle (Ulm, Germany)

A 15-09 Free fatty acid receptor 4 activation reduces pulmonary arterial tone and smooth muscle cell growth
Alexander Seidinger (Bochum, Germany)

A 15-10 Inactivation of G_q, but not G_{11} protein, in smooth muscle cells prevents hypoxia-induced pulmonary hypertension
Amanda Ridder (44801 Bochum, Germany)

A 15-11 Hypoxia-Inducible Factor 2α Promotes Hypertension and Vascular Remodeling via Smooth Muscle Cell Phenotypic Switching
Aijuan Qu (Beijing, China)

A 15-12 Impact of inositol hexakisphosphate kinases knockdown on vascular smooth muscle cell calcification
Sheyda Bahiraii (Linz, Austria)

A 15-13 Loss of YAP/TAZ in Vascular Smooth Muscle Cells Sensitizes Arteries to Early Atherosclerotic Remodeling Under High-Fat Diet
Olivia Ritsvall (Lund, Sweden)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 16 | NEURAL PLASTICITY AND PHYSIOLOGY OF NEURAL CIRCUITS

Chairs:

Presentations:

A 16-01 THE POTENTIAL EFFECT OF CYANOCOBALAMIN SUPPLEMENTATION ON BRAIN NEUROPLASTICITY IN AN ANIMAL MODEL
Donna Adriani (Jakarta, Indonesia)

A 16-02 From experience to inhibition: Impact of environmental enrichment onto hippocampal synaptic inhibition
Joana I. Gomes (Basel, Switzerland)

A 16-03 Evidence for ultrafast synaptic engrams in parallel fiber-Purkinje cell synapses in mouse cerebellum
Robert Jacobi (Leipzig, Germany)

A 16-04 Impact of astrocyte-neuron lactate shuttle on LTP
Konrad Offermanns (Leipzig, Germany)

A 16-05 Developmental Profile of Neurturin in Rat Brain During The Postnatal Period
Yunus Emre Özer (Bal?kesir, Turkey)

A 16-06 Transcriptomic Signatures of Age-Associated Endothelial Dysfunction in the Brain
Chae-Jeong Lee (Seoul, South Korea)

A 16-07 Investigation of Functional Integration of Cajal-Retzius Neurons into Maturing Cortical Networks
Federico De Rosa (Mainz, Germany)

A 16-08 Characterization of *in vitro* gamma oscillations in human neocortex
Philip Steiskal (Berlin, Germany)

A 16-09 Structural and molecular reorganization of engram cells after spatial encoding
Nithya Sethumadhavan (Freiburg Im Breisgau, Germany)

A 16-10 In vivo two-photon calcium imaging of the cortical response to sensory stimuli during a hibernation-like state in mice
Ching Pu Chang (Okazaki, Japan)

A 16-11 Differential involvement of hippocampal pyramidal cell subtypes in spatial learning tasks
Nadja Sharkov (Heidelberg, Germany)

A 16-12 Employing human iPSC-derived sympathetic neurons to investigate regulatory mechanisms of sympathetic neurons
Laura Fedele (London, UK)

A 16-14 Differential K_v4 channel functions among projection-defined dopamine neurons of the ventral tegmental area
Marle Jahnke (Frankfurt am Main, Germany)

A 16-15 Reward encoding in the ventromedial thalamus
Dominik Groos (Zurich, Switzerland)

A 16-16 Heart Rate Variability Biofeedback Alleviates Subthreshold Depression by Modulating Habenula-Centered Brain Network Functional Connectivity
Xiaodan Xu (Guangzhou, China)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 17 | SYNAPTIC PHYSIOLOGY

Chairs:

Presentations:

A 17-01 Age-Related Changes in Calcium Signaling and Glucose Metabolism in Neurons and Glia of the *Drosophila* Brain
Nina Vardjan (Ljubljana, Slovenia)

A 17-02 *DMWD*induces social deficits via medial prefrontal cortex dysfunction in mice
Yong Cheng (Beijing, China)

A 17-03 Neuronal Ca^{2+} signaling is regulated by the deubiquitinating enzyme UCH-L1
Desiree Loreth (Hamburg, Germany)

A 17-04 Active zone growth during larval development in Drosophila melanogaster
Martin Pauli (Würzburg, Germany)

A 17-05 Microglia-derived exosomal ciRS-7 mediates IL-17A effect of promoting neurodegeneration via miR-7 and SNCA targets in an experimental Parkinson's disease
Zhan Liu (Nantong, China)

A 17-06 Inhibited follicle stimulting hormone down regulated APOE4 gene expression in aluminum chloride induced-Alzheimer’s disease rodent models
Chinyem N. Ighodaro (Benin city, Nigeria)

A 17-07 Structural and functional changes in microglia-parvalbumin interneuron interactions in DISC1 mice
Luna Šošo Zdravkovi? (Berlin, Germany)

A 17-08 Multifocal two-photon mapping of synaptic activity in vivo
Jonathan Richter (Munich, Germany)

A 17-09 Investigating Presynaptic Plasticity via Live Imaging of Glutamate Release and Mitochondrial Dynamics in Hippocampal Neurons
Johannes Härterich (Leipzig, Germany)

A 17-10 Ternary Neurexin-T178-PTPR complexes represent a presynaptic core-module of neuronal synapse organization
Phil Henneken (Freiburg im Breisgau, Germany)

A 17-11 The final two nanometers determine release probability
Kristina Lippmann (Leipzig, Germany)

A 17-12 Modulation of AMPA receptor funtion by the auxiliary subunit CKAMP59
Benedikt Grünewald (Mainz, Germany)

A 17-13 Real-Time Probing of NMDA Receptor Co-agonist Dynamics in the Hippocampus Using Optical FRET Sensors
Petr Unichenko (Bonn, Germany)

A 17-14 Oligodendrocyte precursor cells facilitate neuronal lysosome release via process-somatic contact
Lipao Fang (Homburg, Germany)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 18 | PHYSIOLOGY OF TRANSPORT AND ENDOTHELIUM

Chairs:

Presentations:

A 18-01 The Japanese Kampo Medicine Boi-ogi-to (BOT) Promotes Cellular Chloride Excretion via Activation of Volume-Sensitive Outwardly Rectifying (VSOR) Anion Channels
Tomohiro Numata (Akita, Japan)

A 18-02 Exploration of the mechanism of Occludin co-polymerisation within Claudins' strands in the Tight junctions.
Roman Shobik (Berlin, Germany)

A 18-03 Ultrastructural Mechanisms Governing Blood-Brain Barrier Integrity
Shireen Mentor (Stellenbosch, South Africa)

A 18-04 An intricate interplay between Na^+/H^+ exchangers NHE1, NHE3, NHE8 and HCO_3^- transport differentially affects single cell migration and invasion of colon cancer cells (HT29-MTX)
Christian Stock (Hannover, Germany)

A 18-05 Combined exposure to microplastics and particulate matter leads to intestinal inflammation and loss of barrier integrity- the protective efficacy of kefir peptides
Tsai-Chun Lai (Taichung, Taiwan)

A 18-06 Connexin26 Hemichannels are Involved in Lipopolysaccharide-induced Alteration of the Barrier Function of Respiratory Airway Epithelial Cells
Tina Lehrich (Hannover, Germany)

A 18-07 Podocyte exopher formation as a novel pathomechanism of immune complex removal
Vincent Böttcher-Dierks (Hamburg, Germany)

A 18-08 Differential uptake of nanodiamonds in cardiomyoblasts and adult rat cardiomyocytes.
Guillaume Gilbert (Brest, France)

A 18-09 Aquaporin-5 as a potential new target in breast cancer treatment
Teresa Kirkegaard (Aarhus, Denmark)

A 18-10 Lithium prevents the neurotoxic effects of paclitaxel mediated through TRPA1 channels
Julio C. Sánchez (Pereira, Colombia)

A 18-11 The HUSH complex sustains endothelial angiogenic activity through epigenetic repression of Zinc finger transcription factors
Matthias S. Leisegang (Frankfurt am Main, Germany)

A 18-12 *Can the EZH2-dependent reshaping of the microvascular endothelial epigenome explain the alteration of angiogenic capacity after wildland fire $PM_{2.5}$ exposure?*
Pierre Lemieux (Toronto, Canada)

A 18-13 Protective role of *Geranium palustre L.* extract against oxidative tissue damage in gentamicin-induced nephrotoxicity mouse model
Viktoriya Dyakova (Stara Zagora, Bulgaria)

A 18-14 Torin1 modifies the kinetics the LPS induced activation of NF-κB
Emma Luttermann (Jena, Germany)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 19 | MOLECULAR PHYSIOLOGY

Chairs:

Presentations:

A 19-01 HMGB domain associated proteins are potential RNA-DNA triplex binding proteins
Julia Stötzel (Frankfurt, Germany)

A 19-02 Long non-coding RNA-SWI/SNF subcomplex assembly and targeting in iPSC differentiation
Yinuo Zhou (Frankfurt am Main, Germany)

A 19-03 Neddylation stabilizes IκB, which in turn suppresses cell migration mediated by NF-κB
Yeseon Son (Seoul, South Korea)

A 19-04 Structural insights into the polymerase catalyzed FAD-capping of hepatitis C viral RNA
Deping Wang (Taiyuan, China)

A 19-05 Pemetrexed Enhances γδ T Cell-Mediated Cytotoxicity in NSCLC via the ATM-STING-NF-κB Axis
Meng-Yu Hung (Taichung, Taiwan)

A 19-06 Genetic control of DNA methylation : example of the *CD36* gene
Maïmouna Touré (Dakar, Senegal)

A 19-07 HDAC6 regulates breast cancer stem cells via Akt/Stat3 signaling axis
SeungYeon Ko (Seoul, South Korea)

A 19-08 Multi-omics Profiling of Serum Exosomes Identifies Potential Biomarkers for Brain Metastasis in Lung Cancer
Jiwoo Lim (Seoul, South Korea)

A 19-09 SENP3-governed epigenetic signaling regulates sarcomere organization and cachexia.
Mugeng Li (Hannover, Germany)

A 19-11 An *in vivo* atlas of the proteome and phosphoproteome reveals fundamental principles of cell and tissue organization
Eugenio F. Fornasiero (Göttingen, Germany)

A 19-12 *Myo18a* encodes multiple Myo18A isoforms with distinct domain structures and tissue-specific localization
Markus Horsthemke (Potsdam, Germany)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 20 | ION CHANNEL PHYSIOLOGY

Chairs:

Presentations:

A 20-01 Electrophysiological evaluation of neuronal electrical activity in *Clcn4*$^{-/-}$ and *Clcn4*^{A549V} rat hippocampal neurons
Alberto Diaz-Castillo (Jülich, Germany)

A 20-02 Sex differences of Cav1.3 function in DLS-projecting dopamine substantia nigra neurons
Nick S. Schaar (Frankfurt, Germany)

A 20-03 Cellular mechanisms of low repeat spike timing-dependent plasticity (STDP) at hippocampal input synapses to the mPFC of adult mice
Maxime Picard (Magdeburg, Germany)

A 20-04 “Multi-patch clamp analysis of principal neuron-interneuron microcircuits in human neocortex”
Emilia Thoma (Berlin, Germany)

A 20-05 Effects of Neuropeptide Y on hippocampal network oscillations in vitro
Evangelia Pollali (Heidelberg, Germany)

A 20-06 The role of endosomal Na^+/H^+exchanger NHE6 in iron homeostasis and metabolism in neurons and astrocytes
Lara Sach (Copenhagen, Denmark)

A 20-07 Serotonin bidirectionally modulates network activity in the developing hippocampus via 5?HT4 and 5?HT1A receptors
Rafael Y. Schwier (Würzburg, Germany)

A 20-08 Endothelin-1 modulates hippocampal and hypothalamic network activity in mouse primary dissociated cultures and brain slices
Lea Wegmann (Düsseldorf, Germany)

A 20-09 Eight novel variants in *CLCN3* expand our understanding of the molecular and phenotypic spectrum of *CLCN3*-related condition
Marlon M. Macias (Jülich, Germany)

A 20-10 Calcium-activated chloride channel TMEM16A opens via pi-helical transition in transmembrane segment 4
Jan-Philipp Machtens (Hannover, Germany)

A 20-11 Analgesic effects of acupuncture on migraine via trigeminal pathway
Jia Wang (Beijing, China)

A 20-12 Kit^+ interstitial cells are targets of nitrergic neurotransmission in mouse lower oesophageal but not urethral smooth muscle sphincter
Bernard Drumm (Dundalk, Ireland)

A 20-13 Differentiation of hippocampal immediate early gene responses to frequency-dependent locus coeruleus stimulation
Muxin Lin (Bochum, Germany)

A 20-14 Inter-site synchrony of ripple oscillations as a hallmark of GABAergic function
Michael D. Hadler (Berlin, Germany)

A 20-15 Investigating the role of I_{Ks} and I_{Kr} in the electrophysiological responses to sympathetic nerve stimulation in an innervated isolated rabbit heart preparation

Rachel L. Sutcliffe (Leicester, UK)

Thursday, 11 September 2025, 16:15 - 17:45
Room(s): Foyer

A 21 | PHYSIOLOGY OF POTASSIUM CHANNELS

Chairs:

Presentations:

A 21-01 Thermosensitivity of TREK K2P channels is controlled by a PKA switch and depends on the microtubular network
Soenke Cordeiro (Kiel, Germany)

A 21-02 NOVEL MODULATORS OF HUMAN TWIK-RELATED SPINAL CORD K^+ (hTRESK) CHANNELS UNCOVER AN UNSELECTIVE DRUG INTERACTION SITE
Anthony Ogwo (Kiel, Germany)

A 21-03 Characterization of the dynamic movement of DII-S4 voltage sensor in Two-pore channel 3
Takushi Shimomura (Okazaki, Japan)

A 21-04 Licorice ingredients modulate GIRK channel activity and atrial rhythms
I-Shan Chen (Wakayama, Japan)

A 21-05 $K_{Ca}3.1$ channel inhibition as a therapeutic approach in osimertinib-resistant lung cancer
Dominika Ciechanska (Münster, Germany)

A 21-06 Crosstalk of *KCNH1* and *KCNH5* Gain-of-Function Mutations Leading to Neurodevelopmental Disorders
Alisa Bernert (Jena, Germany)

A 21-07 A complete genetic loss-of-function in a K_{2P} channel linked to Ivemark syndrome II
Susanne Rinné (Marburg, Germany)

A 21-08 Functional Role of K2P Channels in the Regulation of Tone in Systemic Arteries
Lara M.A. Heinrich (Augsburg, Germany)

A 21-09 The role of K^+ channels for neutrophil migration
Tahir Ulu (Münster, Germany)

A 21-10 Channel Pharmacology and Calcium Sensitivity of Small Conductance Calcium-Activated Potassium Channels: Automated Whole-cell vs Inside-Out Patch Clamp Assays
Katesirin Ruamyod (Bangkok, Thailand)

A 21-11 Probing a contribution of erg (KCNH) potassium channels to the electrical response properties of Auditory Outer Hair Cells
Muhammad Younus (Marburg, Germany)

A 21-12 Comparison between the effects of NS1643 and NS3623 on the gating properties of hERG
Fatema Al-Sabahi (Muscat, Oman)

A 21-13 A Mechanism for hERG Kv Channel Conductance Increase by its Blocker
Kazuharu Furutani (Tokushima, Japan)

A 21-14 Heterodimerization leads to a K_{2P} channel complex with altered functional properties, receptor-coupling and pharmacology
Sven Schütte (Marburg, Germany)

Thursday, 11 September 2025, 18:00 - 19:15
Room(s): Horizont

| Congress Opening Ceremony & IUPS President's Lecture

Chairs:

Presentations:

18:00		Welcome address (Fabio Benfenati, President FEPS)
18:08		Welcome address (Susan Wray, President IUPS)
18:15		Welcome address (Bernhard Brüne, VP Goethe University Frankfurt)
18:22		Welcome address (Joachim Fandrey, Conference President DPG)
18:29	SL	The past, present and future of human reproduction and the uterus **Susan W. Wray** (Liverpool, UK)

Thursday, 11 September 2025, 19:15 - 21:00
Room(s): Foyer

| Welcome Reception

Chairs:

Presentations:

Friday, 12 September 2025, 8:30 - 10:00
Room(s): Satellit

OS 05 | Cellular and Molecular Neuroscience 1

Chairs:

Presentations:

8:30 OS 05-01 Ultrastructural correlates of high synaptic vesicle release probability
Maximilian Zettner (Wuerzburg, Germany)

8:45 OS 05-02 Noelin proteins control excitatory synaptic strength and short-term plasticity in the mouse cerebellum
Igor Delvendahl (Freiburg, Germany)

9:00 OS 05-03 Silencing Synapsin II unravels a calcium-dependent mechanism controlling excitatory neurotransmission
Caterina Canevari (Genoa, Italy)

9:15 OS 05-04 Irisin Targets the Blood-Brain Barrier via Integrin αV/β5 complex and FAK-ERK Signaling to Promote Hippocampal BDNF Overexpression
Clémence Leger (Dijon, France)

9:30 OS 05-05 Neuronal ryanodine receptor 2 forms clusters which remodel in a mouse model of Alzheimer's disease
Michelle L. Munro (Dunedin, New Zealand)

9:45 OS 05-06 The epi-perineurial barrier: Functional analysis by microscale techniques including a miniaturized Ussing chamber
Susanne M. Krug (Berlin, Germany)

Friday, 12 September 2025, 8:30 - 10:00
Room(s): Sirius

OS 06 | Education and Teaching

Chairs:

Presentations:

8:30 OS 06-01 Developing online interactive case studies to support physiology teaching
Catriona J. Cunningham (Aberdeen, UK)

8:45 OS 06-02 Student Perspectives on Teaching the Physiology of Dying: Comfort Levels and Curriculum Inclusion
Derek Scott (Aberdeen, UK)

9:00 OS 06-03 Rethinking Physiology Education: Insights from a Pilot Study on Student Perceptions at Universidade Lusófona
Luis Monteiro Rodrigues (Lisboa, Portugal)

9:15 OS 06-04 Virtual laboratories (VL) complement but should not replace face-to-face practical classes: Evaluation of undergraduate perceptions of VL resources for practical skill learning in life sciences
Bernard Drumm (Dundalk, Ireland)

9:30 OS 06-05 Medical student's concepts and practical applications of smartwatch-based cardiovacular function assessments - implications for teaching physiology today
Robert Patejdl (Erfurt, Germany)

9:45 OS 06-06 Enhancing Physiology Practical Skills through Workplace-Based Assessment
Muhammad Adnan Kanpurwala (Karachi, Pakistan)

Friday, 12 September 2025, 8:30 - 10:00
Room(s): Mistral

OS 07 | Cellular and Molecular Physiology 1

Chairs:

Presentations:

8:30 OS 07-01 Properties of claudin-2 cation and water channels after co-expression with claudin-1 or claudin-3
Fabian Martinez Perafan (Berlin, Germany)

8:45 OS 07-02 Cx43 Hemichannel-Driven Ca²? Signaling Regulates eNOS-Caveolae Internalization in Endothelial Hyperpermeability
Veronica A. Kuzdowicz (Newark, USA)

9:00 OS 07-03 Sub-Millivolt Voltage Imaging Reveals Ion Channel–Driven Membrane Potential Dynamics in Non-Excitable Cells
Philipp Rühl (Jena, Germany)

9:15 OS 07-04 Loss of $P2Y_2$ receptor impairs hepatic clearance of uropathogenic *E. coli*.
Nanna Johnsen (Aarhus, Denmark)

9:30 OS 07-05 Titratable opto- and chemogenetic mitochondrial ROS production to resolve species-specific roles in redox signalling
Juan C. Cárdenas (Göttingen, Germany)

9:45 OS 07-06 Post-synaptic changes increase the excitability of NTS neurons of C57Bl/6J mice exposed to sustained hypoxia rather than pre-synaptic or astrocyte related mechanism.
Daniela Accorsi-Mendonca (Ribeirao Preto, Brazil)

Friday, 12 September 2025, 8:30 - 10:00
Room(s): Plateau

S 04 | Location, Location, Location: Why Location Does Matter in the Cardiac Myocyte

Chairs:

Presentations:

8:30	S 04-01	Decoding heart beat dance: PDEs and the control of Ca^{2+}-handling in the human atria and in atrial fibrillation **Cristina E. Molina** (Hamburg, Germany)
9:00	S 04-02	Regulation of cardiac excitation-contraction coupling and ryanodine receptors by type I PKA and calstabin FKBP12.6 **Marine Gandon-Renard** (Paris, France)
9:15	S 04-03	Regional cAMP signaling heterogeneity drives sex-specific arrhythmia susceptibility in heart failure **Jessica L. Caldwell** (Davis, USA)
9:30	S 04-04	Understanding cardiomyocyte structure: function relationships with super-resolution microscopy **William E. Louch** (Oslo, Norway)

Friday, 12 September 2025, 8:30 - 10:00
Room(s): Passat

S 05 | Strategies for Dealing with Predictable Increases in Energy Demands Across Time and Space

Chairs:

Presentations:

8:30 S 05-01 Hot reproduction in the tropics: thermogenic mechanisms in a facultative endothermic lizard
Kenia C. Bicego (Jaboticabal, Brazil)

9:00 S 05-02 Calcium dynamics facilitate seasonal changes in songbird thermogenesis
Maria Stager (Massachusetts, USA)

9:15 S 05-03 Seasonal metabolic variations in free ranging adult birds: Muscle Ca2+ handling and mitochondria as the primary drivers
Punyadhara Pani (Bhubaneswar, India)

9:30 S 05-04 Adaptations to deal with cold hypoxia in high-altitude mammals – cardiorespiratory physiology, metabolism, and the gut microbiome
Graham R. Scott (Hamilton, Canada)

Friday, 12 September 2025, 8:30 - 10:00
Room(s): Meridian

S 06 | The Pathophysiology of Exertional Dyspnoea: From Physiology to Clinical Applications

Chairs:

Presentations:

8:30 S 06-01 control of breathing: from physiology to clinical applications
Florence Cayetanot (Paris, France)

8:45 S 06-02 Back to basics: the fundamental principles of exercise physiology
Pierantonio Laveneziana (Paris, France)

9:15 S 06-03 The mechanisms of dyspnoea: from physiology to clinical applications
Pierantonio Laveneziana (Paris, France)

9:45 S 06-04 Respiratory and locomotor muscles in cardio-respiratory disease: the role of exercise and rehabilitation
Daniel Langer (Leuven, Belgium)

Friday, 12 September 2025, 8:30 - 10:00
Room(s): Horizont

S 07 | Epithelial Barrier Functions: Brush Border, Tight Junctions, and Beyond

Chairs:

Presentations:

8:30 S 07-01 The microbiota-gut-brain axis in neurodevelopmental disorders
Melanie Gareau (Davis, USA)

9:00 S 07-02 Chronic pain in IBD: biological sex and dysbiosis
Yasmin Nasser (Calgary, Canada)

9:15 S 07-03 Tight Junction Proteins Occludin and ZO-1 Orchestrate Cell Fate Decisions Beyond the Barrier Sealing to Sustain Mucosal Homeostasis
Wei-Ting Kuo (Taipei, Taiwan)

9:30 S 07-04 Targeting primary cilia defects to identify new therapeutic approaches in nephronophthisis, a renal ciliopathy.
Alexandre Benmerah (Paris, France)

Friday, 12 September 2025, 10:00 - 10:30
Room(s): Foyer

| Coffee Break

Chairs:

Presentations:

Friday, 12 September 2025, 10:30 - 11:15
Room(s): Meridian

SL 01 | Capillary Ion Channels and Cerebral Blood Flow

Chairs:

Presentations:

10:30 Sl 01 Bioelectric Control of Brain Blood Flow by Capillaries
Thomas Longden (Baltimore, USA)

Friday, 12 September 2025, 10:30 - 11:15
Room(s): Horizont

SL 02 | Programming and Reprogramming of Aging

Chairs:

Presentations:

10:30 SL 02 Programming and Reprogramming of Aging
Guang-Hui Liu (Beijing, China)

Friday, 12 September 2025, 11:25 - 11:55
Room(s): Plateau

KL 05 | IUPS Wallace Fenn Lecture

Chairs:

Presentations:

11:25 KL 05 A multiscale perspective on the role of structural and functional heterogeneity in cardiac arrhythmias
Karin R. Sipido (Leuven, Belgium)

Friday, 12 September 2025, 11:25 - 11:55
Room(s): Passat

KL 06 | Mechanisms of Pain and Touch (Primary Sensory System)

Chairs:

Presentations:

11:25 KL 06 No Pain No Gain: A Healthy Career in Pain Research
Cheryl L. Stucky (Franklin, USA)

Friday, 12 September 2025, 11:25 - 11:55
Room(s): Meridian

KL 07 | IUPS Ernst Knobil Lecture

Chairs:

Presentations:

11:25 KL 07 Pulsatile GnRH: A Key Link Between Reproduction, Metabolism, and Cognitive Decline
Vincent Prevot (Lille, France)

Friday, 12 September 2025, 11:25 - 11:55
Room(s): Horizont

KL 08 | The Physiological Society Hodgkin-Huxley-Katz Prize Lecture

Chairs:

Presentations:

11:25 KL 08 Using Digital Twins and AI in Arrhythmia Research: From Mechanisms to Clinical Applications
Natalia Trayanova (Baltimore, USA)

Friday, 12 September 2025, 11:55 - 13:25
Room(s): Foyer

| Lunch Break

Chairs:

Presentations:

Friday, 12 September 2025, 13:25 - 14:25
Room(s): Horizont

PL 01 | Nobel Laureate Lecture

Chairs:

Presentations:

13:25 PL 01 *HIF Related Oxygen Sensing Mechanisms Underlying Physiologic Responses to Hypoxia*
Peter Ratcliffe (Oxford, UK)

Friday, 12 September 2025, 14:35 - 15:05
Room(s): Plateau

KL 09 | Metabolic and hormonal control of energy balance

Chairs:

Presentations:

14:35 KL 09 Metabolic and hormonal control of energy balance
Miguel López (Santiago de Compostela, Spain)

Friday, 12 September 2025, 14:35 - 15:05
Room(s): Passat

KL 10 | Development of neuronal circuits in the developing brain

Chairs:

Presentations:

14:35 KL 10 Formation of mature neural circuits through synapse elimination in the developing brain
Masanobu Kano (Tokyo, Japan)

Friday, 12 September 2025, 14:35 - 15:05
Room(s): Meridian

KL 11 | Microcirculation and Cardiovascular Disease

Chairs:

Presentations:

14:35 KL 11 Lymphatic endothelial cell hemoglobin alpha modulation of cardiometabolic heart failure
Brant E. Isakson (Charlottesville, USA)

Friday, 12 September 2025, 14:35 - 15:05
Room(s): Horizont

KL 12 | The Scandinavian Physiological Society Ulf von Euler Prize Lecture

Chairs:

Presentations:

14:35 KL 12 Regulation of insulin and glucagon secretion - role of microRNAs
Lena Eliasson (Malmö, Sweden)

Friday, 12 September 2025, 15:15 - 16:00
Room(s): Meridian

SL 03 | Dendritic Spines: Relationship of Spine Morphology and Its Movement with Brain Function and Psychiatric Disorders

Chairs:

Presentations:

15:15 SL 03 *Dendritic spines: relationship of spine morphology and its movement with brain function and psychiatric disorders*
Haruo Kasai (Tokyo, Japan)

Friday, 12 September 2025, 15:15 - 16:00
Room(s): Horizont

SL 04 | Skeletal Muscle in Health and Disease

Chairs:

Presentations:

15:15 SL 04 Fiber-type and absolute abundances of dysferlinin skeletal muscle are species-dependent – implications for translating animal models to human muscle diseases
Robyn M. Murphy (BUNDOORA, Australia)

Friday, 12 September 2025, 16:00 - 16:30
Room(s): Foyer

| Coffee Break

Chairs:

Presentations:

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Solar

OS 08 | Modelling

Chairs:

Presentations:

16:30 OS 08-01 The Physiome journal at eight years old
David Nickerson (Auckland, New Zealand)

16:45 OS 08-02 Multi-System Modeling of Autonomic Nervous System Function in the Modulation of Interoceptive Signals
Ruichen Li (Tokyo, Japan)

17:00 OS 08-03 The role of variability in biological systems: Using a variability-based artificial intelligence platform to address malfunctions within systems.
Yaron Ilan (Jerusalem, Israel)

17:15 OS 08-04 Aging Clock and Its Interventions
Weiqi Zhang (Beijing, China)

17:30 OS 08-05 Impedance Cardiography Meets AI: A Novel Pathway to Continuous and Cuffless Blood Pressure Monitoring
Tomas L. Bothe (Berlin, Germany)

17:45 OS 08-06 *RADIAnT*: Unified identification of statistically-robust RNA-DNA interactions from diverse data types
Simonida Zehr (Frankfurt, Germany)

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Satellit

OS 09 | Endocrinology and Metabolism

Chairs:

Presentations:

16:30 OS 09-01 Interleukin-33 treatment normalises leptin and induces fat loss in obesity
Sophie N. Saxton (Manchester, UK)

16:45 OS 09-02 Spatiotemporal non-invasive phenotyping characterization of the hepatic microenvironment in MASLD/MASH progression
Rallia Velliou (Athens, Greece)

17:00 OS 09-03 Functional Insights Into Neuropeptide FF in the Hypothalamic Arcuate Nucleus and Its Role in Metabolic Homeostasis Under Dietary Stress
Ya-Tin Lin (Taipei, Taiwan)

17:15 OS 09-04 White adipose tissue browning as protecting strategy induced by*Bacillus subtilis* spores administration in preventing the metabolic dysregulation induced by 6 weeks of high fructose diet in young rats
Arianna Mazzoli (Naples, Italy)

17:30 OS 09-05 Improved pancreatic β-cell collective function by calorie restriction
Johannes U. Pfabe (Vienna, Austria)

17:45 OS 09-06 Modulation of aldosterone secretion by osmolality
Luca Püschl (Regensburg, Germany)

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Sirius

OS 10 | Physical Activity: Immunometabolic Effects

Chairs:

Presentations:

16:30 OS 10-01 Physical inactivity-induced anabolic and metabolic alterations are exacerbated upon systemic inflammation
Moritz Eggelbusch (Amsterdam, Netherlands)

16:45 OS 10-02 Optimizing Exercise Intensity for Gut Health: Effect on Microbiota Composition, Barrier Integrity, and Inflammation in Male Wistar Rats
Nova Sylviana (Sumedang, Indonesia)

17:00 OS 10-03 Children with Cerebral Palsy display reduced skeletal muscle respiratory capacity
Sebastian Edman (Stockholm, Sweden)

17:15 OS 10-04 Physical Exercise Improves Blood-Brain Barrier Integrity Under Chronic Stress Conditions
Hidefumi Waki (Inzai, Japan)

17:30 OS 10-05 Acute exercise rewires the proteomic landscape of human immune cells
David Walzik (Dortmund, Germany)

17:45 OS 10-06 Physical inactivity mitigates inflammation-induced metabolic shift in low-oxidative skeletal muscle fibres
Koen A.E. Zwetsloot (Amsterdam, Netherlands)

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Mistral

OS 11 | Gastrointestinal Physiology

Chairs:

Presentations:

16:30 OS 11-01 The role of claudin-4 in intestinal paracellular phosphate absorption
Zsuzsa Radványi (Zürich, Switzerland)

16:45 OS 11-02 Breed-Specific Differences in Intestinal Response to *Brachyspira* Infections: Insights from Porcine Colonic Organoid Models
Masina Plenge (Hannover, Germany)

17:00 OS 11-03 Chemical activation of hypoxia-inducible factor supports hypoxic adaptation in equine jejunum enteroid-derived monolayers
Franziska Dengler (Stuttgart, Germany)

17:15 OS 11-04 Upregulation of Farnesoid X Receptor expression and activity in colonic epithelial cells by a lipid-based plant extract.
Stephen J. Keely (Dublin 2, Ireland)

17:30 OS 11-05 Long-term swimming exercise enhances healing of colon anastomosis in rats by upregulating colonic irisin levels
Oguzhan Simsek (Istanbul, Turkey)

17:45 OS 11-06 Occludin Deficiency Disrupts Mucosal Apoptosis via Impaired TGFβ/SMAD3 Signaling in Inflammatory Bowel Disease
Chia-Ying Lin (Taipei, Taiwan)

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Plateau

S 08 | Bidirectional Brain-Gut Interactions in Health and Diseases

Chairs:

Presentations:

16:30 S 08-01 Brain-Gut Interactions in Psychiatric Disorders- A role for the Microbiome
John F. Cryan (CORK, Ireland)

17:00 S 08-02 Novel probiotic treatment of autism spectrum disorder based upon preclinical studies
Kitti Mintál (Pécs, Hungary)

17:15 S 08-03 Plasticity of Neural Gut-Brain Communication underlying Feeding Control
Henning Fenselau (Cologne, Germany)

17:30 S 08-04 The HPA Axis as a Key Gastroprotecive Player in Brain-Gut Interactions
Liudmila Filaretova (St. Petersburg, Russia)

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Passat

S 09 | Extracellular Vesicles and Physical Exercise: Hermes is Using Nanocarriers to Convey Bodily Messages

Chairs:

Presentations:

16:30	S 09-01	Skeletal muscle-derived extracellular vesicles transmit the pro-metabolic effects associated with exercise in a recipient-cell dependent manner. **Ayesha Saleem** (Winnipeg, Canada)
17:00	S 09-02	Inflammatory activity of extracellular vesicles induced by physical exercise **Rachele Agostini** (Urbino, Italy)
17:15	S 09-03	Plasma-derived extracellular vesicles released after endurance exercise exert cardioprotective activity through the activation of antioxidant pathways **Carolina Balbi** (Schlieren, Switzerland)
17:30	S 09-04	Proteomic and Functional Profiling of Exercise-Induced Small Extracellular Vesicles Uncovers Active AMPK Transport **Martin Whitham** (Birmingham, UK)

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Meridian

S 10 | The Physiology of Hypoxia: From Cellular Oxygen Sensing to Ethnical Differences in High Altitude Adaptation

Chairs:

Presentations:

16:30 S 10-01 Adapting to moderate to high altitudes: ethnic differences
Max Gassmann (Zurich, Switzerland)

17:00 S 10-02 Oxygen sensing through N-terminal cysteine dioxygenation
Thomas P. Keeley (Oxford, UK)

17:15 S 10-03 Fighting Hypoxia with Perfluorocarbon-based Artificial Oxygen Carriers
Katja B. Ferenz (Essen, Germany)

17:30 S 10-04 Hypoxia induces glycolysis in intestinal epithelial cells indepedent of HIF-1-driven transcription
Sarah J. Kierans (Dublin, Ireland)

Friday, 12 September 2025, 16:30 - 18:00
Room(s): Horizont

S 11 | Arterial Blood Pressure, Cerebral Perfusion and Brain Health

Chairs:

Presentations:

16:30 S 11-01 Intracranial pressure, sympathetic tone, and the brain–heart axis: evidence and open questions on an intracranial baroreflex in animal and human physiology.
Eric Schmidt (Toulouse, France)

17:00 S 11-02 Intracranial Baroreceptor Mechanism in the Regulation of Arterial Blood Pressure
Philippa Wittenberg (London, UK)

17:15 S 11-03 Cerebral blood flow and blood pressure in a conscious rat model of hypertension/prediabetes and lumacaftor treatment.
Tonja Emans (Auckland, New Zealand)

17:30 S 11-04 Circadian-dependent ion transport at the choroid plexus
Deidre Jansson (Seattle, USA)

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

| Poster Session B

Chairs:

Presentations:

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

B 01 | HYPOXIC SIGNALLING

Chairs:

Presentations:

B 01-01 Tumor spheroids effectively model hypoxia's impact on adenoviral replication
Anna Malyshkina (Essen, Germany)

B 01-02 Nuclear actin shaping the transcriptional response to hypoxia parallel to the HIF pathway
Anika Göpel (Göttingen, Germany)

B 01-03 The hypoxia-inducible factor 1alpha and primary cilia – a functional analysis of the interplay in neuronal cells
Pascal F. Schneider (Essen, Germany)

B 01-04 Adenosine A_{2A} receptors modulate the intracellular Ca^{2+} mobilization in NTS astrocytes of Balb-C mice exposed to sustained hypoxia.
Daniela Accorsi-Mendonça (Ribeirão Preto, Brazil)

B 01-05 Primary cilia as hypoxia-sensitive signaling hubs of cellular communication
Tristan Leu (Essen, Germany)

B 01-06 The transcriptomic response of neuroblastoma cells to hypoxia
Xheni Meçi (Berlin, Germany)

B 01-07 Co-culture of colorectal cancer cells with *Lactobacillus acidophilus* destabilizes Hypoxia inducible factor-1α
Sandra Winning (Essen, Germany)

B 01-09 How adequately does "hypoxia-mimicking" work in immune cells?- Effects of hypoxia-simulating substances compared to "real" hypoxia
Mats P. Schoumakers (Essen, Germany)

B 01-10 Pharmacological HIF Stabilization Restores CD4+ T Cell Function in Hereditary Hemorrhagic Telangiectasia
Nelson Niski (Essen, Germany)

B 01-11 Effect of Hypoxic Priming on Apoptotic Cell Clearance by Bone Marrow-Derived Murine Macrophages
Brenda Krishnacoumar (Essen, Germany)

B 01-12 NFAT5/TonEBP controls mitochondrial respiration of lung endothelial cells in the hypoxic lung
Tom Kretzschmar (Heidelberg, Germany)

B 01-13 Hypoxia causes microtubule reorganization in epithelial cells
Darragh Flood (Dublin, Ireland)

B 01-14 Hypoxia-dependent glycolytic metabolon formation is increased in colon cancer cells compared to primary cells
Emily DeMichele (Dublin, Ireland)

B 01-15 RNA does not play a role in hypoxia-induced glycolytic complex formation.
Ethan T. Dehantschutter (Dublin, Ireland)

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

B 02 | AUTONOMOUS NERVOUS SYSTEM AND MYOCARDIAL SIGNALLING

Chairs:

Presentations:

B 02-01 miR-221/222 and -208b affect the function of the sympathetic and parasympathetic signaling cascade in neonatal cardiomyocytes
Barbara Schreier (Halle, Germany)

B 02-02 Sex-Specific Trajectories of Cardiac Baroreflex Decline with Aging
Pedro Henrique S. Santos (Brasília, Brazil)

B 02-03 Spontaneous baroreceptor sensitivity in atrial fibrillation and hypertension
Samuel Thomas (Manchester, UK)

B 02-04 Autonomic Dysfunction in Early Parkinson's Disease: An Information-Theoretic Analysis
Barbora Czippelova (Martin, Slovakia)

B 02-05 Long term β-adrenergic stimulation leads to calcium sparks duration prolongation and RyR2 cluster rearrangement.
Radoslav Janicek (Bern, Switzerland)

B 02-06 Roles and mechanisms of NLRP3 inflammasome related signaling in pathogenesis of Brugada Syndrome
Chen Yan (Mannheim, Germany)

B 02-07 Growth differentiation factor 6 (GDF6): a novel regulator of pulmonary vascular remodeling in pulmonary hypertension secondary to left heart disease
Qiuhua Li (Berlin, Germany)

B 02-08 Characterization of molecular mechanisms underlying OTUB1 dependent heart tissue homeostasis
Nina Oechsler (Greifswald, Germany)

B 02-09 Sex-Specific Associations Between BMI and Cardiac Autonomic Function in Sri Lankan Children Aged 5–12 Years

Amaranath Karunanayake (Galle, Sri Lanka)

B 02-10 Differential Age-Related Effects on Neural and Peripheral Arcs of Baroreflex Function in Healthy Adults
Rosa V.D. Guerrero (Brasília, Brazil)

B 02-11 Cardiovascular autonomic dysregulation in Parkinson's disease - relation to the assumed pathological process origin
Barbora Czippelova (Martin, Slovakia)

B 02-12 Liraglutide reduced the dark period core body temperature and curtailed cardiac sympathetic activity during the restraint stress.
Elham Ghadhanfar (Jabriya, Kuwait)

B 02-13 CaMKII Participation in the Molecular Pathways of the Anrep Effect
Alicia Mattiazzi (La Plata, Argentina)

B 02-14 Photoacoustic imaging of cardiac Calcium dynamics using calcium-sensitive absorption dyes
Shingo Murakami (Tokyo, Japan)

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

B 03 | MITOCHONDRIA ENERGETICS AND SIGNALLING

Chairs:

Presentations:

B 03-01 Reactive oxygen species drive metabolism in excitable cells: implications for the Takotsubo Syndrome
Vamsi Priya Vikram (Göttingen, Germany)

B 03-02 MAO-B as inducer of mitochondrial ROS production in cardiac fibroblasts of mice
Gerhild Euler (35392 Gießen, Germany)

B 03-03 The role of long-chain ceramides in modulating mitochondrial function and proliferation in pulmonary artery smooth muscle cells in pulmonary hypertension secondary to left heart disease
Huimin Jia (Berlin, Germany)

B 03-04 Therapeutic targeting of Decr1 ameliorates cardiomyopathy by suppressing mitochondrial fatty acid oxidation in diabetic mice
Qing-Bo Lu (Wuxi, China)

B 03-05 Effects of Moderate-Intensity Treadmill Exercise on Cardiac Mitochondrial Dynamics and Mitophagy in Aging Rats
Julia W. Gunadi (Bandung, Indonesia)

B 03-06 Investigating the effects of compartment-specific production of H_2O_2 on the function of hiPSC-derived cardiomyocytes
Yamin Chen (Göttingen, Germany)

B 03-07 PPARδ activation improves cardiac function and metabolism in a model of experimental diabetes
Antigone Lazou (Thessaloniki, Greece)

B 03-08 Cardiac effects of Roquin
Nadja Itani (Gießen, Germany)

B 03-09 *Drosophila* as a replacement model to understand candidate genes in cardiac physiology
Kate E. Campbell (Manchester, UK)

B 03-10 A Drug-Elicitable Alternative-Splicing Module (DreAM) for Controlled Myocardial Repair by AAV
Yuxuan Guo (Beijing, China)

B 03-11 Dynamics of adenosine metabolism and signalling in cardiac fibroblasts after myocardial infarction
Julia Hesse (Düsseldorf, Germany)

B 03-12 Investigation of primary energy substrates in the pacemaking function of the sinus node in mice
Shu Nakao (Isehara, Japan)

B 03-13 Energetic compartmentalization in cardiomyocytes
Lucia Jaska (Tallinn, Estonia)

B 03-14 Mito Thermo Yellow fluorescence provides uncompelling evidence for ‘hot mitochondria’
Jason R. Treberg (Winnipeg, Canada)

B 03-15 Uncovering the factors driving the evolutionary retention or loss of UCP1
Michael J. Gaudry (Stockholm, Sweden)

B 03-16 Mitochondrial Myopathy Induces Multiorgan Energetic Imbalance and Metabolic Reprogramming
Itamar Jesus (Sao Paulo, Brazil)

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

B 04 | GI: MICROBIOME, MOTILITY, AND EXCHANGE

Chairs:

Presentations:

B 04-01 Invasive pathobionts in dysbiotic microbiota promote intestinal tumorigenesis in mice
Linda C.-H. Yu (Taipei, Taiwan)

B 04-02 Bacterial Internalization Shapes Microbiota Dysbiosis to Evoke Epithelial Circadian Disruption and Chronic Intestinal Inflammation in Gnotobiotic Myosin Light Chain Kinase-Transgenic Mice
Yu-Chen Pai (Taipei, Taiwan)

B 04-03 Bacteriophage Treatment Targeting Gut Microbiome to Modulate Colon Cancer Development in Mice
Yi-Hsuan Li (Taipei, Taiwan)

B 04-04 Co-occurrence Network Analysis Reveals the Impact of Arbequina Table Olive Supplementation on Gut Microbiota in Spontaneously Hypertensive Rats
Joana M Planas (Barcelona, Spain)

B 04-05 Effect of gut bacterial components on glucagon like peptide-1 secretion in L-cells
Nalini Sodum (Oulu, Finland)

B 04-06 The Inhibitory Effect of Clomipramine on Intestinal Motility in Female Rats
Orhan Sayin (Elazig, Turkey)

B 04-07 Establishing gene transfer for optogenetic gastric pacemaking
Johannes Riebeling (Göttingen, Germany)

B 04-08 Association Between Physical Activity and Gastric Motility Parameters in Sri Lankan Office Workers
Pradeepa I. Basnayake (Ratnapura, Sri Lanka)

B 04-09 The Impact of BMI and Body Fat on Gastric Emptying and Antral Motility in Sri Lankan Office Workers
Pradeepa I. Basnayake (Ratnapura, Sri Lanka)

B 04-10 Sodium/hydrogen exchanger 8 affects sheet migration of human intestinal epithelial cells (HT29-MTX) by influencing the actin cytoskeletal rearrangement
Katerina Nikolovska (Hannover, Germany)

B 04-11 Distinct Contributions of the Chloride/Bicarbonate Exchanger SLC26A3 and the Anion Channel CFTR to Intestinal Bicarbonate Secretion and pH Homeostasis in Human Colon
Mahdi Amiri (Hannover, Germany)

B 04-12 Human adult stem cell-derived colon organoids for sodium absorption measurements reveal IL-22-dependent ENaC inhibition via STAT3 signalling
Susanne Krug (Berlin, Germany)

B 04-13 A re-evaluation of ion permeability in the intercellular space of the rat small intestine using the everted sac method
Wendy Hempstock (Shizuoka, Japan)

B 04-14 Expression Patterns of Tight Junction Proteins: Do Porcine Intestinal Organoids Reflect the Epithelial Barrier Properties of the Native Tissue?
Linda Droessler (Berlin, Germany)

B 04-15 Physiological functions of tight junction proteins expressed in the basolateral membrane of small intestinal epithelial cells
Miharu Ogata (Shizuoka, Japan)

B 04-16 Associations Between Physical Activity and Metabolic Markers in Office Workers
Pradeepa I. Basnayake (Ratnapura, Sri Lanka)

B 04-17 Neuropeptides B and W as Novel Targets in Research on Gastrointestinal Dysfunction in Diabetes Mellitus
Tomas Chmelir (Pilsen, Czech Republic)

B 04-18 Visualizing gut neural signaling in real time on-chip
Luke Schwerdtfeger (Fort Collins, USA)

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

B 05 | ORGAN INTERACTIONS IN EXERCISE

Chairs:

Presentations:

B 05-01 Effect of High Intensity Exercise Regimen on Forced Vital Capacity in Young Obese Individuals
Khaled Mohsin Badaam (Aurangabad, India)

B 05-02 Nano-moringa oleifera potentialy to increase human performance
Hamidie R.D. Ray (Bandung, Indonesia)

B 05-03 Investigating the impact of night-duty on sleep architecture and mental well-being in the security personnel: A quasi-experimental study
Prafull Kamble (HYDERABAD, India)

B 05-04 Effects of swimming exercise on levels of IL-7 and thymus tissue in rats fed an obesogenic diet
Orkide Palabiyik (Edirne, Turkey)

B 05-05 Immune cell mobilization after exhaustive exercise and their association with subjective mental state in young healthy adults: a randomized cross-over study
Frederike Adammek (Dortmund, Germany)

B 05-06 Activation of afferent vagal nerves by myokine leads to reflex efferent sympathoexcitation in mice
Mamoru Tanida (Uchinada, Japan)

B 05-07 Impact of running exercise on paretic skeletal muscle properties after unilateral brain injury in mice
Akira Yoshikawa (Yokohama, Japan)

B 05-08 Exercise-Enhanced Neurogenesis:A Potential Remedy for Malnourished Rat Brains
Hanna Goenawan (Bandung, Indonesia)

B 05-09 Study of the Association Between Happiness and Physical Fitness
Om Lata Bhagat (Jodhpur, India)

B 05-10 Affective States and Temporal Alterations in Women with Polycystic Ovary Syndrome During the Early Follicular Phase
Gülhan C. ?en (Edirne, Turkey)

B 05-11 Effect of overtraining on MoodandBlood-Brain Barrier
Hyo Youl Moon (Seoul, South Korea)

Friday, 12 September 2025, 18:00 - 19:30
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B 06 | HUMAN EXERCISE

Chairs:

Presentations:

B 06-02 Time-resolved characterization of cardiac sympathetic and parasympathetic indices: Applications to fetal-maternal interactions and brain-heart axis research
Diego Candia-Rivera (Paris, France)

B 06-03 GDF-15 is associated with age, not aerobic fitness, in lifelong trained individuals
Noemi A. Cherestes (London, UK)

B 06-04 Reproducibility of Cardiorespiratory Measures of Physical Conditioning Status in Inactive 55 – 65 Year Olds and their Relationships with Free Living Activity Measures.
Donald L. Peden (Nottingham, UK)

B 06-05 Mechanical efficiency of lower limb eccentric cycling
Beatrice Maspes (Brescia, Italy)

B 06-06 Cervical vestibular evoked myogenic potentials and proprioception in professional female volleyball players
Gülnur Öztürk (Edirne, Turkey)

B 06-07 Detection of Sleep Spindles as an Indicator of REM Sleep: A Comparative Study of Manual and Automated Analyses
Yukari Tamamoto (Osaka, Japan)

B 06-08 Prevalence and risk factors of Pre Sarcopenia among medical students in Surabaya: pre eliminary Study
Raden Roro Shinta Arisanti (Surabaya, Indonesia)

B 06-09 Cardiac autonomic nervous system flexibiliy in type 1 diabetes subjects compared to healthy peers, preliminary results
Nejka Poto?nik (Ljubljana, Slovenia)

B 06-10 The Effect of Aerobic Exercise in Various Intensities on the Modulation of IL-6 , IL-15, IGF-1 genes and The Histological Growth of Soleus Muscle in Low Protein diet Wistar Rats Model
Vita Murniati Tarawan (Bandung, Indonesia)

B 06-11 Suboptimal adaptations in the breathing pattern after fatigue onset: a novel take on the durability of endurance cyclists
Andrea Manca (Sassari, Italy)

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B 07 | INFLAMMATION: PATHWAYS AND THERAPIES

Chairs:

Presentations:

B 07-01 Olopatadine's Impact on Exocytosis in Rat Peritoneal Mast Cells: Countering Membrane Surface Changes
Itsuro Kazama (Taiwa-cho, Kurokawa-gun, Miyagi, Japan)

B 07-02 Brainstem control of the splanchnic anti-inflammatory pathway
Michael J. McKinley (Parkville, Australia)

B 07-03 Unveiling the Hidden Dangers: Chronic Doxorubicin Toxicity in the Rodent Pancreas—Can Ghrelin Be the Shield?
Balindiwe J. Sishi (Stellenbosch, South Africa)

B 07-04 Protective effects of gilaburu (*Viburnum opulus* L.) fruit extract on burn-induced lung and kidney injury in rats
Berna Karakoyun (Istanbul, Turkey)

B 07-05 Administration of Gas6 attenuates lung inflammation and fibrosis in bleomycin-induced lung injury
YeJi Lee (Seoul, South Korea)

B 07-06 *Cirsium japonicum* alleviates allergic nasal inflammation by regulating mucin production through NRF2-KEAP1 signaling pathway

Bo-Jeong Pyun (Daejeon, South Korea)

B 07-07 Impact of Phoenixin-14 on Fever, Inflammation, and Hematological Parameters in Lipopolysaccharide-Induced Liver Sepsis
Hümeyra Göçmen (Afyonkarahisar, Turkey)

B 07-08 Myeloid HIF-1a in urinary bladder infection and cancer
Clara Roggendorf (Essen, Germany)

B 07-09 From *in silico* studies to molecular determinants: purported α7-selective ligands interact with unconventional α9* nicotinic receptors to shape the immune function of mononuclear phagocytes
Mona Mobasher (Sankt Augustin, Germany)

B 07-10 Construction of PD-L1 nanobody-ferritin nanocarriers for tumor photodynamic immunotherapy
Xin Zhou (Taiyuan, China)

B 07-11 Metabolic profiling in guinea pig models of bacterial and allergic inflammation
Andrea Calkovska (Martin, Slovakia)

B 07-12 Activation-induced glutamic acid decarboxylase 67 (GAD67) expression and GABA secretion in T cells from healthy and type 1 diabetic individuals
Zhe Jin (Uppsala, Sweden)

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B 08 | METABOLISM

Chairs:

Presentations:

B 08-01 Sodium butyrate mitigates metabolic and endocrine deregulation in male Wistar rats following high fructose intake
Olabimpe C. Badejogbin (Ogun State, Nigeria)

B 08-03 Separate Compartmentalization of Adenylate Kinase and Creatine Kinase Indicates Distinct Roles in Cellular Energy Metabolism
Divya Shikha (Tallinn, Estonia)

B 08-04 The transcription factor WT1 is important for adipose tissue homeostasis
Helena Landstorfer (Berlin, Germany)

B 08-05 Exercise mitigates the metabolic imbalance induced by different forms of circadian disruption in mice
Cecilia González (Mexico City, Mexico)

B 08-06 P2X7 Receptor Deficiency Suppresses Adipogenesis and Promotes Browning of White Adipose Tissue to Improve Metabolic Dysfunction
Pin Rong Chen (Taipei, Taiwan)

B 08-07 The role of alternative splicing throughout the course of metabolic dysfunction-associated liver disease (MASLD)
Eirini Giannousi (Athens, Greece)

B 08-08 POMC neuron-specific mitochondrial methionyl-tRNA formyltransferase deficiency improves energy metabolism through enhanced sympathetic activity
Kyu-Sang Park (Wonju, South Korea)

B 08-09 *Neonatal oleanolic acid administration attenuates fructose-induced metabolic dysfunction–associated steatotic liver disease (MASLD) in female rats*
Trevor T. Nyakudya (Pretoria, South Africa)

B 08-10 The role of adipose tissue hypoxia and hypoxia inducible factor-1α in the etiology of cardiometabolic syndrome
Emmanuel O. Ademilusi (Ibadan, Nigeria)

B 08-11 Blocking neddylation induces adipocyte browning by UCP1 regulation
Geon Ho Moon (Seoul, South Korea)

B 08-12 Effects of Palmitoleic Acid on Glucose Uptake in Adipocytes from Women with Obesity and Prediabetes
Andressa Bolsoni-Lopes (Vitoria, Brazil)

B 08-13 Demystifying metabolic research in female rats
Hanel Sadie-Van Gijsen (Parow, South Africa)

B 08-14 Celastrol improves preference for a fatty acid, and Taste bud and systemic Inflammation in obese mice
Naim A. Khan (Dijon, France)

B 08-15 In-silico assessment of bioactive compounds from chewing stick (Salvadora persica) against N-acetylneuraminate lyase (5ZKA) of Fusobacterium nucleatum involved in salicyclic acid metabolism
Nisreen Daffa Alla (Riyadh, Saudi Arabia)

B 08-16 Taurine efflux counters the hydrodynamic impact of anaerobic metabolism to protect cardiorespiratory function under acute thermal stress in brook char (*Salvelinus fontinalis*)
Tyson MacCormack (Sackville, Canada)

B 08-17 Assessing human adipocyte bioenergetics as a tool for testing energy turnover enhancing drugs
Michaela Keuper (Stockholm, Sweden)

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B 09 | MODELLING AND ANALYSIS

Chairs:

Presentations:

B 09-01 Validation of Frequency Power Spectrum Analysis Parameters with a Heart Rate Mathematical Model
Sana Miyauchi (Osaka, Japan)

B 09-02 The relationship between autonomic nervous system activity and indexes of Tone-Entropy analysis through heart rate model based on point process
Hideo Nakamura (Osaka, Japan)

B 09-03 Resolving the bupivacaine-induced flicker-block of MaxiK channels
Efthymios Oikonomou (Erlangen, Germany)

B 09-04 Non-coding genetic variation contributes to cardiovascular physiology and pathology via disrupted RNA:DNA:DNA triple helix formation
Timothy Warwick (Frankfurt am Main, Germany)

B 09-05 Modeling the active and passive dynamics of confluent endothelial cells
Anselm Hohlstamm (Dresden, Germany)

B 09-06 The Microbiome Signature of the Placenta and its Role in Preterm Birth: A Systematic Review and 16s rRNA Re-Analysi
Francheska Sophia Dela Cruz (Manila, Philippines)

B 09-07 A Comparison of Different Isolation Methods for Urine-derived Epithelial Cells in Dogs and Horses
Linda Droessler (Berlin, Germany)

B 09-08 Gene expression alterations in neuroendocrine and cell death pathways in human pituitary gonadotroph tumors
Arif Kamil Salihoglu (Trabzon, Turkey)

B 09-09 Scalable Single-Cell Multiomics and AI Bridge Cellular Complexity to Clinics
Lan Jiang (Beijing, China)

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B 10 | SIGNALLING IN SKELETAL MUSCLE

Chairs:

Presentations:

B 10-01 *Running exercise reduces skeletal muscle expression of the histone writer EZH2: exploring Mdm2 dependent mechanisms.*
Pierre Lemieux (Toronto, Canada)

B 10-02 Absence of Parkin results in atrophy of oxidative myofibers and modulation of AKT and MURF1 signaling in middle-aged male mice
Isabela Divino (Limeira, Brazil)

B 10-03 Parkin alters myogenic markers during C2C12 differentiation and changes ubiquitination patterns of myosins in skeletal muscle in mice
Isabela A. Divino (Limeira, Brazil)

B 10-04 How UC-MSC Secretome Helps Heal Muscles: Early Findings from an Experimental Study
Aziiz M. Rosdianto (Jatinangor, Indonesia)

B 10-05 State-of-the-art fluorescent assessment of mitochondrial hydrogen peroxide as the mediator of rapid skeletal muscle loss under microgravity and during ageing on earth
Karolina Wikaryjczyk (Liverpool, UK)

B 10-06 Like physical activity, phlorotannin-enriched extracts protect against oxidative stress.
Anaïs Marandeau (Brest, France)

B 10-07 Repeated Botulinum toxin injections in the biceps brachiimuscle alter skeletal muscle at the histological andtranscriptomic level
Baptiste Jude (Stockholm, Sweden)

B 10-08 Mitochondrial Dysfunction and Muscle Atrophy Following Botulinum Toxin Type A Injection: Beyond Clinical/Cosmetic Purposes
Sonja Buvinic (Santiago, Chile)

B 10-09 Higher AMPK activation in mouse oxidative compared with glycolytic muscle does not correlate with LKB1 or CaMKKβ expression
Romain Bernasconi (Tallinn, Estonia)

B 10-10 S100A13 as a potential regulator of skeletal muscle metabolic response to exercise.
Clément Lanfranchi (1015, Switzerland)

B 10-11 Glycogenolytic derived ATP affects Cytosolic Free Calcium transients in Single Muscle Fibres
Niels Ørtenblad (Odense, Denmark)

B 10-12 Chronic activation of a key exercise signal transducer, CaMKII, drives skeletal muscle aging and sarcopenia
Qinchuan Wang (Baltimore, USA)

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B 11 | RENAL DRUG EFFECTS AND ASSESSMENT

Chairs:

Presentations:

B 11-01 Deep Visual Proteomic Assessment of Proximal Tubule Dysfunction During Diabetic Nephropathy
Xiang Zheng (Aarhus, Denmark)

B 11-02 Renoprotective Effects of Phoenixin-14 and Dexamethasone in a Lipopolysaccharide-Induced Sepsis Model: A Comparative Study
Özden Kutlay (Afyonkarahisar, Turkey)

B 11-03 The role of LAPTM5 in chronic kidney disease-associated dyslipidemia
Kristine Aarup (Aarhus, Denmark)

B 11-04 RNF130 ameliorates renal injury and inflammation by inhibiting macrophage pyroptosis through ubiquitination degradation of PDCD4
Qing-Bo Lu (Wuxi, China)

B 11-05 The Protective Potential of Tannic Acid Against Renal Proximal Tubular Cell Damage Induced by Amine-Modified Polystyrene Nanoplastics
Ameena Benchamana (Narathiwat, Thailand)

B 11-06 Prevention of Acute Kidney Injury (AKI) by maintaining Na/K pump activity
Ruisheng Liu (Tampa, USA)

B 11-07 V1a receptor agonist reduces bacterial burden in a murine model of ascending urinary tract infection
Johanna Hornhaver (Aarhus, Denmark)

B 11-08 PHD Inhibition Attenuates Anemia and Vascular Rarefaction in Cyclosporine-A–Induced Kidney Injury.
Robert Labes (Berlin, Germany)

B 11-09 Differential Renal Response to Calcimimetics in FVB/N and C57BL/6J Mice: Implications for CASR-Mediated Claudin-14 Activation.
Angele Frisdal (Odense M, Denmark)

B 11-10 the improvement of kidney function in bbs patients by mc4r/mc1r-agonist setmelanotide might be caused by direct affects in the kidney
Johannes Jägers (Essen, Germany)

B 11-11 Plasma microfibrillar-associated protein 4 is not associated with renal fibrosis but is depressed by mineralocorticoid receptor antagonism
Marie L.C. Bach (Odense M, Denmark)

B 11-12 Distal TRPV5-Mediated Calcium Reabsorption Contributes to Hypocalciuria Induced by Thiazide Diuretics
Jessica Bahena Lopez (Portland, USA)

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B 12 | OVARIES AND MALE REPRODUCTIVE FUNCTION

Chairs:

Presentations:

B 12-01 Mechanisms and Synergistic Effects of Combined Astaxanthin and Curcumin Treatment on Ovarian Function in PCOS Mice
Limin Yue (Chengdu, China)

B 12-02 "DECODING THE SPEXIN-INSULIN RESISTANCE AXIS: IMPLICATIONS FOR METABOLIC DYSFUNCTION IN POLYCYSTIC OVARIAN SYNDROME"
Maryam Rao (LAHORE, Pakistan)

B 12-04 Quantitative Evaluation of Bioactive Compounds in Garlic (Allium sativum) and Their Role in Reproductive Hormone Modulation in Wistar Rats
Anwuli J. Ogbe (Benin, Nigeria)

B 12-05 Investigating the Impact of Moringa oleifera Leaf Extract on Postnatal Development and its Molecular Interactions with Glucocorticoid Receptors in the Context of Gestational Stress
Odochi Chukwu (Abakaliki, Nigeria)

B 12-06 Exploring the Relationship Between Anxiety and Male Reproductive Function
Bongekile Skosana (Cape Town, South Africa)

B 12-07 Cypermethrin Disrupts Male Gonadal Function via Oxidative Stress, Inflammation, Apoptosis, Disruption of Autophagy and Perturbation of Blood-Testis Barrier Proteins: A Protective Role for Rutin
Olusola A. Ayegboyin (Ibadan, Nigeria)

B 12-08 Hypoxia impairs male reproductive functions via inducing rat Leydig cell ferroptosis under simulated environment at altitude of 5000 m
Chengli Xu (Beijing, China)

B 12-09 The effect of nobiletin on sperm quality in male rats with renovascular hypertension
Petcharat Chiangsaen (Bangkok, Thailand)

B 12-10 Function and cellular trafficking of mammalian voltage-sensitive phosphatase (VSP) is regulated by association with basigin
Vijay Renigunta (Marburg, Germany)

B 12-11 Modular Sexual Activity Index (mSAI): An AI-Optimized Composite Metric for Male Rat Sexual Behavior
Mehmet Ridvan Ozdede (Konya, Turkey)

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B 13 | AIRWAYS AND LUNG CELLS

Chairs:

Presentations:

B 13-01 Role of FAAH in the regulation of lung function in asthma bronchiale
Cara Münter (Bochum, Germany)

B 13-02 Role of 2-arachidonoylglycerol (2-AG) and arachidonic acid (AA) in airway tone regulation
Annika Simon (Bochum, Germany)

B 13-03 Calcium-dependent regulation of mucin secretion in airway epithelia
Giorgio Fois (Ulm, Germany)

B 13-04 Bile acid releasing from senolytic targeted senescent myofibroblasts promotes alveolar regeneration in lung fibrosis
Yan Zhou (changsha, China)

B 13-05 Identification of the core exocytic machinery for surfactant secretion in type II alveolar epithelial cells
Hongyu Miao (Ulm, Germany)

B 13-06 The cystic fibrosis transmembrane conductance regulator (CFTR) potentiator ivacaftor stabilizes endothelial CFTR in lung infection
Caihong Li (Berlin, Germany)

B 13-07 Contribution of Pulmonary Vascular Alterations in Emphysema Development and Alveolar Repair
Danielle Fomferra (Gießen, Germany)

B 13-08 Characterization of the Mucin Secretion Machinery in Human Airway Epithelial Cells
Veronika Neubauer (Ulm, Germany)

B 13-09 From Injury to Fibrosis: Identifying Epithelial Drivers of Fibroblast Activation in IPF
Susanne Wespel (Ulm, Germany)

B 13-10 Ethanol alters e-liquid physicochemical properties, toxicity, and nicotine deposition.
Matthew G.S. Biggart (KANSAS CITY, USA)

B 13-11 Dysregulation of the CEACAM6/HO-1 axis drives oxidative stress, inflammation, and pulmonary vascular alterations in COPD
Henrike Treis (Gießen, Germany)

B 13-12 Single-Cell Transcriptomics Reveals Stem Cell-Derived Exosomes Attenuate Inflammatory Gene Expression in Pulmonary Oxygen Toxicity
Jing Shi (Shang Hai, China)

B 13-13 Arachidonic Acid Triggers GPR40-Mediated Calcium Signaling and NO-Dependent ROS Production in Pulmonary Fibroblasts: Implications for Fibrotic Remodeling
Roberto Berra Romani (Puebla, Mexico)

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B 14 | MICROVESSELS, NEOVASCULARIZATION AND ANGIOGENESIS

Chairs:

Presentations:

B 14-01 Significance and therapeutic potential of microvascular natriuretic peptides/cGMP/cGMP-dependent protein kinase signaling in vascular development and regeneration
Zihou Liu (Würzburg, Germany)

B 14-02 The effect of acute hyperglycemia on skin microvascular reactivity in healthy young humans: Exploring endothelial and smooth muscle responses through an integrated approach
Lana Kralj (Ljubljana, Slovenia)

B 14-03 Therapeutic potential of colchicine in coronary microvascular dysfunction: mechanistic insights from human and rat arteries
Jessica L. Meades (Copenhagen, Denmark)

B 14-04 Alanine mutation of myosin light chain targeting subunit MYPT1 –T696 prevents development of age-dependent hyper contractile phenotypes in pre-glomerular intrarenal arterieries
Nikola R. Lazarov (Varna, Bulgaria)

B 14-05 Regulation of vascular tone of pre-glomerular vasculature by caldesmon
Viktor V. Velyanov (Varna, Bulgaria)

B 14-06 Ribosomal protein S6 kinase 2 contributes to vasoconstriction in small human arteries
Olaf Grisk (Neuruppin, Germany)

B 14-07 Short exposure to hypergravity induce a fine alteration of blood brain barrier in mice.
David Dubayle (Paris, France)

B 14-08 Developing an *in vitro* model to assess Particulate Matter effects on the Blood-Brain Barrier
Fátima Gimeno-Ferrer (Augsburg, Germany)

B 14-09 Semaphorin 3A Protects Against Thoracic Aortic Aneurysm Dissection by Suppressing Aortic Angiogenesis
Jimin Cao (Taiyuan, China)

B 14-10 CD117 knockdown reduces melanoma-induced neovascularization through S6RP and PRAS
Peace Mabeta-Zwane (Pretoria, South Africa)

B 14-11 Extracellular vesicles from stem cells and macrophages act synergistically in angiogenesis
Dong Liu (Atlanta, USA)

B 14-12 Microvascular Alterations in Psoriasis and Atopic Dermatitis evaluated by Optical Coherence Tomography Angiography
Michael Pedersen (Aarhus N, Denmark)

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B 15 | PERIPARTAL VASCULAR ALTERATIONS, REMODELLING

Chairs:

Presentations:

B 15-01 Assessment of Aortic Stiffness in Women with Ovarian Endometriosis
Shantilata Majhi (New Delhi, India)

B 15-02 Preeclamptic placental extracellular vesicles permanently alter vascular function in postpartum spontaneously hypertensive rats
Sophie I.M. Piesse (Auckland, New Zealand)

B 15-03 Sex-Specific Alterations in Offspring Cerebral Arteries Following Maternal BPA Exposure
Maurizio Mandala (Rende (CS), Italy)

B 15-04 Long-term cardiovascular consequences of pregnancy in a rat model: a role for placental extracellular vesicles
Carolyn J. Barrett (Auckland, New Zealand)

B 15-05 Characterizing the short-term cardiovascular response to placental extracellular vesicles from preeclampsia in the pregnant mouse
Sien Yee S. Lau (Auckland, New Zealand)

B 15-06 Postpartum Vascular Dysfunction Is Associated with Blunted S-Nitrosylation of Connexin 43 Hemichannels
Veronica A. Kuzdowicz (Newark, USA)

B 15-07 Impact of hormonal contraceptives on cardiovascular, lipid, and inflammatory markers in young women across menstrual cycle phases
Xenie Budínská (Brno, Czech Republic)

B 15-08 Gestational diabetes mellitus impairs vascular function in fetal placental vessels
Nils Ankenbrand (Dresden, Germany)

B 15-10 The consumption of a high-refined carbohydrate diet for fifteen days reduces vascular reactivity in male rats.
Karoline Neumann (Vióría -ES, Brazil)

B 15-11 From macrophage infiltration to vascular remodeling: Early events in cigarette smoke induced pulmonary hypertension
Vinita Sharma (Giessen, Germany)

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B 16 | MOTOR SYSTEMS, PERCEPTION, AND MEMORY

Chairs:

Presentations:

B 16-01 *In vivo* awake Neuropixels recordings of putative dopamine neurons in the substantia nigra reveal distinct firing patterns related to movement
Yingning Lu (Frankfurt, Germany)

B 16-02 Regular exercise increases NAD+ levels in aging mice's skeletal muscle and brain to affect cognitive function.
Jimmy Kim (Chiba, Japan)

B 16-03 Patch Me If You Can*: Neural and Behavioral Correlates of Exploratory Decision-Making in a Probabilistic Foraging Paradigm Across Species*
Max F. Happel (Magdeburg, Germany)

B 16-04 CDP-choline and/or uridine monophosphate improve behavioral outcomes by altering synaptic proteins and neurotransmitter levels
Derya Oktay (Istanbul, Turkey)

B 16-05 To Move Or Not To Move – The contribution of dopamine substantia nigra neurons to voluntary movement
Daniela Schenkel (Frankfurt am Main, Germany)

B 16-06 Olfaction is required for social synchronization of wheel-running activity in rats
Ko Yamanaka (Inzai, Japan)

B 16-07 Sleep (in)-dependency of motor learning, recent memory and gist abstraction in a complex wheel running task
Farzin Kamari (Tübingen, Germany)

B 16-09 Neural mechanism underlying a feeling of happiness and lack of fear in the near-death experience: Neurophysiological findings in dying rats
Mariana Graca Santos (Seoul, South Korea)

B 16-10 Representational geometry of pulsed sound stimuli in the auditory cortex explains perceptual decision-making in mice
Johannes P.-H. Seiler (Mainz, Germany)

B 16-11 Cognitive Skills Assessment in Deaf & Hard of Hearing School Children
Madhusudhan Umesh (Hyderabad, India)

B 16-12 “GABAergic Modulation of Dynamic Auditory Arousal Threshold in Drosophila”
Johannes Wibroe (Berlin, Germany)

B 16-13 Age and strain-dependent effects on spatial appetitive learning, extinction learning, and renewal in mice
Jiaoru Liu (Bochum, Germany)

B 16-14 Object Coding in the Dentate Gyrus during Novel Object Recognition
Vladimir Zavialov (Basel, Switzerland)

B 16-15 Impact of astroglial GABAB receptor deletion on L-DOPA-induced dyskinesia in a mouse model of Parkinson’s disease
Mariza Bortolanza (Homburg, Germany)

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B 17 | MECHANISMS OF NEUROLOGICAL DISEASES

Chairs:

Presentations:

B 17-01 Surface Modification of Extracellular Vesicles from Adipose-Derived Stem Cells for Targeting Brain Delivery and Treatment of Neuroinflammation
SoHui Kim (Seoul, South Korea)

B 17-02 Testing the efficacy of b-lactam antibiotic ceftriaxone in attenuating cannabis-induced motor impairment. Pre-clinical study.
Yasser El-Wazir (Ismailia, Egypt)

B 17-03 Toxic gain-of-function in *CLCN3* variants is the primary molecular defect causing the disease in the *CLCN3*-related condition
Abraham Tettey-Matey (Genoa, Italy)

B 17-04 Discovery of a novel dual-action small molecule that improves multiple Alzheimer's disease pathologies
Kang Ho Park (Daegu, South Korea)

B 17-05 Anti-inflammatory treatment with Fingolimod or Ozanimod starting after onset of disease symptoms reverses synaptic spine and memory deficits in an Alzheimer disease APP/PS1 mouse model
Volkmar Lessmann (Magdeburg, Germany)

B 17-06 Network-wide modulation of synaptic plasticity and spike patterns in motor circuits after pallidal deep brain stimulation in a dystonia model
Denise Franz (Rostock, Germany)

B 17-07 Involvement of inwardly rectifying K^+ channel, Kir2.1, in the susceptibility of chronic stress-induced depression-like behavior.
Masayoshi Okada (Kurashiki, Japan)

B 17-08 Astrocytic and Endothelial Consequences of CCM3/PDCD10 Deficiency: Disrupted Neurovascular Signaling in Epileptic Seizure Pathogenesis
Pei-Chien Hsu (Taipei, Taiwan)

B 17-09 Dopamine receptor D2 on CD4+ T cells is protective against neuroinflammation and neurodegeneration in a mouse model of Parkinson's disease
Yan Huang (Nantong, China)

B 17-10 Sex differences in the effects of early life stressors in a rat model of myofascial low back pain
Deepika Singhal (Mannheim, Germany)

B 17-11 Immunotherapy targeting plasma ASM is protective in a mouse model of Alzheimer's disease
Wan Hui Han (Daegu, South Korea)

B 17-12 Downregulation of CTCF ameliorates tau-induced deficits in *Drosophila melanogaster*
Sung Yeon Park (Seoul, South Korea)

B 17-13 Modulation of the glymphatic system by Aβ antagonism in APP/PS1 mice
Feng-Shiun Shie (Zhunan, Miaoli County, Taiwan)

B 17-14 Fecal microbiota transplantation reconstituted with lycium barbarum glycopeptide alleviates motor dysfunction and neuroinflammation in rotenone-induced Parkinson's disease mice
Guanghua Li (Yinchuan, China)

B 17-15 Unraveling the novel role of Gadd45a in the etiology of autism: Recruiting Tet1 to modulateneuronalexcitability via R-loop dependentregulation of Kcnq5
Ying Zhang (chengdu, China)

B 17-16 Electrophysiological profiling of genetically modified iPSC neurons modeling frontotemporal dementia via automated patch clamp: ion channel and action potential differences
Eliška Waloschková (Ballerup, Denmark)

B 17-17 Korean Red Ginseng Enhances Adult Hippocampal Neurogenesis and Cognitive Function in Mice
Jieun Seo (Yangsan-si, Gyeongsangnam-do, South Korea)

B 17-18 Sexually dimorphic mechanism of neuropathic pain regulated by the circadian clock gene *Per2*
Wakaba Yamakawa (Fukuoka, Japan)

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B 18 | CELLULAR BASES OF DISEASES I

Chairs:

Presentations:

B 18-01 Alisertib suppresses the proliferation of acute myeloid leukemia cells via the STAT3/Myc signaling pathway
Pang-Ting Cheng (Taichung, Taiwan)

B 18-02 *In Vitro* Study of *Hypericum scabrum* L. Extracts for Promoting Fibroblast Proliferation in Wound Healing
Seymanur Yilmaz Tasci (Istanbul, Turkey)

B 18-03 Regulatory Role of *Antrodia salmonea* Extract on STAT3-Mediated EMT and Cancer Stemness in Human Prostate Cancer
Ayse Celik (Taichung, Taiwan)

B 18-04 Implication of the 'Hes3 Signaling Axis' in MASH-related hepatocellular carcinoma
Grigorios Papadopoulos (Goudi, Greece)

B 18-05 CDK5-AR Signaling Contributes to Oral Squamous Cell Carcinoma Progression
Yu-Chiao Cheng (Taichung, Taiwan)

B 18-06 The *in vitro* effects of kynurenine metabolites and a chemokine inhibitor CTCE-9908 on cell adhesion in B16-F10 melanoma and sEnd-2 endothelioma cells and the *in vivo* effect in C57BL/6 mice
Sandra Tatchum (Pretoria, South Africa)

B 18-07 The Role of Phoenixin-14 in Cell Proliferation on Breast and Uterine Cancer Cell Lines
Leyla Semiha ?en (?stanbul, Turkey)

B 18-08 Altered microglial morphology, phagocytic activity and synaptic engulfment in a mouse model of KCNA2-related Developmental and Epileptic Encephalopathy
Nikolaos Vassiliadis (Tübingen, Germany)

B 18-09 Lactoferrin targeting INTL1 receptor inhibits hepatocellular carcinoma progression via apoptosis and cell cycle signaling pathways
Abdulkadir Cidem (Taichung, Taiwan)

B 18-10 Investigation of the Anticancer Effects of Combined Therapy with Liraglutide and Metformin on Lung Cancer A549 Cells
Tülay Akan (Afyonkarahisar, Turkey)

B 18-11 Extracellular Vesicles Released by the Gut Microbiota Influence Blood Pressure of the Spontaneously Hypertensive Stroke Prone Rat
David Durgan (Houston, USA)

B 18-12 Preliminary study on the effects of Qi-tonifying herbs in Parkinson's disease-induced cellular and animal models
Hee-young Kim (Yangsan-si, Gyeongsangnam-do, South Korea)

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B 19 | CELLULAR BASES OF DISEASES II

Chairs:

Presentations:

B 19-01 Intracellular localization of $K_{Ca}2.1$ in Ewing sarcoma
Zoltán Peth? (Münster, Germany)

B 19-02 JHDM Suppresses Breast Cancer Bone Metastasis by Modulating Tumor-Bone Microenvironment
Min Young Lee (Seoul, South Korea)

B 19-03 Live imaging of physicochemical gradients in pancreatic tumor spheroids
Sofie C. Holste (Copenhagen, Denmark)

B 19-04 The Effects of Umbilical Cord Mesenchymal Stem Cell Exosomes and Hyperglycemic Environment on an In Vitro Wound Healing Model Created with Human Keratinocytes
Furkan P. Diriarin (?stanbul, Turkey)

B 19-05 The *in-vitro* effects of MAZ-51 and zingerone on melanoma cell proliferation
Kganya Letsoalo (Pretoria, South Africa)

B 19-06 Effects on lipid peroxidation associated genes of 4-hydroxynonenal in human colon cancer cell lines
Arif Kamil Salihoglu (Trabzon, Turkey)

B 19-07 The Role of Neuropeptide W Overexpression on Pancreatic Cancer Cell Behaviour
Hande Yapislar (Istanbul, Turkey)

B 19-08 Effects Of Hexokinase Inhibitor, Boric Acid and Their Combinations On Colorectal Cancer Cells
Gizem E. Koç (-, Turkey)

B 19-09 Neddylation-mediated regulation of bone cell differentiation in postmenopausal osteoporosis counteracted by dual-targeted therapy
Min Yong Lee (Seoul, South Korea)

B 19-10 Investigating the Role of PHF2 in Hepatocellular Carcinoma Through Proteomic Profiling of Its Interacting Partners
Hye-Joon Park (Seoul, South Korea)

B 19-11 Exploring the impact of dual use of electronic and combustible cigarettes on the development of emphysema and pulmonary hypertension in mice
Derrick Opoku (GIEßEN, Germany)

B 19-12 Oxidative stress in diabetes and ferroptosis: studies in rat models and future directions
Savina Shtereva (Stara Zagora, Bulgaria)

B 19-13 Nilco interaction may play an important role in the progresson of colorectal cancer
Mete Ozkurt (Eski?ehir, Turkey)

B 19-14 Phenotypic spectrum of *CLCN6*-associated neurological disease
Maya M. Polovitskaya (Berlin, Germany)

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

B 20 | PHYSIOLOGY OF CALCIUM CHANNELS AND CALCIUM-DEPENDENT CHANNELS

Chairs:

Presentations:

B 20-01 A novel state-dependent inhibitor selective for $Ca_V2.1$ reverses the hiperactivity of neuronal networks from Hemiplegic Migraine mouse model
José M. Fernández Fernández (Barcelona, Spain)

B 20-02 PHARMACOLOGICAL MODULATION OF $Ca_V2.1$ N-GLYCOSYLATION TO REVERT PATHOLOGICAL GAIN OF CHANNEL FUNCTION
Gorane Rodriguez Urquirizar (Barcelona, Spain)

B 20-03 Hydrophobic interactions between LINGO2 and BK channel pore residues regulate inactivation.
Zainab R. Baig (Dundalk, Ireland)

B 20-04 Effect of mutating F315 in the BK channel pore on LINGO-induced inactivation.
Sai N. Palakurthy (Dundalk, Ireland)

B 20-05 The BK channel (hSlo) mutation K392E responsible for paroxysmal dyskinesia uncouples voltage sensor activation from pore opening
Kaneez E Rabab (Dundalk, Ireland)

B 20-06 The architecture of the cortical endoplasmic reticulum supports Ca^{2+} tunneling.
Raphael Courjaret (Doha, Qatar)

B 20-07 Ca^{2+} channelopathy-associated *CACNA1D* (Cav1.3) missense variants exert a C-terminal-mediated dominant effect on channel gating
Horia C. Hermenean (Innsbruck, Austria)

B 20-08 Vascular smooth muscle BK channels limit ouabain-induced vasocontraction
Anastasia Pyanova (Augsburg, Germany)

B 20-09 Assessment of BK_{Ca} Mutations and Openers with Genetically Encoded Voltage Sensors
Rama Hussein (Jena, Germany)

B 20-10 Targeting mito$K_{Ca}3.1$ channel in non-small cell lung cancer cells
Héctor Noguera Hurtado (Münster, Germany)

B 20-11 Thyroid Hormones Induce Ca^{2+}-Dependent K^+ Currents via GPCR-Mediated Signaling in Human Thyroid Epithelial Cells
Lu Qin (52074 Aachen, Germany)

Friday, 12 September 2025, 18:00 - 19:30
Room(s): Foyer

B 21 | PHYSIOLOGY OF TRANSPORTS

Chairs:

Presentations:

B 21-01 Dissecting substrate usage and transport modes of human and mouse SLC26A6
Annalisa Questino (Marburg, Germany)

B 21-02 Exploring lysosomal ion channels and transporters using high-throughput electrophysiology
Alison Obergrussberger (Munich, Germany)

B 21-03 Proton selective conductance and gating of lysosomal cation channel TMEM175
Oliver Rauh (Darmstadt, Germany)

B 21-04 Projection-specific uni-directional organisation of dendritic dopamine transmission in the midbrain
Niklas Hammer (Frankfurt am Main, Germany)

B 21-05 An integrated electrophysiological and morphological pipeline to assess mutation-specific CFTR therapy in primary human airway cultures
Roshani N. Singh (Muenster, Germany)

B 21-06 Potassium binding top the Na^+-dependent amino acid exchanger ASCT2
Joel Porto (Jülich, Germany)

B 21-07 Transport mechanism of DgoT, a bacterial homolog of SLC17 organic anion transporters
Natalia Dmitrieva (Jülich, Germany)

B 21-08 Alterations of tight junction network structure and paracellular permeability by coexpression of claudin-4+8 or claudin-16+19
Ioanna Pouyiourou (Berlin, Germany)

B 21-09 BASIC – a possible regulator of fasting responses and the lipid metabolism in mouse hepatocytes
Dominik Wiemuth (Aachen, Germany)

B 21-10 Rescue of APOE4-induced alterations to neuronal function with clinicaly relevent NMDAR antagonists
Oliver G. Steele (Falmer, UK)

B 21-11 Aquaporin-3 Overexpression Promotes E-Cadherin Enrichment at the Cell Membrane
Catarina Pimpão (Aarhus N, Denmark)

B 21-12 The C-terminus of polycystin-2 is not required for the formation of functional homomeric ion channels but is critical for polycystin-2/polycystin-1 heteromerisation
Bardha Azemi (Erlangen, Germany)

B 21-13 Cells of the human colonic cell line CaCo-2 express a conductance to acetate
Lara Riedemann (Potsdam, Germany)

B 21-14 Contribution of Claudin-10b to the transport properties of salivary glands
Evgeniya Kochina (Berlin, Germany)

Saturday, 13 September 2025, 8:00 - 9:25
Room(s): Horizont,Meridian,Mistral,Passat,Plateau,Satellit,Sirius,Solar

| Society Meetings

Chairs:

Presentations:

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Solar

OS 12 | Inflammation

Chairs:

Presentations:

9:35	OS 12-01	Heart-to-lung miscommunication: Role of phosphodiesterase 2A in pulmonary endothelial inflammation after myocardial infarction **Virta V. Wagde** (Würzburg, Germany)
9:50	OS 12-02	Unconventional α9 nicotinic acetylcholine receptors control the ATP-mediated cytokine release by macrophages **Katrin Richter** (Giessen, Germany)
10:05	OS 12-03	Decoding the neuroprotective capability of omega-3 polyunsaturated fatty acid derived metabolites in the context of brain inflammation, amyloid-beta oligomers and Alzheimer's disease using primary mouse hippocampal neuro-glial cell- and slice cultures **Christoph Rummel** (Gießen, Germany)
10:20	OS 12-04	Knockdown of the oxygen sensor FIH decreases TNF-α-mediated signaling in THP-1 monocytes and macrophages **Marleen S. Oswald** (Greifswald, Germany)
10:35	OS 12-05	Prenatal exposure to bacterial extracellular vesicles influences fetal gut immunity and immune programming **Manuel Jr S. Vidal** (Manila, Philippines)
10:50	OS 12-06	S-acylation enhances STIM1 translocation to the immune synapse, promoting T cell activation **Raphaël Néré** (Geneva, Switzerland)

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Satellit

OS 13 | Ion Channels and Transporters 1

Chairs:

Presentations:

9:35 OS 13-01 KCNQ-ENCODED VOLTAGE-GATED POTASSIUM 5 (Kv7.5) CHANNELS ARE MODULATED VIA α_1R-SIGNALLING
Mitchell Mercer (Dundalk, Ireland)

9:50 OS 13-02 Binding of PAP-1 to side pockets of open Kv1.3 channels causes a co-operative rearrangement of central cavity and pore dewettening
Aytug K. Kiper (Marburg, Germany)

10:05 OS 13-03 The antiepileptic cannabidiol inhibits the human cardiac Kv7.1 and Kv7.1/E1 channels through two distinct binding sites: Implications for channel-specific drug design
Michael Pökl (Linköping, Sweden)

10:20 OS 13-04 Natural xanthones (e.g. α-mangostin) mediate vasorelaxation via binding to key gating residues in the S6 domain of BK channels
Marianne Musinszki (Kiel, Germany)

10:35 OS 13-05 T- and L-Type Calcium Channels Maintain Calcium Oscillations in the Murine Zona Glomerulosa
Hoang A. Dinh (Berlin, Germany)

10:50 OS 13-06 L-type $Ca_v1.3$ (a_{1D}) and hyperpolarisation-activated “funny” (HCN) channels mediate heart rate acceleration by catecholamines.
Matteo E. Mangoni (Montpellier, France)

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Sirius

OS 14 | Cardiac Physiology

Chairs:

Presentations:

9:35 OS 14-01 Disturbances of cardiac bioenergetics in a diabetes associated HFpEF mouse model are characterized by substrate-specific alterations in myocardial metabolism
Andre Heinen (Düsseldorf, Germany)

9:50 OS 14-02 A novel approach for multiplexed imaging of Ca^{2+} signals in different intracellular compartments
Ursa Maity (Göttingen, Germany)

10:05 OS 14-03 Cardiomyocyte peroxisome proliferator-activated receptor α protects against heart failure with preserved ejection fraction by reducing ferroptosis
Aijuan Qu (Beijing, China)

10:20 OS 14-04 Large-scale quantification of cardiomyocyte size across heart cryosections using Deep-Learning based image analysis.
Guillaume Gilbert (Brest, France)

10:35 OS 14-05 Reproductive senescence in females triggers persistent cardiac sympathoexcitation through the activation of brainstem pre-sympathetic C1 neurons
Karla G. Schwarz (Santiago, Chile)

10:50 OS 14-06 Distinct effects of PDE5 inhibition on cGMP and calcium signaling in human atrial myocytes from patients in sinus rhythm *versus* atrial fibrillation
David Revuelta (Hamburg, Germany)

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Mistral

OS 15 | Kidney and Vessels

Chairs:

Presentations:

9:35 OS 15-01 Renal vascular remodeling in diabetic nephropathy
Anders M. Kristensen (Aarhus, Denmark)

9:50 OS 15-02 Impaired pressure natriuresis, abnormal diurnal sodium excretion and non-dipping blood pressure in a mouse model of Cushing syndrome
Matthew A. Bailey (Edinburgh, UK)

10:05 OS 15-03 Endothelial ANP/GC-A signaling is critically involved in acute ANP-induced stimulation of natriuresis and the regulation of renal blood flow
Elena-Sofia Heinl (Regensburg, Germany)

10:20 OS 15-04 A novel and dynamic endothelial derived cell type in the kidney
Isabela Bastos Binotti Abreu de Araujo (Aarhus, Denmark)

10:35 OS 15-05 Harnessing Renal Microvascular Function for Therapeutic Advancement: The Potential of sGC Activators
Minze Xu (Berlin, Germany)

10:50 OS 15-06 SGLT-2 inhibitor empagliflozin increases alternative complement activation in patients with diabetes and chronic kidney disease
Mia Jensen (Odense, Denmark)

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Plateau

S 12 | Multimodal Communications Between Astrocytes and Heterogeneous Cell Types in the Cerebral Cortex

Chairs:

Presentations:

9:35	S 12-01	Control of dendritic computation by astrocytic D-serine and glycine signaling **Christian Henneberger** (Bonn, Germany)
10:05	S 12-02	Astrocyte Ca^{2+} activity and adenosine signalling regulate myelinated axon function. **Jonathan Lezmy** (London, UK)
10:20	S 12-03	Astrocytes control neuronal activity by modulating extracellular ion concentrations **Verena Untiet** (Copenhagen, Denmark)
10:35	S 12-04	Dorsal raphe astrocytes promote social bonding **Gertrudis Perea** (Madrid, Spain)

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Passat

S 13 | Mechanisms and Functions of Gas Permeation across Membranes

Chairs:

Presentations:

9:35 S 13-01 Determinants of CO_2 and O_2 permeability in biological membranes.
Samer Al-Samir (Hannover, Germany)

10:00 S 13-02 CO_2 and HCO_3^- movements remarkably support gas secretion in the fish swimbladder
Bernd Pelster (Innsbruck, Austria)

10:25 S 13-03 Changes in red cell shape and metabolic status can impair oxygen release kinetics in stored blood and anaemias, leading to diffusion-limited oxygen exchange at systemic capillaries
Pawel Swietach (Oxford, UK)

10:50 S 13-04 Mechanism of CO_2 and NH_3 Transport through Human Aquaporin 1: Evidence for Parallel CO_2 Pathways
Raif Musa-Aziz (Sao Paulo, Brazil)

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Meridian

S 14 | Gastrointestinal Hormones and the Gut Kidney Axis

Chairs:

Presentations:

9:35	S 14-01	N.N.
10:05	S 14-02	Secretin Lowers GFR and Urinary Output via Efferent Arteriolar Vasodilation **Peder Berg** (Aarhus, Denmark)
10:20	S 14-03	Physiological quantification of gastrointestinal hormones and their mechanisms of release **Ida M. Modvig** (Copenhagen, Denmark)
10:35	S 14-04	Appetite-regulating GPR39 agonist reduces renal urinary concentration capacity by interfering with AVP-induced AQP2 trafficking **Helle Praetorius** (Aarhus, Denmark)

Saturday, 13 September 2025, 9:35 - 11:05
Room(s): Horizont

S 15 | Body Rhythms and Metabolic Aging

Chairs:

Presentations:

9:35 S 15-01 Chrono-Exercise and Metabolic Health: Time-Dependent Mechanisms in Exercise
Juleen R. Zierath (Stockholm, Sweden)

10:05 S 15-02 Insights into Islet Circadian Regulation: BMAL1-driven transcriptional landscape in mice and humans
Georgia Katsioudi (Geneva, Switzerland)

10:20 S 15-03 Aerobic exercise and time-restricted feeding restore clock mechanisms in periphery and improve metabolic health in mice fed with high-fat diet
Ghulam Shere Raza (Oulu, Finland)

10:35 S 15-04 Thermogenic Regulation of Health by Time Restricted Feeding
Joseph Bass (Chicago, USA)

Saturday, 13 September 2025, 11:15 - 12:00
Room(s): Meridian

SL 05 | Decoding Life: How Claudin-based Tight Junctions Shape Biological Systems

Chairs:

Presentations:

11:15 SL 05 Decoding Life : How Claudin-based Tight Junctions Shape Biological Systems
Sachiko Tsukita (Tokyo, Japan)

Saturday, 13 September 2025, 11:15 - 12:00
Room(s): Horizont

SL 06 | Sex differences in lung physiology

Chairs:

Presentations:

11:15 SL 06 Sex Differences in Lung Physiology
Patricia Silveyra (Bloomington, USA)

Saturday, 13 September 2025, 12:00 - 13:30
Room(s): Foyer

| Lunch Break

Chairs:

Presentations:

Saturday, 13 September 2025, 12:15 - 13:15
Room(s): Plateau

I | Industry Workshop - AIBODY - Virtual patients for learning physiology

Chairs:

Presentations:

Saturday, 13 September 2025, 13:30 - 14:30
Room(s): Horizont

PL 02 | Nobel Laureate Lecture

Chairs:

Presentations:

13:30 PL 02 Molecule-scale resolution and dynamics in fluorescence microscopy
Stefan W. Hell (Göttingen, Germany)

Saturday, 13 September 2025, 14:40 - 15:10
Room(s): Plateau

KL 13 | The Scandinavian Physiological Society Christian Bohr Prize Lecture

Chairs:

Presentations:

14:40 KL 13 pH Regulation Physiology and Gas Transport
Walter Boron (Cleveland, USA)

Saturday, 13 September 2025, 14:40 - 15:10
Room(s): Passat

KL 14 | A Unique Coding of Memories in the Human Hippocampus

Chairs:

Presentations:

14:40 KL 14 A unique coding of memories in the human hippocampus
Rodrigo Quian Quiroga (Barcelona, Spain)

Saturday, 13 September 2025, 14:40 - 15:10
Room(s): Meridian

KL 15 | Mechanisms underlying basal ganglia flexibility

Chairs:

Presentations:

14:40 KL 15 Striatal alterations in structural and functional plasticity in neurodevelopmental disorders
Claudia Bagni (Lausanne, Switzerland)

Saturday, 13 September 2025, 14:40 - 15:10
Room(s): Horizont

KL 16 | The Physiological Society Bayliss-Starling Prize Lecture

Chairs:

Presentations:

14:40 KL 16 *Defining mechanisms of blood-brain barrier dysfunction in neurodegenerative diseases using advanced organ-on-a-chip models*
Mootaz Salman (Oxford, UK)

Saturday, 13 September 2025, 15:10 - 15:40
Room(s): Foyer

| Coffee Break

Chairs:

Presentations:

Saturday, 13 September 2025, 15:40 - 17:10
Room(s): Solar

OS 16 | Sensory Systems

Chairs:

Presentations:

15:40 OS 16-01 Identification of TMEM145 as a principal component of outer hair cell stereocilia
Dennis Derstroff (Marburg, Germany)

15:55 OS 16-02 Protein profile of a unique extracellular solution, endolymph, suggests its role in controlling cochlear homeostasis in the inner ear
Hiroshi Hibino (Osaka, Japan)

16:10 OS 16-03 The ubiquitin-proteasome system (UPS) offers novel potential therapeutic targets for Pendred syndrome/non-syndromic deafness DFNB4
Silvia Dossena (Salzburg, Austria)

16:25 OS 16-04 Microelectrode recordings from cutaneous afferents in the sole of the foot during unsupported standing in humans
Vaughan G. Macefield (Melbourne, Australia)

16:40 OS 16-05 The Effect of Repetitive Transcranial Magnetic Stimulation (rTMS) on the Pain Status, Disability & Corticomotor Excitability in Chronic Low Back Ache (CLBP)Patients
Santosh L. Wakode (Bhopal, India)

16:55 OS 16-06 Presynaptic maturation of inhibitory connections towards vasoactive intestinal polypeptide-expressing GABAergic interneurons in the mouse barrel field
Clara A. Simacek (Mainz, Germany)

Saturday, 13 September 2025, 15:40 - 17:10
Room(s): Satellit

OS 17 | Cellular and Molecular Physiology 2

Chairs:

Presentations:

15:40 OS 17-01 Role of reactive oxygen species in declining mitochondrial structure and mitochondrial distribution with musculoskeletal ageing
Samrajni Banerjee (Liverpool, UK)

15:55 OS 17-02 Alterations in lipid metabolism and mitochondrial functions in histone methyltransferase gene *Kmt2c* mutant mice
Kazuki Harada (Komaba, Meguro, Tokyo, Japan)

16:10 OS 17-03 The inflammation-regulated microprotein miP-FERMT3 localizes to centriole subdistal appendages and regulates cell cycle progression
Manav Raheja (Frankfurt am main, Germany)

16:25 OS 17-04 Effects of 15-deoxy-$\Delta^{12,14}$-prostaglandin J_2on type 1 T-helper cell differentiation and activity
Katharina Glosse (Heidelberg, Germany)

16:40 OS 17-05 Glucocorticoid-induced disruption of the renal artery circadian transcriptome.
Jess R. Ivy (Edinburgh, UK)

16:55 OS 17-06 Targeting hypoxia-inducible factor-1 in a hypoxidative stress model protects retinal pigment epithelium cells from cell death and metabolic dysregulation
Annika Schubert (Essen, Germany)

Saturday, 13 September 2025, 15:40 - 17:10
Room(s): Sirius

OS 18 | Vascular Health and Function

Chairs:

Presentations:

15:40 OS 18-01 NFAT5 is a critical mediator of pro-calcific signaling in vascular smooth muscle cells
Ioana Alesutan (Linz, Austria)

15:55 OS 18-02 Novel cross-talk between oxidized LDL, oxidative stress and renin-angiotensin-aldosterone system
Henning Morawietz (Dresden, Germany)

16:10 OS 18-03 Soluble Adenylyl Cyclase Overexpression Enhances Mitochondrial Function and Endothelial Barrier Integrity
Muhammad Aslam (Giessen, Germany)

16:25 OS 18-04 Delineating the Role of Protein Kinase D1 in Pulmonary Vascular Disease
Slaven Crnkovic (Giessen, Germany)

16:40 OS 18-05 Intact Glucose-Dependent Insulinotropic Polypeptide Receptor (GIPR) signaling plays a role in maintaining vascular health
Anna Roberts (London, UK)

16:55 OS 18-06 The Glucocorticoid Receptor In Vascular Smooth Muscle Is Required For Glucocorticoid-induced Non-dipping Blood Pressure
Robert Little (Edinburgh, UK)

Saturday, 13 September 2025, 15:40 - 17:10
Room(s): Mistral

OS 19 | Endocrinology and Reproduction

Chairs:

Presentations:

15:40 OS 19-01 Fluoresence-Guided Quantitative Assessment of Intracellular Sperm pHReflecting Mutational Burden Differences in Males Affecting Sperm Motility
Sixian Wu (Chengdu, China)

15:55 OS 19-02 Elabela increases testicular blood flow and improves spermatogenesis in rats with testicular torsion
Alperen Akbaba (Istanbul, Turkey)

16:10 OS 19-03 Complex role of TRPC4 in rat pregnant myometrial contractility
Olesia Moroz (Kyiv, Ukraine)

16:25 OS 19-04 Transcriptomic analysis of the transcription factor WT1 in mouse urogenital development
Florian Zantow (Berlin, Germany)

16:40 OS 19-05 Infection and autoimmunity: pathophysiology of type 1 diabetes modulated by enterovirus coxsackievirus-B4
Akadiri Yessoufou (Cotonou, Benin)

16:55 OS 19-06 Yoga decreases inflammation, oxidative stress, psychological stress and depression and improves cardiovagal modulation and fetomaternal-neonatal outcomes in gestational diabetes mellitus: a randomized control trial
Gopal K. Pal (Puducherry, India)

Saturday, 13 September 2025, 15:40 - 17:10
Room(s): Plateau

S 16 | Arrhythmias: Beyond the Myocyte

Chairs:

Presentations:

15:40 S 16-01 Interstitial Cells and Arrhythmia
Peter Kohl (Freiburg, Germany)

16:10 S 16-02 Alterations of the Autonomic Nervous System in CPVT
Molly O'Reilly (Amsterdam, Netherlands)

16:25 S 16-03 Multicellular interactions driving arrhythmogenesis in heart failure
Eef Dries (Leuven, Belgium)

16:40 S 16-04 Epicardial adipose-cardiomyocyte cross-talk and arrhythmia vulnerability
James Bell (Bundoora, Australia)

Saturday, 13 September 2025, 15:40 - 17:10
Room(s): Meridian

S 17 | Capillary Pericytes in the Central and Peripheral Nervous System

Chairs:

Presentations:

15:40 S 17-01 Mouse brain pericyte heterogeneity is acquired during postnatal development and altered during aging
Annika Keller (Schlieren, Switzerland)

16:10 S 17-02 Store-operated Orai calcium channels in mid-capillary pericytes
Ravi L. Rungta (Montreal, Canada)

16:25 S 17-03 Capillary pericytes as instigators of reduced nerve blood flow during diabetic neuropathy
Harvey Davis (London, UK)

16:40 S 17-04 Noradrenaline Dependent Astrocyte Ca2+ Activity Regulates Neurovascular Coupling Responses to Active Sensing
Barbara L. Lind (Copenhagen N, Denmark)

Saturday, 13 September 2025, 15:40 - 17:10
Room(s): Horizont

S 18 | The Physiome Project and Virtual Human Twins

Chairs:

Presentations:

15:40 S 18-01 A multiscale physics-based framework for physiology
Peter Hunter (Auckland, New Zealand)

16:10 S 18-02 Harnessing 12-lead ECG and MRI data to personalise repolarisation profiles in cardiac digital twin models for enhanced virtual drug testing
Zhinuo Jenny Wang (Oxford, UK)

16:25 S 18-03 1D Hemodynamic Modeling for Cardiovascular Digital Twin Applications
Lydia Aslanidou (Lausanne, Switzerland)

16:40 S 18-04 An Automatic Pipeline for Creation of Digital Twins
Soroush Safaei (Ghent, Belgium)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

| Poster Session C

Chairs:

Presentations:

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 01 | OXIDATIVE STRESS AND HYPOXIA EFFECTS AND TREATMENT

Chairs:

Presentations:

C 01-01 Epidemiological investigation of primary knee osteoarthritis in the Tibetan population
Ba Bian (Lhasa, Tibet, China)

C 01-02 Generation and characterization of murine urinary bladder organoids
Vivienne Schneider (Essen, Germany)

C 01-03 Altitude hypoxia triggers several abnormal breathing patterns in lowlanders: the Himalayan effect
Danilo Bondi (Chieti, Italy)

C 01-04 Circadian disruption of heart rate, EEG and sleep state associated with cystic white matter injury in preterm fetal sheep
Christopher A. Lear (Auckland, New Zealand)

C 01-05 Bladder mucosa is the most dominant tissue for superoxide production in the body – Nox-derived ROS production and its pathological implications
Qin Wu (Yancheng, China)

C 01-06 The Toll of hypoxia and infection in an animal model of early life stress
Anna C. O' Connell (Cork, Ireland)

C 01-07 *Fih* deletion decreases cell proliferation and viability of H9c2 rat cardiomyoblasts in nutrient starvation conditions
Anna D. Dorsch (Greifswald, Germany)

C 01-08 Using chemo-genetic tools to control temporal and spatial H_2O_2 production in mouse pancreatic islets
Melina Duncklenberg (Homburg, Germany)

C 01-09 Immunomodulatory Effects of Roxadustat in Critically Ill Patients with CKD and Renal Anemia
Lioba Tenbohlen (Essen, Germany)

C 01-10 Melatonin reduces mitochondrial oxidative stress in the placenta in a rat model of chronic fetal hypoxia
Kerri L. Smith (Manchester, UK)

C 01-11 Long-term storage of perfluorocarbon-based oxygen carriers through lyophilization
Marina Penzel (Essen, Germany)

C 01-12 Reference values for cardiopulmonary exercise testing-derived parameters for cardiorespiratory fitness in a Dutch community dwelling 55- to 75-year-old population
Dax Houtkamp (Amersfoort, Netherlands)

C 01-13 Perfluorocarbon Emulsion Therapy for Limb Ischemia in a Lewis Rat Model of Temporary and Permanent Ischemia
Travis Murphy (Miami, USA)

C 01-14 The effect of β-sitosterol against high-fructose diet-induced hepatorenal disturbances and oxidative stress, in growing female rats
Nontobeko Gumede (Pretoria, South Africa)

C 01-15 D-Ribose-L-Cysteine reverses copper-induced gonadotoxicity via anti-oxidative, anti-inflammatory, and anti-apoptotic mechanisms: in vivo and in silico studies

Abdullateef I. Alagbonsi (Huye, Rwanda)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 02 | ELECTROPHYSIOLOGY AND CARDIAC FUNCTION

Chairs:

Presentations:

C 02-01 Cardiac impulse generation and propagation manipulated by light-induced local Ca^{2+}-overload
Kentaro Mochizuki (Kyoto, Japan)

C 02-02 Multi-Omics Analysis of Myoglobin Knockout Zebrafish Metabolism
Ciska Bakkeren (Aarhus, Denmark)

C 02-03 HCN4 Conditional Knockdown Increases Atrial Fibrillation Duration
Kensuke Oshita (Kurume, Japan)

C 02-04 Acute Exposure to Tunicamycin Elicits Biphasic Effects on Contractility and Induces Proarrhythmic Events in Rat Ventricular Cardiomyocytes
Ahmad Nawid Nasri (Marburg, Germany)

C 02-05 Electrolyte Dysregulation and Arrhythmogenesis – Testing 3R Compliance in a Cardiac Glycoside Overdose Model
Judith Rees (Berlin, Germany)

C 02-06 Charge-balancing optimizes electrochemical compatibility of biphasic electrical tissue stimulation
Petra Kameritsch (Munich, Germany)

C 02-07 Optogenetic stimulation of G_s-signaling reveals endocardial-specific ventricular arrhythmia mechanisms
Vanessa Dusend (Bonn, Germany)

C 02-08 Specific cleavage of cardiac titin in vivo demonstrates the importance of titin in the generation of restoring forces during diastole.
Johanna K. Freundt (Muenster, Germany)

C 02-09 Unexpected influence of mavacamten on primary functional effect of the HCM-related myosin mutation G716R explored in human ventricular myofibrils
Bogdan Iorga (Hannover, Germany)

C 02-10 Sex Differences in Cardiac Injury post-Acute Lung Injury
Hanjun Wang (Omaha, USA)

C 02-11 A Holistic Perspective: Investigating Electrophysiology and Contractility of atrial vs ventricular hiPSC-cardiomyocytes
Fitzwilliam Seibertz (Munich, Germany)

C 02-12 Investigating functional effects of myosin activator moleculesusing patient-derived living myocardial slices (LMS) with heart failure
Junqing Liu (Hannover, Germany)

C 02-13 Developmental endothelial locus-1 (Del-1) plays a homeostatic role in Hypertension mediated inflammation in mice
Arka Baksi (Dresden, Germany)

C 02-14 Investigation of Neuropeptide Y signalling following treatment with Y1 and Y5 receptor antagonists in a rat model of myocardial infarction.
Thamali Ayagama (Oxford, UK)

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EUROPHYSIOLOGY
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C 02-15 CALMODULIN MUTATIONS ASSOCIATED WITH LONG QT SYNDROME DISRUPT $CA_V1.2$, RYR2, CAMKIIδ, AND CALCINEURIN REGULATION

Rachael Morris (Liverpool, UK)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 03 | HEART PHYSIOLOGY MODELS AND ASSESSMENT

Chairs:

Presentations:

C 03-01 Tcf21-iCre does not sufficiently target adult cardiac fibroblasts after intraperitoneal delivery of tamoxifen
Lukas Müller (Mannheim, Germany)

C 03-02 Large-scale quantification of cardiomyocyte size across heart cryosections using Deep-Learning based image analysis
Guillaume Gilbert (Brest, France)

C 03-03 Impact of lipid droplet accumulation on contractile function of cardiac slices
Martina Krüger (Düsseldorf, Germany)

C 03-04 Mathematical modeling of cardiac muscle cooperativity with cross-bridge ensembles
Maike Mona Sirinov (Tallinn, Estonia)

C 03-05 Normothermic *Ex Vivo* Heart Perfusion with Blood and Artificial Oxygen Carriers (AOCs): Analysis of Tissue Integrity and Myocardial Damage
Sarah Balzk (Essen, Germany)

C 03-06 Induction of Connexin 43 expression increases hemichannel activity in isolated cardiomyocytes
Kerstin Boengler (Giessen, Germany)

C 03-07 Based on Echocardiography and Heart Perfusion Experiments to Explore Hemodynamic Changes and the Intervention of Estrogen and Progesterone on Diabetic Cardiomyopathy in Ovariectomized Mice
Hongfang Li (Lanzhou, China)

C 03-08 Evaluation of hemodynamic changes in patients with chronic heart failure after cardiac rehabilitation using impedance measurement method
Na Zhou (Kunming, China)

C 03-09 Evaluation of Right Ventricular Strain in Chronic Hemodialysis Patients Without Known Cardiac Disease: Subclinical Cardiac Dysfunction Detection via Strain Imaging
Aykut Oruc (Istanbul, Turkey)

C 03-10 Improvement or worsening of hemodynamics in mild COVID-19 survivors after 3 months of initial assessment
Ayan Roy (New Delhi, India)

C 03-11 Structural characterisation of temporary vs. permanent coronary occlusion in a clinically relevant rabbit myocardial infarct model
Bethan Roper-Jones (Leicester, UK)

C 03-12 Deletion of TRPC6 enhances stretch-induced acute increase in myocardial contraction by altering zinc mobilisation
Yohei Yamaguchi (Nagoya, Japan)

C 03-13 Nuclear integrity, desmin structure and P16 accumulation are altered in Hypertrophic Cardiomyopathy
Judith Montag (Berlin, Germany)

C 03-14 Modelling Obstructive Sleep Apnoea: Strain-Specific Cardiovascular Responses to Chronic Intermittent Hypoxia
Andrew M. Coney (Birmingham, UK)

C 03-15 Sex hormones shape CRP dynamics, unveiling the secrets behind sex-specific cardiac performance: a large data study

Zheng Gong (Seoul, South Korea)

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C 04 | EDUCATION AND TEACHING (2)

Chairs:

Presentations:

C 04-01 What helped medical students thrive in a hybrid Physiology viva?
Amaranath Karunanayake (Galle, Sri Lanka)

C 04-02 Exploring factors influencing 16–18 year-old school students' STEM subject choices
Mirza Subhan (Plymouth, UK)

C 04-03 Can a physiology internship be fun?
Peter Dreischer (Tübingen, Germany)

C 04-04 Thirteen Years of Experience in Integrative Team-Teaching: A Laboratory Course on Cardiac Function Featuring Echocardiography
Tobias Heinrich (Hamburg, Germany)

C 04-05 Factors affecting engagement in large group teaching across undergraduate medicine and life sciences students
Oliver G. Steele (Falmer, UK)

C 04-06 Innovative teaching practices to widen participation in medicine: A BrightMed case study
Oliver G. Steele (Falmer, UK)

C 04-07 A modified hydraulic model of the cardiovascular system for teaching of physiology
Adela Tiffner (Linz, Austria)

C 04-08 Piloting a brief online ECG test base d on NICE CG109: Year 2 to year 3 progress of UK paramedic student interpretation of ECGs for TLOC patients
Harry J. Witchel (Brighton, UK)

C 04-09 A student-led approach to reimagining physiology problem solving tutorials
Catriona Cunningham (Aberdeen, UK)

C 04-10 Capacity building of medical faculty in designing scenario based multiple choice questions and item analysis.
Anupinder Thind (Bathinda, India)

C 04-11 Optimising final-year research project allocations: a mathematical modelling approach to enhance student satisfaction and fairness
Sarah K. Hall (Cardiff, UK)

C 04-12 Studio-based brief lecture videos can be effective and engaging as flexible, online learning for undergraduate physiology students
Andrew Moorhouse (Camperdown, Australia)

C 04-13 Student opinions on exercise physiology elective course applied in medical school: A qualitative study
Selma Arzu Vardar (Edirne, Turkey)

C 04-14 Integrative physiology 1– Development of an Interdisciplinary Lab Course Connecting Physiological Processes with Psychological Phenomena
Marie-Christin Schulz (Halle, Germany)

C 04-15 Learning & Teaching to Analyse Acid-Base-Status – Theory & Teaching Approach
Henrik Alle (Berlin, Germany)

C 04-16 Learning & Teaching to Analyse Acid-Base Status – A Model-based Teaching & Learning Tool
Luise Wehle (Berlin, Germany)

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C 05 | GI: INFLAMMATION AND PATHOPHYSIOLOGY

Chairs:

Presentations:

C 05-01 Intestinal absorption and plasma concentrations of phenolic compounds from table olive intake in healthy human volunteers
Joana M Planas (Barcelona, Spain)

C 05-02 Preoperative beta-hydroxy-beta-methylbutyrate (HMB) supplementation maintains mitochondrial quality and liver function after partial hepatectomy (PHx) in mice.
Ana Laura Vieira da Silva (Limeira, Brazil)

C 05-03 The effects of dietary phosphate content and chronic kidney disease on intestinal paracellular phosphate absorption
Zsuzsa Radványi (Zürich, Switzerland)

C 05-04 Intestinal Submucosal Nerves Participate in Serotonin Receptor Subtype 7-Mediated Neurotrophin Synthesis and Visceral Hypersensitivity
Li-Yu Lin (Taipei, Taiwan)

C 05-05 Phoenixin-14 alleviates the cytokine storm in an L-Arginine-induced experimental acute pancreatitis model
?erife N. Bulat (Afyonkarahisar, Turkey)

C 05-06 Nesfatin-1 Have Role in The Action Mechanism of Cholinergic Anti-inflammatory Pathway in the Gastrointestinal Tract
Meltem Kolgazi (Istanbul, Turkey)

C 05-07 ZO-1 Orchestrates Mitotic Spindle Orientation Independent of Actomyosin to Facilitate Epithelial Repair in Inflammatory Bowel Disease.
Ying Chieh Chang (Taipei, Taiwan)

C 05-08 Examining the physiology of the gastrointestinal tract in an animal model of oxygen dysregulation.
Anna O'Connell (Cork, Ireland)

C 05-09 Association of Serum Phoenixin-14 Levels with Anxiety, Depression, and Quality of Life in Inflammatory Bowel Disease Patients
Leyla Semiha Sen (?stanbul, Turkey)

C 05-10 Oesophageal dysphagia in different geriatric age sub-groups: a cross sectional study using high-resolution manometry
Deepanjan Dey (Pune, India)

C 05-11 *Protective Effects of Irisin and NO Modulators on Colonic and Renal Damage in TNBS-Induced Experimental Colitis*
Nazl?can Tepe (?stanbul, Turkey)

C 05-12 Comparison of 24-hour pH impedance and high-resolution manometry parameters between patients with erosive reflux disease, non-erosive reflux disease, reflux hypersensitivity, and functional heartburn
Nilanka Wickramasinghe (Colombo, Sri Lanka)

C 05-13 Modeling the pancreatic cancer microenvironment using a 96-well-based multicellular spheroid platform
Weronika Wilczak (Münster, Germany)

C 05-14 Zileuton, an inhibitor of 5-lipoxygenase, protects rat pancreatic stellate cells against ferroptosis and induces antioxidant response.
Antonio González (Cáceres, Spain)

C 05-15 ZO-1 Safeguards Mitotic Orientation and Genomic Integrity to Suppress Colorectal Tumorigenesis
Yi-Syuan Tsai (Taipei, Taiwan)

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C 06 | BODY HOMEOSTASIS AND THERAPEUTIC APPROACHES

Chairs:

Presentations:

C 06-01 A walking spatial awareness meditation with an interoceptive sensation may improve locomotive deteriorations of the aged people – a preliminary observation
Ming Cheh Ou (Taipei City, Taiwan)

C 06-02 Subjective time perception in response to different sleep loss patterns
Levent Öztürk (ED?RNE, Turkey)

C 06-03 Corneal biomechanical properties in children with low refractive errors
Maria C. Marinescu (Bucharest, Romania)

C 06-04 Biological Leverage: A Novel Principle in Human Biomechanics

Yahya A. Sharif (Dongola, Sudan)

C 06-05 Adaptive response to resistance training in older male population: a pilot study
Petra Štursová (Brno, Czech Republic)

C 06-06 Sodium binding properties of Chondroitin Sulfate depends on [ChS] in Vitro
Andreas Lind (Aarhus, Denmark)

C 06-07 Handgrip Strength and Endurance of Apparently Healthy Subjects
Sanyukta Gurung (Chitwan, Nepal)

C 06-08 Fitness assessment as a tool to promote exercise adherence in diabetes mellitus and hypertension.
Sandip M. Hulke (Bhopal, India)

C 06-09 Physical activity and glycosylphosphatidylinositol-specific phospholipase D1 (GPLD1) plasma levels in different cohorts
Ghulam Shere Raza (Oulu, Finland)

C 06-10 The effects of trauma film paradigm on autonomic nervous system activity and reaction time in individuals with chronic fatigue
Ümmühan Erge (Edirne, Turkey)

C 06-11 Effect of sprint interval exercise on pulmonary function in gymnasts
Khaled Mohsin Badaam (Aurangabad, India)

C 06-12 The Role of Indonesian Propolis Extract in Ameliorating Obesity and Modulating Inflammation and Autophagy Process in the Brain After Palmitic-Based High-Fat Diet Exposure
Ronny Lesmana (SUMEDANG, Indonesia)

C 06-13 Is the beta-blocker a therapeutic approach to post-sepsis syndrome?
Renata Lataro (Florianopolis, Brazil)

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C 07 | OBESITY AND DIABETES

Chairs:

Presentations:

C 07-01 Assessment of percentage body fat by using B-mode ultrasound technique vs. Skin-fold caliper in apparently healthy obese Indian adult males
Avinash S. Ingle (RAIPUR, India)

C 07-02 Diurnal Variation of Postprandial Glucose in Young Women With Different Body Compositions
Er?na Akmene (Riga, Latvia)

C 07-03 Impact of Body Fat, Glycemic, and Lipid Profile on Sleep Quality and Daytime Sleepiness
Pradeepa I. Basnayake (Ratnapura, Sri Lanka)

C 07-04 Intermedin inhibits DNA damage-promoted senescent phenotype transition of vascular smooth muscle cells in aorta by activating NAMPT/PARP1 in mice
Yong Fen Qi (100083, China)

C 07-05 Integrating Regional Adiposity and Machine Learning for Early Risk Prediction of Metabolic Syndrome in Young Adults
Shipra Das (Rajnandgaon, India)

C 07-06 Peripheral nerve conduction response with serum Vitamin B-12 levels in patients with newly diagnosed type-2 diabetes mellitus treated with metformin: A prospective study
Rajay Bharshankar (BHOPAL, India)

C 07-07 Physiological Impact of Ertugliflozin and Sitagliptin Therapy on Glycemic and Cardiometabolic Parameters in Type 2 Diabetes
Muhammad Adnan Kanpurwala (Karachi, Pakistan)

C 07-08 The Association Between Serum Vitamin D and Blood Glucose, HbA1c and Some Inflammatory Markers in Type 2 Diabetes Mellitus Patients
Nouralsalhin A. Alaagib (Khartoum, Sudan)

C 07-09 Restoring Beta Cell Function: Reversal of Impaired Glucose Sensitivity in Type 2 Diabetes by Caloric Restriction
Jan Kopecky (Maribor, Slovenia)

C 07-10 Pomegranate Ellagitannins and Early IAPP Modulation: A Preventive Strategy Against Type 2 Diabetes Mellitus
Luis Monteiro Rodrigues (Lisboa, Portugal)

C 07-11 Dim blue light at night causes circadian desynchronization and disrupts circadian melatonin rhythm and glucose homeostasis in rats
Cecilia González (Mexico City, Mexico)

C 07-12 SARS-CoV-2 spike protein variants elicit differential effects on cell surface and endosomal entry proteins in INS-1 β-cells under glycative and oxidative stress conditions
Danzil Joseph (Stellenbosch, South Africa)

C 07-13 A study on correlation between heart rate variability and insulin resistance in early Indian postmenopausal women
Praveena Sinha (Faridabad, India)

C 07-14 Impact of BMI, Body Fat Percentage, and Waist-to-Hip Ratio on Lung Functions
Pradeepa I. Basnayake (Ratnapura, Sri Lanka)

C 07-15 Insulin Function in Participants who were Diabetic by HbA1c but not OGTT, a cross-sectional study in Tanzania
Evangelista Malindisa (MWANZA, Tanzania)

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C 08 | METABOLISM ASSOCIATED DISEASES

Chairs:

Presentations:

C 08-01 Endothelial Kallikrein-Related Peptidase 8 Promotes Diabetic Nephropathy through a LIFR dependent mechanism
Xin Ni (Changsha, China)

C 08-02 The Effects Of Chronic Cadmium Exposure On Perivascular Adipose Tissue Of Mesenteric Arteries In Wistar Rats
Lorraine Christiny C.S. Mulher (Vitória, Brazil)

C 08-03 Effects of copper overload on the redox state and endocrine and metabolic function of mesenteric perivascular adipose tissue of Wistar rats
Nina B.S. Mawandji (Vitória - Espirito Santo, Brazil)

C 08-04 Metabolic and Bone Mineral Density Evaluation of Elderly Patients with Fragility Hip Fractures
Mark Anthony Sandoval (Manila, Philippines)

C 08-05 Long chain fatty acid β-oxidation increases at a genomic, proteomic and functional level in male C57BL/6 mouse models of diabetic heart failure
Hannah R. Smith (Leeds, UK)

C 08-06 Prostaglandin E2 is a powerful regulator of fibroblast growth factor 23 through prostaglandin E receptor subtype 2 and Nurr1
Katharina Hammerschmidt (Stuttgart, Germany)

C 08-07 Deficiency of soluble epoxide hydrolase ameliorated metabolic-associated fatty liver disease
Pinhsuan Li (Taipei, Taiwan)

C 08-08 Effects of a Yoga-Based Lifestyle Intervention on Cortico-Motor Excitability, Eating Behavior, Neurocognitive Plasticity, and Sleep in Obesity: A Randomized Controlled Trial
Raj Kumar Yadav (New Delhi, India)

C 08-09 F1-Ginsenoside enhances differentiation of primary and bone marrow mesenchymal stem cell (BMSC) derived osteoblasts via BMPR1-SMAD pathway
Sulagna Mukherjee (Daegu, South Korea)

C 08-10 Mechanistic Regulation of Aldehyde Dehydrogenase 1 family member B1 by Liver Receptor Homolog-1 in Hepatic Ethanol Metabolism
MinHee Seo (Daegu, South Korea)

C 08-11 Very Low-Density Lipoprotein-Loaded Triacylglycerol Facilitate HBV Activation in MASLD
Wen-Lung Ma (Taichung, Taiwan)

C 08-12 Etanercept Partially Restores Adipose and Liver Inflammatory Profiles in a Mouse Model of Chronic Inflammation
Duarte MS Ferreira (Solna, Sweden)

C 08-13 Expression of uroguanylin and guanylate cyclase C in human brain is gender dependent and regulated by feeding
Aleksandra Dugandži? (maiden Sin?i?) (Zagreb, Croatia)

C 08-14 Enhancing lipid profile in diet-induced obesity: The synergistic impact of melatonin and orlistat in rats
Tahir A. Abdussalam (Ilorin, Nigeria)

C 08-15 Changes in β_1 adrenergic receptor expression in the pancreas of female rats in a metabolic syndrome model.
Abigail K. Hernández-Munive (México, Mexico)

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C 09 | MUSCLE PHYSIOLOGY

Chairs:

Presentations:

C 09-01 A comparison of human skeletal muscle cell maturation in 2D versus 3D culture: A quantitative proteomic study
Benjamin Tollitt (Liverpool, UK)

C 09-02 Differential Effects of Neuromuscular Transmission Inhibition on Strength-Duration Curves Between Slow- and Fast-Twitch Skeletal Muscles
Mari S. Matsumoto (Osaka, Japan)

C 09-03 Comparison of Force and Impedance Measurements on Human Muscle Constructs during and after Electrical Stimulation using a Bespoke System
Michael Mueller (Liverpool, UK)

C 09-04 Subcellular distribution of human skeletal muscle glycogen particles in exercise-induced supercompensation as evaluated by a semantic segmentation model to predict glycogen particles in specific subcellular regions using EM images
Joachim Nielsen (Odense M, Denmark)

C 09-05 Gasdermin D inhibition by Disulfiram attenuates skeletal muscle inflammation and improves insulin sensitivity in a mouse model of diet-induced insulin resistance
Paola Llanos (Santiago, Chile)

C 09-06 Loose LPS sink ships. AhR Tlr4 interactions responsible for skeletal muscular pathology in DMD?
Anthony Marullo (Cork, Ireland)

C 09-07 Skeletal Muscle Microbiopsies in Children and Adults - Tolerability, Sample Yield and Analyzability
Emil Rydell Högelin (Eksjö, Sweden)

C 09-08 The impact of sex and repeated high-intensity endurance exercise on skeletal muscle glycogen content
Anders A. Hansen (Odense M, Denmark)

C 09-09 Acute Ankle Joint Inflammation Induces Muscle Atrophy, Reduces Translational Capacity, and Contributes to Ribosome Heterogeneity in CFA-Treated Mice
Oscar Horwath (Stockholm, Sweden)

C 09-10 Menopausal Status and Its Impact on Thigh Muscle volume, Fat Composition, and Knee Extensor Strength
Campbell Menzies (Nottingham, UK)

C 09-11 Evaluation of Surface Electromyographyin Masticatory, Sternomastoid, and Trapezius Muscles among Smartphone Users with Varying Duration of Mobile phoneUsage: An Observational Cross-Sectional Study
Avinash Thakare (Bhopal, India)

C 09-12 Movement-Based Neuromuscular Outcomes Assessed via Electromyography in Postmenopausal Females: A Systematic Review
Luke Pelton (Springfield, USA)

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C 10 | KIDNEY: VASCULAR EFFECTS, DIAGNOSTIC METHODS AND MODELS

Chairs:

Presentations:

C 10-01 The influence of Polyamines on kidney vessel function
Yipeng Chen (Berlin, Germany)

C 10-02 Excess dietary potassium can raise blood pressure by an aldosterone-dependent increase in ENaC
Adrienne M. Assmus (Aarhus, Denmark)

C 10-03 Elevated blood pressure in aged male mice with hyperaldosteronism is associated with reduced blood vessel compliance
Debra Fong (Aarhus, Denmark)

C 10-04 Experts fail to reliably detect AI generated histological data
Ralf Mrowka (Jena, Germany)

C 10-05 Evaluating Conventional and Generative AI-Based Data Augmentation for Limited Training Data Scenarios
Ralf Mrowka (Jena, Germany)

C 10-06 Contribution of Cystatin C dosage in the evaluation of renal function
Maïmouna Touré (Dakar, Senegal)

C 10-07 The Urine Ammonium-pH Index: A Sensitive Measure of Renal Tubulo-Interstitial Function
Peder Berg (Aarhus, Denmark)

C 10-08 Spatial Transcriptomic Analysis Reveals Osmoadaptive and NFAT5 Mediated Control of Gene Expression Pattern in the Kidney
Bayram Edemir (Witten, Germany)

C 10-09 Establishing an Experimental Porcine Marginal Kidney Model
Nicolai W. Matias (Aarhus, Denmark)

C 10-10 Establishment of a cellular model of the human cortical collecting duct
Etang C. Etang (St Andrews, UK)

C 10-11 Gadolinium-Based MRI Contrast Agents in the Rat Kidney: Insights From Spatially Resolved Mass Spectrometry
Luis Hummel (Berlin, Germany)

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C 11 | KIDNEY CELLS, HYPEROSMOTIC LOAD, AND MECHANISMS

Chairs:

Presentations:

C 11-01 P38-dependent IL-6 expression drives inflammatory crosstalk between renal proximal tubular cells and fibroblasts under acidic conditions.
Marie-Christin Schulz (Halle, Germany)

C 11-02 Localisation of Claudin-7 and EpCAM in Mouse Collecting Duct
Markus Bleich (Kiel, Germany)

C 11-03 Altered urine composition supports growth of *Escherichia coli* and increased risk of urinary tract infection in kidney transplant patients
Aimi D.K. Hamilton (Aarhus, Denmark)

C 11-04 Nephrocalcinosis – formation of kidney stones following repeated cyclical exposure to high CO2 and O2 levels in rainbow trout (Oncorhynchus mykiss)
Gam Thi Hong Le (Bergen, Norway)

C 11-05 Adaption of the renal tryptophan metabolism during cold stored kidneys – investigations in pig and rat models
Katharina van der Giet (Essen, Germany)

C 11-06 Sex- and species-specific differences of the mineral buffering system in health and chronic kidney disease
Mehdi Razazian (Linz, Austria)

C 11-07 The role of the receptor tyrosine kinase c-Kit in regulating renal intercalated cell function
Clarisse Cornebise (Lyon, France)

C 11-08 Regulator of G-protein signaling 4 negatively regulates renal erythropoietin production in mice
Bettina K.M. Firmke (Regensburg, Germany)

C 11-10 Free water improves sodium mobilization in furosemide treated pigs after a hyperosmotic sodium load
Michael Marks-Hultström (Uppsala, Sweden)

C 11-11 Cystic Fibrosis in the Kidney: Assessing CFTR Modulator Efficacy via Urine Bicarbonate Excretion following a Short Therapy Interruption
Amalie Q. Rousing (Aarhus C, Denmark)

C 11-12 Unraveling cellular heterogeneity and phenotypic signatures of healthy and injured mouse kidney primary cell culture models
Arnold Tsamo Tetou (Berlin, Germany)

C 11-13 Receptor-Mediated Endocytosis of Albumin in Viable Human Kidney Tissue using Precision-Cut Kidney Slices
Michael S. Jensen (Aarhus, Denmark)

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C 12 | RESPIRATORY CONTROL AND LUNG DISEASES

Chairs:

Presentations:

C 12-01 Respiratory and Metabolic Responses to Chronic Intermittent Hypoxia in Two Rat Strains
Dhaifallah S. Alotaibi (Birmingham, UK)

C 12-02 Therapeutic efficacy of norepinephrine on cardiorespiratory function, spinal microenvironment, and gene expression following cervical spinal cord injury in rats.
Rui Yi Chen (Kaohsiung, Taiwan)

C 12-03 Postnatal caffeine treatment enhances pulmonary ventilation and lowers arterial blood pressure in spontaneously hypertensive rats
Daniel Zoccal (Araraquara, Brazil)

C 12-04 β-Arrestin1 Deficiency Prevents LPS-Induced Changes in Respiratory Mechanics Despite a Similar Inflammatory Response
Jasper L. Weiß (Bochum, Germany)

C 12-06 Pulmonary versus systemic N-acetylcysteine therapy in acute lung injury: a comparative study in adult rabbits
Pavol Mikolka (Martin, Slovakia)

C 12-07 Minocycline attenuates CO?-induced panicogenic responses in mice and humans
Luciane Gargaglioni (Jaboticabal, Brazil)

C 12-08 Inhibition of *Locus coeruleus* (LC) astrocytes via fluorocitrate microinjection and DREADD(Gi) attenuate panicogenic effects caused by CO_2 exposure in male but not female mice
Alana T. Frias (Jaboticabal, Brazil)

C 12-09 Sex difference in rat ventilatory response and pulmonary vascular resistance
Lucas Ratelet (Talence, France)

C 12-10 Pre- and post-natal exposure to nicotine affects glycinergic inhibitory neuronal mechanisms in the nucleus tractus solitarius of rats
Yoshiyasu Nagashima (Bunkyo-ku, Tokyo, Japan)

C 12-11 Recombinant Fibroblast Growth Factor 10 Treatment Reverses Experimental Emphysema and Pulmonary Hypertension
Edma Loku (Giessen, Germany)

C 12-12 Peak inspiratory performance in early and advanced disease in the D2.*mdx* mouse model of Duchenne muscular dystrophy.
Ben T. Murphy (Cork, Ireland)

C 12-13 Albuminuria as a non-invasive biomarker of endothelial dysfunction in patients with COPD
Yasser El-Wazir (Ismailia, Egypt)

C 12-14 The lateral parafacial glutamatergic interneurons control the expiratory motor function of mice
Juliana R. Souza (Ribeirão Preto, Brazil)

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C 13 | VASCULAR CELL PHYSIOLOGY

Chairs:

Presentations:

C 13-01 Association of osteoprotegerin single nucleotide polymorphism with reduced baroreflex sensitivity and inflammation in hypertensive patients with type-2 diabetes mellitus
Nivedita Nanda (Puducherry, India)

C 13-02 Arterial hypertension, obesity, and depressive-like behavior in *Crtc1*-deficient mice
Karoline Morhenn (Hamburg, Germany)

C 13-03 A single-cell resolution spatial profiling of non-neuronal cell responses to ischemic stroke in female mice
Line Mathilde B. Hansen (Aarhus, Denmark)

C 13-04 ERRγ restores mitochondrial homeostasis in reverse remodeling of the pulmonary vasculature in pulmonary hypertension secondary to left heart disease
Donghai Tian (Berlin, Germany)

C 13-05 New perspectives from the primary Raynaud´s phenomenon through ice cooling exposure (ICE)
Luis Monteiro Rodrigues (Lisboa, Portugal)

C 13-06 Modulation of microglial phagocytosis via the GAS6-MERTK pathway regulates pathological angiogenesis in the mouse oxygen-induced retinopathy model
Anne Klotzsche - von Ameln (Dresden, Germany)

C 13-07 Vascular diameter and localization as determinants for the sensitivity to soluble guanylate cyclase of the human and murine mesenteric and intrarenal arteries
Lubomir T. Lubomirov (Neuruppin, Germany)

C 13-08 Modifications of SDF-1a expression in damaged vascularized tissue in an experimental obesity model
Kameliya Bratoeva (Varna, Bulgaria)

C 13-09 Piezo1 stimulation by Yoda1 relaxes mouse tail artery via Ca^{2+}-regulated potassium channels
Alina Maslakova (Dresden, Germany)

C 13-10 The role of AURKA in pulmonary arterial hypertension
Alexandr Melnikov (Berlin, Germany)

C 13-11 Exploring the Pulmonary Arterial Hypertension-Inducing Potential of D-Glutamic Acid: A Comparative Study with Monocrotaline in Rats
Aykut Oruc (Istanbul, Turkey)

C 13-12 Single cell sequencing reveals a distinct cellular response to vascular pressure in a model of unilateral carotid artery atherosclerosis of mice.
Victoria Jurisch (Frankfurt, Germany)

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C 14 | VASCULAR PHYSIOLOGY: DIAGNOSTIC METHODS AND TREATMENTS

Chairs:

Presentations:

C 14-01 *In-silico* and *in-vivo* evaluation of the Cardiovascular effects of five *Leonotis leonurus* diterpenes
Ismaila A. Raji (Dutse, Nigeria)

C 14-02 Pulmonary Vascular Function of Rats Exposed to Intramuscular $HgCl_2$
Ingridy R.G. Schereider (Vitória, Brazil)

C 14-03 Peripheral circulatory responses associated with Lower Body Negative Pressure-induced augmentation of retrograde blood flow in human brachial artery
Dinu S. Chandran (New Delhi, India)

C 14-04 Therapeutic effect of cordycepin derived from *Cordyceps militaris* on pulmonary hypertension: possible contribution of p53/CDK1/TERT axis and gut microbiota
Gaopeng Li (Miki-cho, Japan)

C 14-05 Early detection of hypovolemia by venous pulse wave velocity
Marco Romanelli (Torino, Italy)

C 14-06 Skin Reactive Hyperemia – a clear illustration of sympathetic control of skin circulation
Luis Monteiro Rodrigues (Lisboa, Portugal)

C 14-07 Using non-invasive methods in patients with bicuspid aortic valve – a pilot study
Samuel Smoter (Brno, Czech Republic)

C 14-08 Thromboembolism Risk Biomarkers Before and After Bariatric Surgery: A Longitudinal Study
Andressa Bolsoni-Lopes (Vitoria, Brazil)

C 14-09 B lymphocyte autoimmunity in patients with mitral valve disease and secondary pulmonary hypertension
Szandor Simmons (Berlin, Germany)

C 14-10 Understanding the hypertensive effect of high potassium supplementation
Jan E. Stahlhut (Hamburg, Germany)

C 14-11 Effect of amiloride on high potassium-induced hypertension
Helga Vitzthum (Hamburg, Germany)

C 14-12 From physiological research to rational effective Magnesium-Oxygen Therapy of small vessel disease and tissue hypoxia
Elfriede Leniger-Follert (Hagen, Germany)

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C 15 | SENSORY SYSTEMS

Chairs:

Presentations:

C 15-01 Protective effects of grape seed proanthocyanidins on rabbit lenses subjected to oxidative damage induced by H_2O_2
Xiaoyu Zhang (Lanzhou, Gansu Province, 730000, China)

C 15-02 The Association Between Internet Addiction And Dry Eyes Among Undergraduate Medical Students In Jakarta
Julia R. Tanjung (Jakarta, Indonesia)

C 15-03 Development of the animal model of retinal damage caused by ischemic stroke
An-Li Wang (Taichung City, Taiwan)

C 15-04 Visual Electrophysiological Changes in Posterior Reversible Encephalopathy Syndrome: A Case Study
Aykut Oruc (Istanbul, Turkey)

C 15-05 Hearing Loss Risk in Young Adults:The Role of Earphone Usage Duration
Manish Bajpai (Lucknow, India)

C 15-06 Neural Basis of Olfactory Processing in Ixodes Ticks
Carola Städele (Göttingen, Germany)

C 15-07 Why fish don't like it hot and spicy - zebrafish TRPV1 is a vital sensor for noxious heat and contributes to ambient warmth detection in vivo
Jonathan R. Husk (Mannheim, Germany)

C 15-08 Acclimation to Thermoneutrality alters Temperature Preference in Mice
Jan Roedel (Erlangen, Germany)

C 15-09 Thermal pain perception during different satiety levels in males and females across follicular and lutheal phases of the ovarian-menstrual cycle
Tamar Gvasalia (Tbilisi, Georgia)

C 15-10 Neural circuit mechanisms of the parafascicular nucleus in modulating pain and motor dysfunction in Parkinson's disease
Cheng Cen (Beijing, China)

C 15-11 Novel Diagnostic Methods for Vulvodynia
Signe J. Jegsen (Aarhus, Denmark)

C 15-12 Psychological factors, genetic association and novel treatment option in Fibromyalgia
Abdul H. Ansari (Providence, Guyana)

C 15-13 Sensory Functions of the β-Secretase BACE1
Tobias Huth (Erlangen, Germany)

C 15-14 Sensory perceptions of inulin-enriched vs. placebo biscuits: A feasibility study.
Manpreet K. Mujral (London, UK)

C 15-15 A cellular atlas of the mouse accessory olfactory bulb: where pheromones meet the brain
Andres Hernandez-Clavijo (Aachen, Germany)

40th congress of the international union of physiological sciences
IUPS 2025
a joint meeting with
EUROPHYSIOLOGY
11. – 14. September 2025 | Frankfurt/Main

C 15-16 THE PATTERN AND MAGNITUDE OF INTRAOCULAR PRESSURE CHANGE FOLLOWING A VISUAL TASK ON A SMARTPHONE

Alolika Bhattacharyya (Ahmedabad, India)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 16 | PERIPHERAL AND AUTONOMIC NERVOUS SYSTEM

Chairs:

Presentations:

C 16-01 The mechanism of E/I imbalance in glutamatergic neurons of the parafascicular nucleus in regulating trigeminal neuralgia and comorbid anxiety
Yitian Lu (Beijing, China)

C 16-02 A point of care periphery nerve measurement device: a paradigm shift in evaluation of nerve dysfunction in patients suffering from balance disorders
Michael Pedersen (Aarhus N, Denmark)

C 16-03 Peripheral KV7 activation for pain relief in human subjects
Michael J. Fischer (Vienna, Austria)

C 16-04 Possible relay projection to the medulla from the hypothalamus in psychological stress-induced pressor response in rats.
Mio Matsuyama (Asaka, Japan)

C 16-05 Targeting histamine H4 receptor in the rostral ventromedial medulla to relieve hypertension
Xiao-Yang Zhang (Nanjing, China)

C 16-06 Hypophagia-related behaviours elicited by PPG neuron activation
Cecilia Skoug (London, UK)

C 16-07 Dopamine modulates the activity of dopaminergic neurons involved in feeding in *Drosophila*
Michael-Marcel Heim (Berlin, Germany)

C 16-08 Cardiac autonomic function and olfactory discrimination ability in older adults
Sae Uchida (Tokyo, Japan)

C 16-09 Effect of Binaural Beats on Autonomic function in Healthy participants
Radhakrishnan Sherly Haripriya (New Delhi, India)

C 16-10 ANATOMICAL AND PHYSIOLOGICAL BASIS OF THE TRIGEMINAL AUTONOMIC CEPHALGLGIA-LIKE RESPONSE INDUCED BY FORMALIN INJECTION INTO THE CHEEK IN RATS
Ming R. Wang (Kaohsiung, Taiwan)

C 16-11 Lateral hypothalamic neuronal dynamics command behavioral transitions and coordinate different stages of feeding
Mahsa Altafi (Erlangen, Germany)

C 16-12 Central command controls and metaboreflex mediates supraorbital skin sympathetic nerve activity in humans
Thad E. Wilson (Lexington, USA)

C 16-13 The Hypotensive Effect of *Theobroma Cacao* Seed Powder Is Mediated by Attenuation of Sympathetic Nervous System Activity in Healthy Young Adults
Frank B. Mojiminiyi (Sokoto, Nigeria)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 17 | PHYSIOPATHOLOGY OF NEUROLOGICAL DISEASES

Chairs:

Presentations:

C 17-01 Effects of treadmill exercise as aerobic exercise on abnormal behaviors induced by neonatal dopamine depletion in rats
Toshiya Habata (Sagamihara, Japan)

C 17-02 Anatomical and functional coupling of pacemaker cells in the medial septum to the hippocampus in a temporal lobe epilepsy model
Giulia L. Turri (Freiburg, Germany)

C 17-03 Role of catecholaminergic modulation of prefrontal cortex and lateral hypothalamus in stress response
Alisa Bakhareva (Cologne, Germany)

C 17-04 GHS-R1a signaling drives anxiety-related behavior by shaping excitability of ventromedial hypothalamic neurons
Yu Zhou (Qingdao, China)

C 17-05 Neocortical Long-Term Potentiation in a Rat Glioma Model Using Field Potential Recordings
Ellen Hakvoort (Rostock, Germany)

C 17-06 Therapeutic potential of *Occimum gratissimum* (Clove basil) in modulating inflammatory responses in the prefrontal cortex of Chronic Unpredictable Mild Stress (CUMS)-modelled Wistar rats
Kenneth C. Oparaji (Ndufu-Alike Ikwo, Nigeria)

C 17-07 Presbycusis in mice masks the debilitating effects of Abeta(1-42) on hippocampal LTP
Celina D. Böse (Bochum, Germany)

C 17-08 Selective enhancement of substantia nigra dopamine neuron activity projecting to the dorsomedial striatum in a 22q11.2 deletion mouse model of schizophrenia
Solmaz Bikas (Frankfurt am Main, Germany)

C 17-09 Differential Effects of Restraint Stress and Corticosterone on Inflammatory Microglial Activation and Depressive-like Behavior in Rats.
Kaito Kodaira (Asaka, Japan)

C 17-10 Secretory IgA Response to Acute Stress Before and After 12-Week Biofeedback Training in Highly Stressed Individuals
Gabriela G. Panayotova (Varna, Bulgaria)

C 17-12 Unraveling the novel role of Gadd45a in the etiology of autism: Recruiting Tet1 to modulateneuronalexcitability via R-loop dependentregulation of Kcnq5
Ying Zhang (chengdu, China)

C 17-13 Influence of sleep disturbance, depression, anxiety, and stress on quality of life in people with epilepsy
Pravati Pal (Puducherry, India)

C 17-14 BACE1 influences the sleep-wake cycle via both catalytic and non-catalytic functions
Hannah Heininger (Erlangen, Germany)

C 17-15 Chronic neural excitation dysregulates Ca^{2+} signalling to accelerate cognitive decline with age
Karl Emanuel Busch (Potsdam, Germany)

C 17-16 Group III mGluRs Modulate Defensive and Anxiety-Like Behaviors in Juvenile Zebrafish
Ekin Döngel Dayanc (Ata?ehir, Turkey)

C 17-17 Study of cognitive function in patients who have recovered from covid-19.
Anand G. Joshi (Karad, India)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 18 | CELLULAR SIGNALLING

Chairs:

Presentations:

C 18-01 C2C12 myotubes secrete Osteoprotegerin (OPG) when exposed to activators of nuclear factor-kappa B (NF-κB)
Aaron Owens (Nottingham, UK)

C 18-02 Measurement of the Absolute Membrane Potential Using Fluorescence Lifetime Imaging Microscopy (FLIM)
Anagha G. Nair (Jena, Germany)

C 18-03 Calcium-dependent mitophagy rejuvenates inter-organellar communication to promote healthy ageing
Konstantinos Palikaras (Athens, Greece)

C 18-04 Intracellular calcium signaling shapes SERCA2a regulation in human atrial myocytes
Andrea Brunetti (Hamburg, Germany)

C 18-05 AZD8055, a pan mTOR inhibitor, abolishes protein synthesis promoted by L-type amino acid transporter 1 inhibition in C2C12 myotubes
Junya Takegaki (Hyogo, Japan)

C 18-06 Regulation of hair growth by lipids via the HIF-1 signaling pathway
Jieun Seo (Yokohama, Japan)

C 18-07 NoxO1 as Novel Regulator of Intracellular Trafficking and Endosomal Dynamics
Maureen Hebchen (Frankfurt am Main, Germany)

C 18-08 Physiological Responses of Scleractinian Corals to physicochemical and ecological factors in the Gulf of Aqaba
Salah Amasheh (Berlin, Germany)

C 18-09 Cereblon regulates osteogenic differentiation in mouse primary cultured bone cells
Yu-Mi Yang (Seoul, South Korea)

C 18-10 Cannabidiol promotes adipogenesis and modulates endocrine function via PPARγ in adipocytes
Omar Lozano (Monterrey, Mexico)

C 18-11 Isoform-specific knock-out of calcineurin in a proximal tubule cell model
Natalie Kunath (Berlin, Germany)

C 18-12 Exploring the effect of high salt on macrophage function
Emma Clare (Edinburgh, UK)

C 18-13 Synaptic ribbon-glutamate release site distance governs the exocytotic kinetics at the ribbon-type synapses in the retinal bipolar cell terminal
Tomoko Oshima-Takago (Tokyo, Japan)

C 18-14 Biphasic mesothelioma cell conditioned media reduces permeability of normal mesothelial cell monolayers
Sotirios I. Sinis (Larissa, Greece)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 19 | CELLULAR PHYSIOLOGY

Chairs:

Presentations:

C 19-01 Endothelial Lmp7 deficiency leads to enhanced cell size and altered membrane trafficking
Rebecca Braun (Hamburg, Germany)

C 19-02 Impact of microenvironment pH on macrophage polarization and function: Direct and cancer cell-driven effects
Leïla Dos Santos (Copenhagen, Denmark)

C 19-03 Emodin Suppresses NSCLC Growth via p53 and Akt-FoxO3a-mediated Ferroptosis and Autophagy
Yu-Hsuan Li (Taichung, Taiwan)

C 19-04 Loss of ovarian hormones diminishes the acute exercise response of circulating microRNAs carried via extracellular vesicles, affecting skeletal muscle protein expression in female rats
Sira Karvinen (Jyväskylä, Finland)

C 19-05 The Role of Obese Adipose-Derived Extracellular Vesicles in Driving Skeletal Muscle Atrophic Responses
Michael Macleod (Birmingham, UK)

C 19-06 ELD607 Maintains Ca²? Homeostasis and Reverses TGFβ-Induced Extracellular Matrix Formation in Human Lung Fibroblasts
Pradeep K. Anand (KANSAS CITY, USA)

C 19-07 Characterization of a high affinity fluorescent PI(4,5)P_2 probe
Christian Halaszovich (Marburg, Germany)

C 19-08 The Antioxidant Effect of Cosmos caudatus (Kenikir) Leaves on Bone Metabolism
Gadis M. Sari (Surabaya, Indonesia)

C 19-09 Adipocyte-specific modulation of 11β-HSD enzymes for the treatment of obesity in mice
Merc Emil Matienzo (Gwangju, South Korea)

C 19-10 Acute high glucose environment attenuates TRPV4 channel activity and gene expression in SH-SY5Y cells
Julio C. Sánchez (Pereira, Colombia)

C 19-11 Oxygen-Dependent Regulation of Th1 Differentiation in Primary Human CD4? T Cells
Anna Wrobeln (Essen, Germany)

C 19-12 Gender Specific Differences In Upper Limb Nerve Conduction Study: A Normative Reference Study Among Young Healthy Individuals
Jeel Ajola (Ahmedabad, Gujarat, India)

C 19-13 The tumor suppressor RASSF8: A WAVE interaction partner controlling migration and cohesion of invasive border cells in *Drosophila*
Mila Y. Höhne (Marburg, Germany)

C 19-14 Rab35 guides wound healing in the pupal abdominal epidermis of *Drosophila melanogaster*
Meike Schneider (Marburg, Germany)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 20 | PHYSIOLOGY OF SODIUM CHANNELS

Chairs:

Presentations:

C 20-01 Analysis of sodium self-inhibition of epithelial sodium channel variants using classical and medium-throughput automated two-electrode voltage-clamp recordings
Oliver Rauh (Rheinbach, Germany)

C 20-02 2',3'-cyclic-nucleotide phosphodiesterase and atypical cAMP as novel HCN channel modulators
Marlene A. Müller (Marburg, Germany)

C 20-03 Dysregulation of the voltage-activated $Na_v1.5$ channel by *SNTB1* variants - a novel mechanism of arrhythmias and putative cause of SIDS/SCD
Emilia De Martino (Marburg, Germany)

C 20-04 Nanobody-mediated modulation of HCN channels in cardiac and neuronal disorders
Roberta Castelli (Milan, Italy)

C 20-05 Common Role of the Extracellular S5-P Linker in HCN and EAG Channel Gating
Kaei Ryu (Shimotsuke-shi, Japan)

C 20-06 The functional contribution of heteromeric and homomeric epithelial sodium channel assemblies to pro-inflammatory IL-1β secretion by human monocytic THP-1 cells
Sarah Shoushrah (Rheinbach, Germany)

C 20-07 Establishing automated patch-clamp recordings as screening approach to identify novel modulators of the epithelial sodium channel (ENaC)
Alexandr V. Ilyaskin (Erlangen, Germany)

C 20-08 A receptor-type protein tyrosine phosphatase stably interacts with acid-sensing ion channel (ASIC) 1a and increases its surface expression
Lea Strüver (Aachen, Germany)

C 20-09 Functional characterisation of a novel mutation in the α-subunit of the epithelial sodium channel detected in a patient with hypertension
Karen Lizet Luján López (Rheinbach, Germany)

C 20-10 A receptor tyrosine phosphatase reduces acid sensing ion channel *(ASIC)* 1a currents by shielding a phosphorylated tyrosine
Sascha Willems (Aachen, Germany)

C 20-11 ChReef: a new channelrhodopsin variant to improve cardiac optogenetic pacing and arrhythmia termination
Aida Garrido Charles (Goettigen, Germany)

C 20-12 Novel cell-penetrating peptides modulate voltage-gated sodium channels
Efthymios Oikonomou (Erlangen, Germany)

Saturday, 13 September 2025, 17:10 - 18:40
Room(s): Foyer

C 21 | OTHER CHANNELS AND TRANSPORTERS

Chairs:

Presentations:

C 21-01 Dissecting Voltage Sensing in Prestin and Anion Transport in SLC26 Transporters: A Comparative Analysis of Mammalian and Zebrafish Orthologs
Makoto F. Kuwabara (Marburg, Germany)

C 21-02 A Novel Discovery of FDA-Approved Drugs as Potential Volume-Regulated Anion Channel (VRAC) Modulators
Phavithra Mohanraj (Chennai, India)

C 21-03 Transporter-dysfunction translates into phenotype severity in *SLC1A2*-associated neurodevelopmental disorders.
Peter Kovermann (Jülich, Germany)

C 21-04 Towards novel therapies for endocrine diseases using high-throughput methods
Rita Coelho (Zürich, Switzerland)

C 21-05 Scaffold Protein PDLIM5 Regulates TRPC-Mediated SOCE in Myoblasts
Mingyi Dong (Nagoya, Japan)

C 21-06 Hypoglycosylation Enhances Mechanosensitivity of Piezo1 Channels: Implications for Stroke-like Episodes in PMM2-Congenital Disorder of Glycosylation
José M. Fernández Fernández (Barcelona, Spain)

C 21-07 Piezo1 mediates anti-inflammatory effects through altering small GTPases.
Johanna-Theres Borutta (Lübeck, Germany)

C 21-08 Mechanosensitive activation of TRPV4 induces pulmonary endothelial barrier failure via anoctamin 6-mediated phospholipid scrambling
Juliana Röder (Berlin, Germany)

C 21-09 Characterization of TRPM3 channels in satellite glial cells of mouse dorsal root ganglia
Júlia Castro-Marsal (Marburg, Germany)

C 21-10 Role of Piezo1 during phagocytosis
Mathilde Bourdin (Genève, Switzerland)

C 21-11 TRPV3 Upregulation and Pharmacological Modulation in Epidermal Keratinocyte Differentiation: Balancing Skin Barrier Restoration and Inflammatory Dynamics
Elina Da Sol Chung (Seoul, South Korea)

C 21-12 Establishment of an *ex vivo* heat stress model using the jejunum of broiler chickens
Julia Riedel (Berlin, Germany)

C 21-13 Unleashing the voltage sensing domain of CNG channels
Gizem Dokuzlu (Jena, Germany)

Saturday, 13 September 2025, 19:30 - 22:30
Room(s): Restaurant...

| Networking Event (outside of the congress venue)

Chairs:

Presentations:

Sunday, 14 September 2025, 9:00 - 10:30
Room(s): Solar

OS 20 | Cardiac Hypertrophy

Chairs:

Presentations:

9:00 OS 20-01 *Recapitulation of unequal cMyBP-C expression and alterations in contraction in a patient-specific hiPSC-CM model for hypertrophic cardiomyopathy*
Sarah A. Konze (Hannover, Germany)

9:15 OS 20-02 ESCRT-mediated exosomal dysregulation promotes hypertrophic cardiomyopathy progression in diabetes: Evidence from clinical and experimental models
Jiung-Pang Huang (Taichung City, Taiwan)

9:30 OS 20-03 MicroRNA 17-5p Modulation and Its Impact on Hypertrophic Cardiomyopathy Phenotype
Wilson Agyapong (Hannover, Germany)

9:45 OS 20-04 Suppressed Catecholaminergic Signaling Prevents Left Ventricular Hypertrophy in a Murine Heart Failure Model Treated with Dapagliflozin, a SGLT2 Inhibitor
Anna Vingborg (Aarhus C, Denmark)

10:00 OS 20-05 Hypertrophic Cardiomyopathy: Possible impact of burst-like transcription and unequal allelic expression of sarcomeric proteins on disease development
Theresia Kraft (Hannover, Germany)

10:15 OS 20-06 The Hypertrophic Cardiomyopathy associated myosin mutation R723G increases β/slow-myosin motor domain stiffness
Tim Scholz (Hannover, Germany)

Sunday, 14 September 2025, 9:00 - 10:30
Room(s): Satellit

OS 21 | Environmental and Comparative Physiology

Chairs:

Presentations:

9:00	OS 21-01	Atmospheric Particulate Matter Impairs Extravillous Trophoblast Function: Implications for Placental Physiology and Maternal-Fetal Health **Leonardo Ermini** (Siena, Italy)
9:15	OS 21-02	No evidence of aging in the coronary blood vessels of the world's longest-lived vertebrate, the Greenland shark. **Holly Shiels** (Manchester, UK)
9:30	OS 21-03	The evolutionary path of the epithelial sodium channel δ-subunit in Cetartiodactyla points to a role in sodium sensing **Mike Althaus** (Rheinbach, Germany)
9:45	OS 21-04	Seasonal patterns of activity and thermoregulation in free-Living tegu, *Salvator merianae* **Derek F. Campos** (Jaboticabal, Brazil)
10:00	OS 21-05	Does malaria infection affect mitochondrial metabolism in avian red blood cells? **Elisa Thoral** (La Rochelle, France)
10:15	OS 21-06	Age and Air Pollution - A Cardiotoxic Combination for Arrhythmogenesis **Ellie England** (Manchester, UK)

Sunday, 14 September 2025, 9:00 - 10:30
Room(s): Sirius

OS 22 | Cellular and Molecular Neuroscience 2

Chairs:

Presentations:

9:00	OS 22-01	Sensory neuron subclasses in cultured dorsal root ganglion cells from pig and mouse **Marc Behrendt** (Mannheim, Germany)
9:15	OS 22-02	Spontaneous seizures and deaths in APPswe/PS1dE9 Alzheimer's Disease model mice occur prior to the formation of amyloid-beta (Aβ) plaques **Peter P. Jones** (Dunedin, New Zealand)
9:30	OS 22-03	Astrocytic α7 nicotinic acetylcholine receptors dysfunction alters glutamate dynamics driving early synaptic and memory alterations in an Alzheimer’s Disease model **Maria Rosaria Tropea** (Catania, Italy)
9:45	OS 22-04	When homeostasis fails: M-current downregulation drives cortical hyperexcitability in Dravet Syndrome **Stefano Iavarone** (Tübingen, Germany)
10:00	OS 22-05	The role of SorCS2 protein in neurovascular signaling **Elizaveta Melnikova** (Aarhus, Denmark)
10:15	OS 22-06	A membrane-targeted photoswitch restores physiological ON/OFF responses to light in the degenerate mouse and rat retina **Fabio Benfenati** (Genova, GE, Italy)

Sunday, 14 September 2025, 9:00 - 10:30
Room(s): Mistral

OS 23 | Respiratory Physiology

Chairs:

Presentations:

9:00	OS 23-01	Airway targets for CF gene therapies: in vitro assessment of anion transport in common and rare cell types of the human airway epithelium. **Isabelle Rose** (London, UK)
9:15	OS 23-02	Sex-specific effect of ayahuasca on respiratory function in adult mice exposed to a model of anxiety **Luana Tenorio-Lopes** (Jaboticabal, Brazil)
9:30	OS 23-03	Predicting pulmonary vascular pathology using high-fidelity and low order models of the pulmonary circulation **Merryn Tawhai** (Auckland, New Zealand)
9:45	OS 23-04	Contribution of *Locus Coeruleus* ASIC1a Channels to CO?-Evoked Responses in Male Mice **Alana T. Frias** (Jaboticabal, Brazil)
10:00	OS 23-05	Role of Kv7 channels in postjunctional M2 muscarinic receptor-dependent contractions of airway smooth muscle **Srijit Ghosh** (Dundalk, Ireland)
10:15	OS 23-06	Optogenetic Activation of Somatostatinergic Local Interneurons Increases Breathing in Mice. **Nathalia Salim** (Ribeirao Preto, Brazil)

Sunday, 14 September 2025, 9:00 - 10:30
Room(s): Plateau

S 19 | HCN Channels: From Atomistic Resolution to Physiological Function

Chairs:

Presentations:

9:00	S 19-01	*Common Denominators: HCN channel plasticity determines cardiac conduction system function in health and in disease* **Alicia D'Souza** (London, UK)
9:30	S 19-02	Conventional and unconventional pharmacology of HCN pacemaker channels **Andrea Saponaro** (Milano, Italy)
9:45	S 19-03	HCN4 channels sense temperature and determine heart rate responses to heat **Qinchuan Wang** (Baltimore, USA)
10:00	S 19-04	Molecule, cell, organism: inferring genotype-phenotype correlations in HCN1-linked epilepsy **Bina Santoro** (New York, USA)

Sunday, 14 September 2025, 9:00 - 10:30
Room(s): Meridian

S 20 | The Biology of Big: Physiological Consequences of Living Large on a Changing Landscape

Chairs:

Presentations:

9:00	S 20-01	The last enigma of ocean giants: feeding behavior and thermal physiology of megamouth sharks **Yuuki Watanabe** (Hayama, Japan)
9:30	S 20-02	Scaling of locomotor performance from wild mice to elephants **Taylor Dick** (Brisbane, Australia)
9:45	S 20-03	Living Large in the Arctic – Dietary constraints and energetics of polar bears **Anthony M. Pagano** (Anchorage, USA)
10:00	S 20-04	Foraging in the largest whales and its physiological consequences **Jeremy Goldbogen** (Pacific Grove, USA)

Sunday, 14 September 2025, 9:00 - 10:30
Room(s): Horizont

S 21 | Respiratory Control Across the Aging and Health Spectrum

Chairs:

Presentations:

9:00 S 21-01 Phrenic Motor Neuron Death with Aging: A Failure of Mitochondrial Resilience
Gary Sieck (Rochester, USA)

9:30 S 21-02 Disrupted airway sensory reflex pathways contribute to Influenza-induced respiratory dysfunction
Alice McGovern (Parkville, Australia)

9:45 S 21-03 Adaptation in the neural control of human respiratory muscles in healthy ageing, chronic obstructive pulmonary disease and spinal cord injury
Anna Hudson (Bedford Park, Australia)

10:00 S 21-04 Age-related differences in diaphragm muscle response to mechanical ventilation in an experimental ICU model.
Lars Larsson (Uppsala, Sweden)

Sunday, 14 September 2025, 10:30 - 10:45
Room(s): Foyer

| Coffee Break

Chairs:

Presentations:

Sunday, 14 September 2025, 10:45 - 11:15
Room(s): Plateau

KL 17 | CFTR in Renal Acid Base Handling

Chairs:

Presentations:

10:45 KL 17 CFTR in Renal Acid Base Handling
Jens Leipziger (Aarhus, Denmark)

Sunday, 14 September 2025, 10:45 - 11:15
Room(s): Passat

KL 18 | IUPS Teaching Lecture

Chairs:

Presentations:

10:45 KL 18 Is now the time to start burning my books? Teaching physiology in our post-truth era of AI
Harry Witchel (Brighton, UK)

Sunday, 14 September 2025, 10:45 - 11:15
Room(s): Meridian

KL 19 | IUPS Te-Pei Feng Lecture

Chairs:

Presentations:

10:45 KL 19 Light and Life – From Eye to Brain
Tian Xue (Hefei, China)

Sunday, 14 September 2025, 10:45 - 11:15
Room(s): Horizont

KL 20 | The Deutsche Physiologische Gesellschaft Du Bois Reymond Prize Lecture (DPG)

Chairs:

Presentations:

10:45 KL 20 Defining thefunction of titin and myosin-binding protein C in cardiac and skeletal muscle
Anthony L. Hessel (Muenster, Germany)

Sunday, 14 September 2025, 11:25 - 11:55
Room(s): Plateau

KL 21 | IUPS Robert Pitts Lecture

Chairs:

Presentations:

11:25 KL 21 Epithelial Ion Transport in Pancreatic Ducts: From Physiology to Treatment
Péter Hegyi (Budapest, Hungary)

Sunday, 14 September 2025, 11:25 - 11:55
Room(s): Passat

KL 22 | Title: Developmental plasticity in the cerebral cortex

Chairs:

Presentations:

11:25 KL 22-01 Developmental plasticity in the cerebral cortex
Marta Nieto (Madrid, Spain)

Sunday, 14 September 2025, 11:25 - 11:55
Room(s): Meridian

KL 23 | IUPS August Krogh Lecture

Chairs:

Presentations:

11:25 KL 23 Molecular Mechanisms of Energy Metabolism: Non-shivering thermogenesis
Martin Jastroch (Stockholm, Sweden)

Sunday, 14 September 2025, 11:25 - 11:55
Room(s): Horizont

KL 24 | The Physiological Society Annual Review Prize Lecture

Chairs:

Presentations:

11:25 KL 24 Maternal Obesity, Studying Consequences for Mother and Child; from Physiology to Clinic to Population Health
Lucilla Poston (London, UK)

Sunday, 14 September 2025, 11:55 - 12:55
Room(s): Foyer

| Lunch Break

Chairs:

Presentations:

Sunday, 14 September 2025, 12:55 - 13:40
Room(s): Meridian

SL 07 | Development programming by obesity

Chairs:

Presentations:

12:55 SL 07 The developmental programming of the offspring´s immune and adipose cells by maternal obesity-insights into progenitor cell compromise and nutritional interventions
Paola Casanello (Santiago, Chile)

Sunday, 14 September 2025, 12:55 - 13:40
Room(s): Horizont

SL 08 | Neural and Circadian Control of Haematopoiesis

Chairs:

Presentations:

12:55 SL 08 Neural and Circadian Control of Haematopoiesis
Simon Mendez-Ferrer (Seville, Spain)

Sunday, 14 September 2025, 13:50 - 15:20
Room(s): Solar

OS 24 | Ion Channels and Transporters 2

Chairs:

Presentations:

13:50 OS 24-01 Targeting proteolytic ENaC activation to inhibit renal epithelial sodium absorption
Florian Sure (Erlangen, Germany)

14:05 OS 24-02 Structural basis of a novel cAMP regulatory mechanism in HCN Channels
Alessandro Porro (Milan, Italy)

14:20 OS 24-03 Enhanced activity of Guinea Pig δβγ-ENaC is independent of structural variants of the δ-knuckle domain
Rene Lawong (Rheinbach, Germany)

14:35 OS 24-04 Modulation of Piezo1 channel kinetics by a naturally occurring fatty acid contributes to endothelial functions
Yurou Cai (Leeds, UK)

14:50 OS 24-05 Treating Epilepsy with Lactate Receptor Agonists
Amal K. Bera (Chennai, India)

15:05 OS 24-06 Molecular characterization of the chloride permeation pathway in Vesicular Glutamate Transporters
Aleksandr Nikiforov (Jülich, Germany)

Sunday, 14 September 2025, 13:50 - 15:20
Room(s): Satellit

OS 25 | Kidney Function and Signalling

Chairs:

Presentations:

13:50 OS 25-01 The secretin receptor controls pendrin function: implications for acid/base balance during prolonged base loading
Mads Vaarby Sørensen (Aarhus, Denmark)

14:05 OS 25-02 Role of SLC26A2 in the kidney
Iana Lukianova (Berlin, Germany)

14:20 OS 25-03 Proteinuria - a critical parameter for urinary tract infections in patients with chronic kidney disease
Laura V. Sparsø (Aarhus C, Denmark)

14:35 OS 25-04 Aging uncovers the critical role of WDR72 for kidney function in mice
Hannah Auwerx (Zurich, Switzerland)

14:50 OS 25-05 Targeting the ANGPT2/TIE2 signaling axis alleviates diabetic complications in the BTBR ob/ob mouse
Amanda M. Marks-Hultström (Uppsala, Sweden)

15:05 OS 25-06 NFAT5-Mediated Induction of Renal 2,3-Bisphosphoglycerate Mutase supports Hypertonic Stress Adaptation.
Vera A. Kulow (Berlin, Germany)

Sunday, 14 September 2025, 13:50 - 15:20
Room(s): Sirius

OS 26 | Muscle Physiology

Chairs:

Presentations:

13:50 OS 26-01 Changes in maximal oxygen consumption, VT2, ventilatory and metabolic efficiency in patients with hypertrophic cardiomyopathy following 12 weeks of concurrent resistance and cardiorespiratory training
Adrián Bayonas-Ruiz (Murcia, Spain)

14:05 OS 26-02 Fibre-type dependent proteomics reveal distinct mitochondrial and proteasomal specialization in low-oxidative skeletal muscle fibres
Koen A.E. Zwetsloot (Amsterdam, Netherlands)

14:20 OS 26-03 Characterization of skeletal muscle in a murine model of peripheral artery disease
Johanna T. Lanner (Stockholm, Sweden)

14:35 OS 26-04 Temporal regulation of ribosome heterogeneity during skeletal muscle regeneration
Minying Cui (Stockholm, Sweden)

14:50 OS 26-05 An Inability to Recover: Reduced Satellite Cells in Patients with ME/CFS and long COVID
Braeden T. Charlton (Amsterdam, Netherlands)

15:05 OS 26-06 Skeletal muscle disruption and mitochondrial dysfunction cause BAG3^{P209L}-myofibrillar myopathy
Kerstin Filippi (Bonn, Germany)

Sunday, 14 September 2025, 13:50 - 15:20
Room(s): Mistral

OS 27 | Microcirculation and Vascular Physiology

Chairs:

Presentations:

13:50 OS 27-01 Impaired Skeletal Muscle Oxygenation and Microvascular Dysfunction in Long COVID and ME/CFS
Anouk Slaghekke (Amsterdam, Netherlands)

14:05 OS 27-02 Connexin 43 Hemichannels: Key Regulators of Microvascular Function
Veronica A. Kuzdowicz (Newark, USA)

14:20 OS 27-03 A2B receptor activation induces pulmonary vasorelaxation and prevents pulmonary hypertension
Jana Lewandowski (Bochum, Germany)

14:35 OS 27-04 Harnessing nebulized nitrite to protect the brain during ischaemic stroke in the aged spontaneous hypertensive rat
Sryana A. Sukhdev (Auckland, New Zealand)

14:50 OS 27-05 Stiffening-induced activation of YAP1 mitigates mitochondrial stress and drives metabolic reprogramming for endothelial hyperproliferation in pulmonary hypertension associated with left heart disease
Mariya M. Kucherenko (Berlin, Germany)

15:05 OS 27-06 Lack of *Lpp* expression and its impact on vascular smooth muscle cell differentiation
Alexandra Sporkova (Heidelberg, Germany)

Sunday, 14 September 2025, 13:50 - 15:20
Room(s): Plateau

S 22 | Competency-based education: Core concepts and skills

Chairs:

Presentations:

13:50 S 22-01 Designing and mapping competency-based curricula
Dee U. Silverthorn (Austin, USA)

14:15 S 22-02 Towards a unified curriculum: the African experience
M. Faadiel Essop (Cape Town, South Africa)

14:35 S 22-03 Creating a unified curriculum using the physiology core concepts in the Australian higher education context
Kathy Tangalakis (Melbourne, Australia)

14:55 S 22-04 Use of Objective Structured Practical Examinations (OSPEs) to assess physiology student practical skills and professional competencies.
Derek Scott (Aberdeen, UK)

15:15 S 22-05 Panel discussion and closing remarks

Sunday, 14 September 2025, 13:50 - 15:20
Room(s): Meridian

S 23 | Natural Computation

Chairs:

Presentations:

13:50 S 23-01 The neuronal basis of numerical cognition in humans and nonhuman primates
Andreas Nieder (Tübingen, Germany)

14:20 S 23-02 The continuous vs. the discrete in mental life: Studies in perception, memory, and decision-making
Joan Danielle K. Ongchoco (Vancouver, Canada)

14:35 S 23-03 Understanding haptic perception of object shape and material via DNN modelling
Anna Metzger (Poole, UK)

14:50 S 23-04 Mental programming of spatial sequences in working memory in the macaque frontal cortex
Liping Wang (Shanghai, China)

Sunday, 14 September 2025, 13:50 - 15:20
Room(s): Horizont

S 24 | Time to Move: Type, Frequency, Dose and Timing Considerations for Physical Activity

Chairs:

Presentations:

13:50	S 24-01	Is regular movement more effective than one daily exercise bout at reducing metabolic disease risk? **Audrey Bergouignan** (Strasbourg, France)
14:20	S 24-02	Introduction to circadian and diurnal physiology **Christopher Depner** (Salt Lake City, USA)
14:35	S 24-03	Intensity matters: why intensity is critical to optimise the benefits of exercise as medicine **David J. Bishop** (Melbourne, Australia)
15:05	S 24-04	Impact of circadian timing of exercise and eating on cardiometabolic health and fitness **Josiane Broussard** (Fort Collins, USA)

Sunday, 14 September 2025, 15:30 - 16:50
Room(s): Horizont

| Prize Giving and Closing Ceremony

Chairs:

Presentations: