



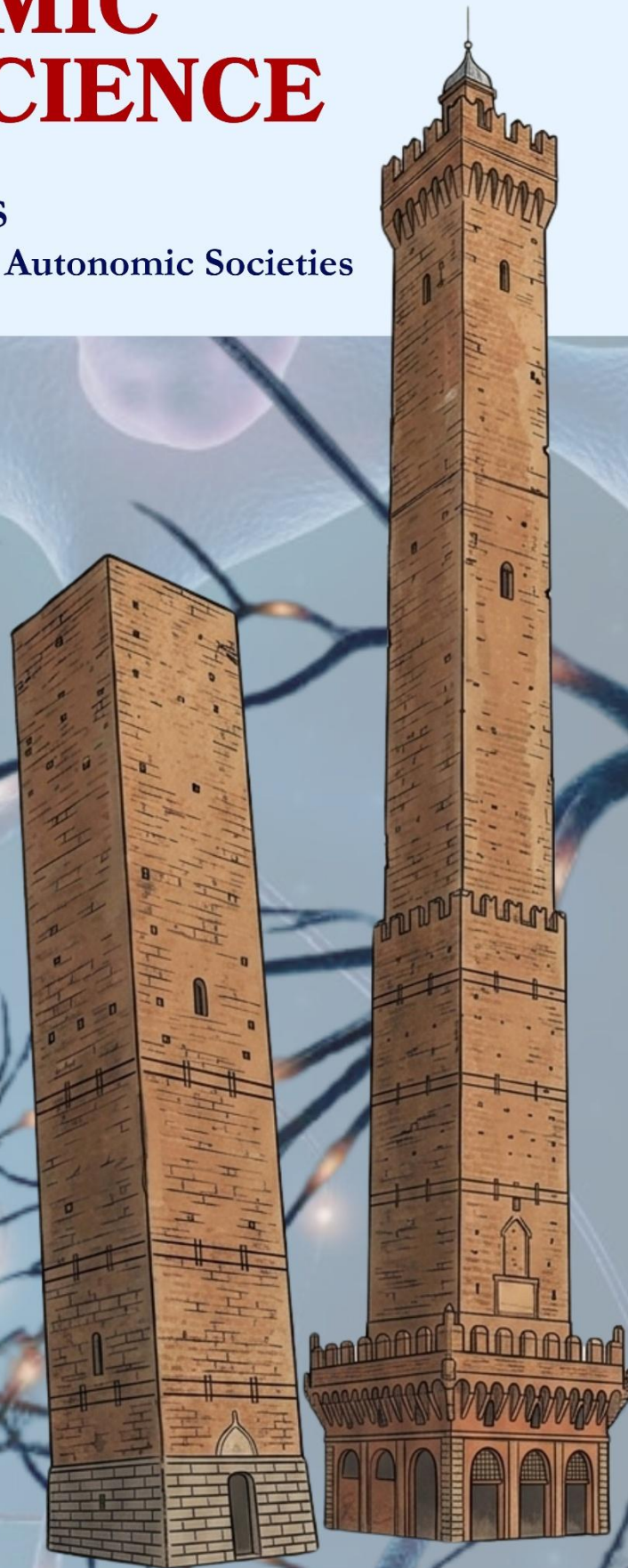
14th Congress of the
**INTERNATIONAL
SOCIETY FOR
AUTONOMIC
NEUROSCIENCE**



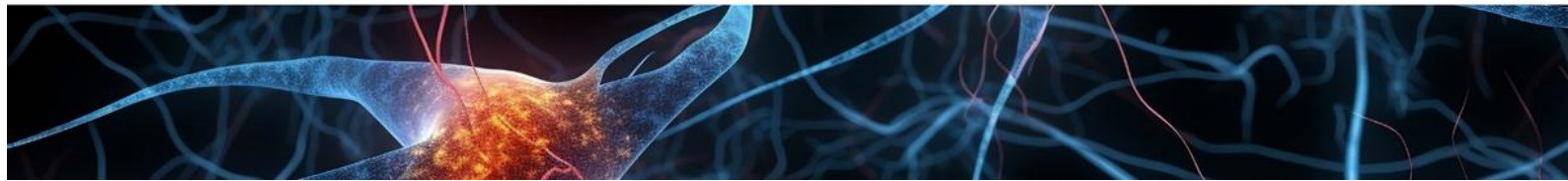
Joint Meeting with EFAS
European Federation of Autonomic Societies

Bologna, Italy
2-5 September
2026

Plesso Belmeloro
University of Bologna



PROGRAM



CHAIRS

Davide Martelli - Chiara Berteotti
(University of Bologna)

ORGANIZING COMMITTEE

Roberto Amici – Chiara Berteotti - Giovanna Calandra Buonauro - Pietro Cortelli
Pietro Guaraldi - Timna Hitrec - Davide Martelli - Giovanna Zoccoli

PRESENTATION

The 14th Congress of the International Society for Autonomic Neuroscience (ISAN), jointly organized with the European Federation of Autonomic Societies (EFAS), held at the University of Bologna (Italy), will focus on current advances in the understanding of autonomic nervous system physiology and pathophysiology, with particular emphasis on mechanisms of disease and translational perspectives.

The scientific program is structured around keynote lectures, thematic symposia, hot topic sessions, and poster presentations covering both basic and clinical research. Major areas include cardiovascular autonomic regulation in health and disease, molecular and cellular drivers of cardiac autonomic dysfunction, and altered sympathetic activity in heart failure. Specific sessions address electroceuticals and neuromodulation strategies, including vagus nerve stimulation, as well as transcriptomic and circuit-level analyses of autonomic ganglia.

Neuroimmune interactions represent a central theme of the meeting, with dedicated sessions exploring inflammatory neural circuits, sympathetic regulation of immune responses, and the role of autonomic pathways in obesity and cancer progression. Additional program components examine autonomic dysfunction in neurodegenerative disorders, multiple system atrophy, multiple sclerosis, protein misfolding diseases, and lysosomal storage disorders, with attention to mechanisms and clinical implications.

Clinical autonomic disorders are addressed through sessions on orthostatic syndromes and their management, as well as on sleep, circadian biology, and interoception in relation to autonomic regulation. Interdisciplinary perspectives also include autonomic involvement in gastrointestinal function and broader systemic diseases.

Overall, the congress program provides an integrated overview of current research directions in autonomic neuroscience, spanning molecular mechanisms, systems physiology, disease models, and clinical applications in the context of autonomic disorders, that represent a substantial and often under-recognized clinical burden across multiple medical specialties and require continued advances in mechanistic understanding to improve diagnostic and therapeutic strategies.



CONFERENCE PROGRAMME

WEDNESDAY, 2 SEPTEMBER 2026

ROOM C

10:00 – 13:00 **EFAS session**
Practical session: Hands on

RECEPTION AREA

13:00 – 14:00 **Registration**

ROOM B

14:00 – 15:00 **OPENING CEREMONY**

15:00 – 16:00 KEYNOTE LECTURE
Ana Domingos, University of Oxford, UK
Sympathetic neuroimmunity in obesity

ROOM A

16:00 – 18:00 *Symposium 1*
CHEMOREFLEX AND AUTONOMIC DYSFUNCTION: FROM MECHANISMS TO THERAPEUTIC TARGETS ACROSS DISEASES
Chair: Rodrigo Del Rio (University of Kansas Medical Center, USA)

16:00 – 16:20 **Heart Failure with Preserved Ejection Fraction: Role of chemoreflex drive on tuning disease progression**
Rodrigo Del Rio (University of Kansas Medical Center, USA)

16:20 - 16:40 **Chemoreflex Adaptations in Metabolic Disease and Obesity**
Silvia Conde (University NOVA Lisboa, Portugal)

16:40 – 17:00 **Fructose Ingestion during the Peripubertal Period increase Blood Pressure and Sympathetic Activity in Adult Male but not in Female Rats**
Deborah Colombari (UNESP, Brazil)

17:00 – 17:20 **Chemoreflex Sensitivity as a Therapeutic Target in Sleep Apnea and Heart Failure**
Alberto Giannoni (Scuola Superiore Sant'Anna, Italy)



WEDNESDAY, 2 SEPTEMBER 2026

ROOM A

Selected Abstracts

- 17:20 – 17:35 **Brainstem respiratory network activity during the hypoxic ventilatory response**
Rishi Dhingra (*Case Western Reserve University, United States*)
- 17:35 – 17:50 **Memantine rescues cardiorespiratory chemoreflex dysfunction following acute irreversible cholinesterase inhibition in female rats**
Lopes Macedo Breno (*Federal University of Espírito Santo, Brazil*)
- 17:50 – 18:00 Discussion

ROOM B

- 16:00 – 18:00** *Symposium 2*
CENTRAL AND PERIPHERAL INVESTIGATION OF THE AUTONOMIC REGULATION OF CARDIOVASCULAR FUNCTION IN HEALTH, DISEASE AND INJURY
Chairs: Clement Menuet (Aix-Marseille University, France)
Davi J.A. Moraes (University of São Paulo, Brazil)
- 16:00 – 16:20 **Acute intermittent carotid bodies stimulations induce long-term facilitation of respiratory-cardiovascular coupling in rats**
Ambre Linossier (*Aix-Marseille University, France*)
- 16:20 – 16:40 **Lateral parafacial neurons evoked expiratory oscillations driving neurogenic hypertension**
Davi J.A. Moraes (*University of São Paulo, Brasil*)
- 16:40 - 17:00 **Investigating end-organ regulation through direct cardiac autonomic nerve recordings**
Julia Shanks (*University of Auckland, New Zealand*)
- 17:00 - 17:20 **Heart and respiratory central regulation changes during the acute phase of brain injury**
Baptiste Balanca (*Université Claude Bernard Lyon 1, France*)



WEDNESDAY, 2 SEPTEMBER 2026

ROOM B

Selected Abstracts

- 17:20 – 17:35 **Spontaneous bursts of muscle sympathetic nerve activity transiently reduce skeletal muscle vascular compliance in humans**
Iannarelli Nathaniel (*Brock University, Canada*)
- 17:35 – 17:50 **A glutamatergic interneuron circuit in the lateral parafacial region controlling active expiration and arterial pressure in mice**
Juliana Reis Souza (*University of São Paulo, Brazil*)
- 17:50 – 18:00 Discussion

ROOM G

- 16:00 – 18:00** *Symposium 3*
BEYOND THE AVERAGE HUMAN: NEW INSIGHTS FROM INTERINDIVIDUAL VARIABILITY IN AUTONOMIC CONTROL
Chairs: Lauro C. Vianna (University of Brasília, Brazil)
James P. Fisher (University of Auckland, New Zealand)
- 16:00 – 16:20 **Interindividual Variability in Muscle Sympathetic Nerve Activity at Rest and During Exercise: Disconnection with Blood Pressure**
Philip Millar (*University of Guelph, Canada*)
- 16:20 – 16:40 **Interindividual Variability in Sympathetic Contributions to Hypertension and Response to Interventional Therapies**
Jens Jordan (*German Aerospace Center (DLR), Germany*)
- 16:40 – 17:00 **Interindividual Variability in Autonomic and Hemodynamic Responses in Pulmonary Arterial Hypertension**
Michael Plunkett (*Royal Brompton Hospital, UK*)
- 17:00 – 17:20 **Interindividual Variability in Orthostatic Disorders: Mechanistic and Clinical Insights**
Marie-Claire Seeley (*University of Adelaide & CEO, Australian POTS Foundation, South Australian Health and Medical Research Institute, Australia*)



WEDNESDAY, 2 SEPTEMBER 2026

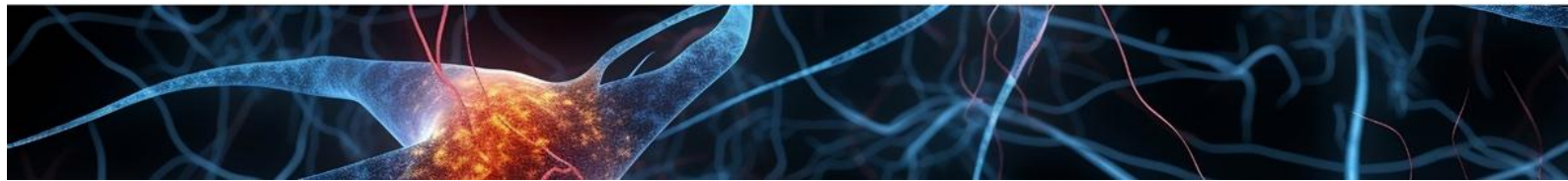
ROOM G

Selected Abstracts

- 17:20 – 17:35 **Who Benefits from Slow Breathing? Mindfulness, Anxiety, and Worry Contribute to Heterogeneity in Blood Pressure Responses**
Erica Wehrwein (*Michigan State University, USA*)
- 17:35 – 17:50 **Cardiac autonomic response to active standing and olfactory function in older adults**
Sae Uchida (*Tokyo Metropolitan Institute for Geriatrics and Gerontology, Japan*)
- 17:50 – 18:00 Discussion

ROOM C

- 16:00 – 18:00** *Symposium 4*
EARLY DETECTION AND MONITORING OF DISEASE PROGRESSION IN PROTEIN MISFOLDING DISEASES AND LYSOSOMAL STORAGE DISORDER
*Chairs: Astrid Juhl Terkelsen (Aarhus University Hospital, Denmark)
Max Hilz (Universitätsklinikum Erlangen, Germany & Icahn School of Medicine at Mount Sinai, USA)*
- 16:00 – 16:20 **Screening of patients with polyneuropathy and neurogenic autonomic dysfunction for early detection of amyloidosis and Lewy Body Disease**
Astrid Juhl Terkelsen (*Aarhus University Hospital, Denmark*)
- 16:20 – 16:40 **Polyneuropathy as an early manifestation of Lewy body disease?**
Naja Helt Andersen (*Aarhus University Hospital, Denmark*)
- 16:40 – 17:00 **Monitoring of patients and asymptomatic carriers with hereditary transthyretin amyloidosis to identify disease progression**
Pietro Guaraldi (*IRCCS Istituto delle Scienze Neurologiche di Bologna, Italy*)
- 17:00 – 17:20 **Similarities and differences between Fabry Disease and TTRAmyloidosis**
Max Hilz (*Universitätsklinikum Erlangen, Germany & Icahn School of Medicine at Mount Sinai, USA*)

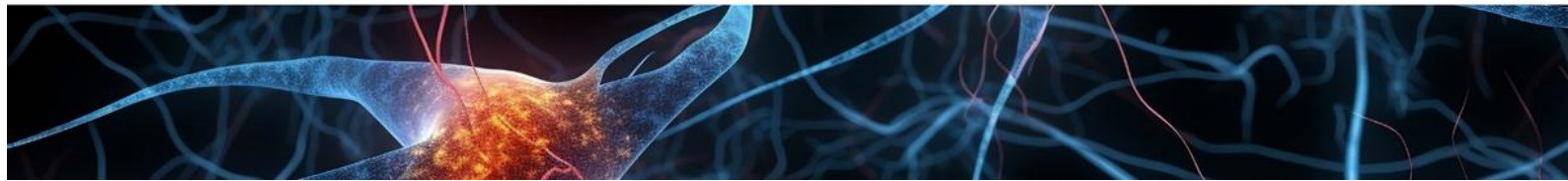


WEDNESDAY, 2 SEPTEMBER 2026

ROOM C

Selected Abstracts

- | | |
|---------------|---|
| 17:20 – 17:35 | Cardiovascular autonomic failure in hereditary non-transthyretin amyloidosis
Laura Sander (<i>University Hospital Basel, Switzerland</i>) |
| 17:35 – 17:50 | Real-World Impact of Vutrisiran on Autonomic Dysfunction and Disability in Hereditary Transthyretin Amyloidosis
Micol Gianoli, Bologna (<i>AUSL Bologna, Italy</i>) |
| 17:50 – 18:00 | Discussion |
| 18:00 – 20:00 | <i>Welcome cocktail</i> |



THURSDAY, 3 SEPTEMBER 2026

ROOM B

- 08:30 – 10:30** *Symposium 5*
CARDIOVASCULAR AUTONOMIC DISORDERS IN CLINICAL PRACTICE
Chairs: Celine Gallagher (University of Adelaide, Australia)
Helen Eftekhari (University of Warwick, UK)
- 08:30 – 08:50** **Mechanistic Insights into POTS and IST: Autonomic Dysfunction, Inflammation and Hemodynamic Regulation**
Artur Fedorowski (Karolinska University Hospital, Sweden)
- 08:50 – 09:10** **Long-COVID POTS have different autonomic function and quality-of-life than non-COVID-related POTS**
Rashnim Hira (University of Calgary, Canada)
- 09:10 - 09:30** **Cardiovascular Autonomic Abnormalities in Post-Acute Sequelae of COVID-19: Mechanistic Overlap with POTS and Implications for Management**
Marie-Claire Seeley (University of Adelaide & Australian POTS Foundation, Australia)
- 09:30 - 09:50** **Does neurogenic orthostatic hypotension matter?**
Fabian Leys (Medical University of Innsbruck, Austria)
- 09:50 - 10:10** **Fixing Perturbed Physiology: Dietary Salt and Compression to Treat Postural Orthostatic Tachycardia Syndrome (POTS)?**
Satish Raj (University of Calgary, Canada)
- 10:10 - 10:30** **Patient's perspective: the POTS face we don't see, patient insights on living with POTS**
Jennifer Camaradou (Patient, UK)



THURSDAY, 3 SEPTEMBER 2026

ROOM G

08:30 – 10:30

Symposium 6

THE FAILING DIALOGUE: MOLECULAR AND CELLULAR DRIVERS OF CARDIAC AUTONOMIC DYSFUNCTION

Chairs: Beth Habecker (OHSU School of Medicine, Portland, USA)

Hanjun Wang (University of Nebraska Medical Center, Nebraska, USA)

08:30 – 08:50

Precise nanomedicine targeting cardiac sympathetic afferents to treat chronic heart failure

Hanjun Wang (University of Nebraska Medical Center, USA)

08:50 – 09:10

Non-invasively targeting cardiac sympathetic neurons with millimeter precision in patients with recurrent ventricular arrhythmias. A first in human study

Ben Bussmann (University of Oxford, UK)

09:10 – 09:30

The role of glial cells in the cardiac autonomic nervous system: The missing link for nervous hearts?

Katarina Scherschel (Heinrich-Heine University, Germany)

09:30 – 09:50

Head to heart: non-invasive assessment of sympathetic tone using sympathetic vasomotion

Peter Pellegrino (University of Nebraska Medical Center, USA)

Selected Abstracts

09:50 – 10:05

Decoding baroreflex dysfunction after spinal cord injury: implications for autonomic dysreflexia

Shaoping Hou (University of Missouri, USA)

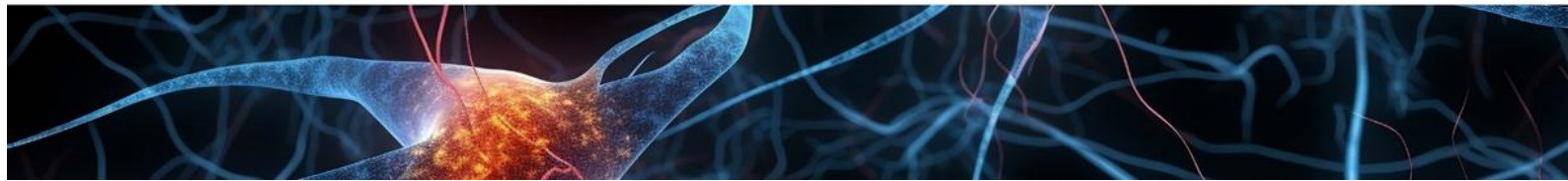
10:05 – 10:20

Strain dependent and chamber specific variations in cardiac cholinesterase activity in female rats: implications for normotensive controls and hypertensive models

Kissylla Brisson da Silva (Federal University of Espirito Santo, Brazil)

10:20 – 10:30

Discussion



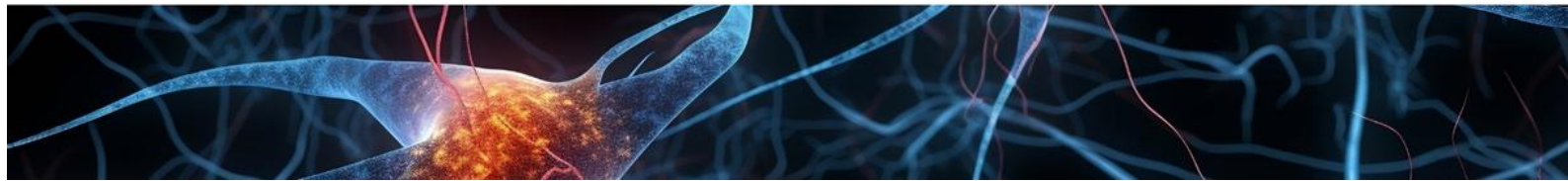
THURSDAY, 3 SEPTEMBER 2026

ROOM A

- 08:30 – 10:30** *Symposium 7*
NEUROIMMUNE INTERACTION: HOW MUCH MORE DO WE HAVE TO DISCOVER?
Chairs: Alessandra Occhinegro (The Florey Institute, Australia)
- 08:30 – 08:50** **Peripheral mechanism of sympathetic anti-inflammatory action**
Alessandra Occhinegro (The Florey Institute, Australia)
- 08:50 – 09:10** **Vagal regulation of adrenergic tone impacts effective antiviral immunity in the central nervous system**
Kaitlin Murray (University of California, USA)
- 09:10 – 09:30** **TNF- α drives carotid body and autonomic dysfunction in dysmetabolic states: reversal through anti-inflammatory modulation**
Silvia Conde (Universidade Nova de Lisboa, Portugal; Universidad de Valladolid, Spain)
- 09:30- 09:50** **Human Cadaveric Tissues: A Critical Bridge for Translational Neuro-Immune Research**
Cindy Cleypool (University Medical Center Utrecht, The Netherlands)

Selected Abstracts

- 09:50- 10:05** **Brain regions regulating systemic inflammation**
Michael McKinley (University of Melbourne, Australia)
- 10:05- 10:20** **Contribution of β 2-adrenergic and neuropeptide y-type 1 receptors to the anti-inflammatory effects mediated by the inflammatory reflex**
Zuzana Tonelli Gombalova (University of Bologna, Italy)
- 10:20 – 10:30** Discussion



THURSDAY, 3 SEPTEMBER 2026

ROOM C

- 08:30 – 10:30** *Symposium 8*
**AUTONOMIC DYSFUNCTION IN NEURODEGENERATIVE DISORDERS:
 FROM MECHANISMS TO THERAPIES**
Chairs: Giovanna Calandra Buonaura (University of Bologna, Italy)
Walter Struhal (University Hospital Tulln, Austria)
- 08:30 – 08:50** **Mechanisms of Neurodegeneration**
Paolo Calabresi (Università Cattolica del Sacro Cuore, Italy)
- 08:50 – 09:10** **Autonomic Dysfunction in Neurodegenerative Disorders**
Valeria Iodice (University College London Hospital, UK)
- 09:10 – 09:30** **Symptomatic and Disease-Modifying Treatments in Neurodegenerative Disorders**
Alessandra Fanciulli (Medical University of Innsbruck, Austria)

Selected Abstracts

- 09:30 – 09:45** **Pure Autonomic Failure: A Peripheral Neurodegenerative Disease With High Risk
 of Phenoconversion to Central Synucleinopathy**
Christopher Gibbons (Beth Israel Deaconess Medical Center, Harvard Medical School, USA)
- 09:45 – 10:00** **Combined Cardiovascular Autonomic Failure and Cognitive Impairment as
 Independent and Additive Predictors of Progression and Phenoconversion in
 Isolated REM Sleep Behavior Disorder**
Luca Baldelli (University of Bologna, Italy)
- 10:00 – 10:15** **Autonomic failure in patients with IgLON5 disease: broadening the spectrum**
Judith Navarro-Otano (Hospital Clinic Barcelona, Spain)
- 10:15 – 10:30** Discussion

ROOM C

- 10:30 – 11:00** *Sponsor Speech*
**THE VALUE OF MEASURING CONTINUOUS NON-INVASIVE
 BLOODPRESSURE AND HEMODYNAMICS IN AUTONOMIC TESTING.**
By the Company Finapress
Frauke Luft (Finapress)



THURSDAY, 3 SEPTEMBER 2026

POSTER AREA

10:30 – 11:30 POSTER SESSION 1 (and refreshment)

ROOM B

11:30 – 12:15 KEYNOTE LECTURE

Pietro Cortelli; University of Bologna, Italy

Sleep and the Autonomic Nervous System: Clinical Insights and Pathophysiology

12:15 – 12:45 Presentation of the bids to host ISAN 2028

12:45 – 13:45 Lunch

13:45 – 15:15 HOT TOPIC SESSION

Chair: Davide Martelli (University of Bologna, Italy)

Wouter de Jonge (University of Amsterdam, Netherlands; University Clinic Bonn, Germany).

13:45 - 14:00 Premotor neurons of the splanchnic anti-inflammatory pathway

Robin McAllen (ISAN, Florey Institute, Australia)

14:00 - 14:15 The association between obesity and the functions of the autonomic nervous system in young adults

Bagchi Sovan (Gulf Medical University, United Arab Emirates)

14:15 - 14:30 Maternal Accuracy in Perceiving Fetal Movements: Influence of Mental Health and Interoceptive Abilities — A Pilot Study

Caroline Sévoz-Couche (Bicetre Hospital, France)

14:15 - 14:30 I Intestinal vagal serotonin signaling links gut dysbiosis to hypertension

Jasenska Zubcevic (University of South Florida, USA)

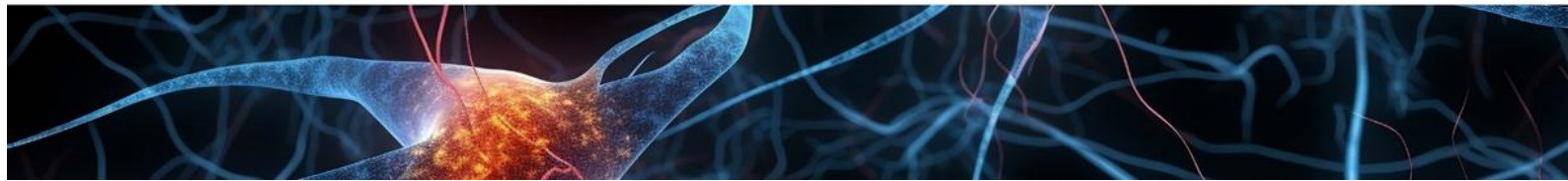
14:30 - 14:45 Beyond the Baroreflex: A Prefrontal-Thalamic-Brainstem Network Preceding Spontaneous Sympathetic Burst Generation

Braun Joe (Swinburne University, Australia)

14:45 - 15:00 Splanchnic denervation enhances bacterial clearance during Streptococcus pneumoniae infection

Elisa De Angelis (University of Bologna, Italy)

15:00 – 15:15 Discussion



THURSDAY, 3 SEPTEMBER 2026

POSTER AREA

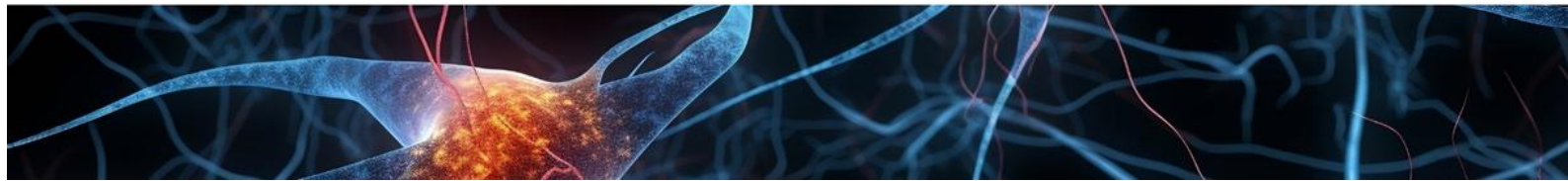
15:15 – 16:00 POSTER SESSION 2 (and refreshment)

ROOM A

- 16:00 – 18:00** *Symposium 9*
ELECTROCEUTICALS FOR CONTROLLING CARDIORESPIRATORY DISEASES
Chair: Julian Paton (University of Auckland, New Zealand)
- 16:00 - 16:20 **Cardioprotection through a brain-gut-heart axis: GLP-1R/KATP signalling in cardiac pericytes prevents coronary no-reflow**
 Svetlana Mastitskaya (*University of Bristol, UK*)
- 16:20 - 16:40 **Stellate ganglion modulation to control autonomic transmitter release**
 Tina Vrabec (*MetroHealth Medical Center, USA*)
- 16:40 - 17:00 **Modulation of renal interoception to treat cardiometabolic diseases: What is the kidney whispering to, or shouting at, the brain?**
 John Osborn (*University of Minnesota, USA*)
- 17:00 – 17:20 **Bionic pacemaking**
 Julian F.R. Paton (*University of Auckland, New Zealand*)
- 17:20 – 17:40 **Spatially Selective Vagus Nerve Stimulation Reveals Functional Organisation of Human Cardiac Vagal Fibres**
 Nicole Thompson (*University College London, UK*)

Selected Abstracts

- 17:40 – 17:55 **Effects of 4-Week Transcutaneous Vagus Nerve Stimulation on Orthostatic Tachycardia, Autonomic Symptom Burden, and Inflammation in Long-COVID POTS**
 Tatiana Solis-Montenegro (*University Medical Center, USA*)
- 17:55 – 18:00 Discussion



THURSDAY, 3 SEPTEMBER 2026

ROOM G

16:00 – 18:00 *Symposium 10*

PRECISELY WHAT IS TORPOR? CAN WE SYNTHESISE IT?

Chairs: Ludovico Taddei (University of Bristol, UK);

Carla Frare (University of Bristol, UK)

16:00 - 16:20 **Autonomic changes during natural torpor in the mouse**

Steven Swoap (*Williams College, USA*)

16:20 - 16:40 **Engineering hibernation: Exploring synthetic torpor induction methods and future perspectives**

Timna Hitrec (*University of Bologna, Italy*)

16:40 - 17:00 **Brain Circuits and Central Mechanisms Enabling Survival under Extreme Conditions**

Natalia Machado (*Harvard Medical School, USA*)

17:00 – 17:20 **Synthetic torpor: clone or counterfeit**

William Wheatley (*University of Bristol, UK*)

Selected Abstracts

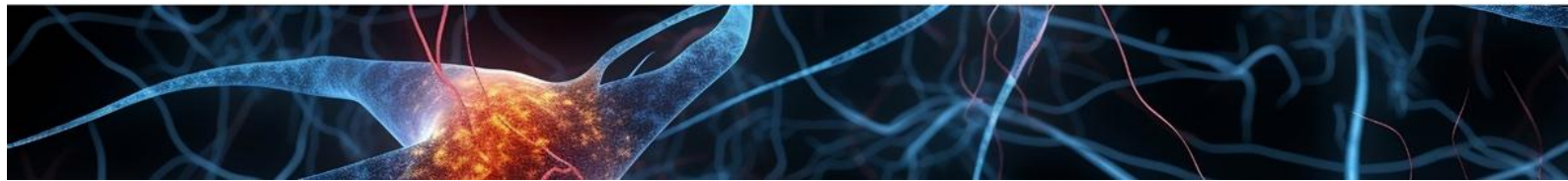
17:20 – 17:35 **Synthetic torpor in the rat protects the heart from ischemia-reperfusion injury**

Mike Ambler (*University of Bristol, UK*)

17:35 – 17:50 **Whole-brain mapping of neuronal populations engaged during LPS-induced hypothermia**

Ludovico Taddei (*University of Bristol, UK*)

17:50 – 18:00 Discussion



THURSDAY, 3 SEPTEMBER 2026

ROOM B

16:00 – 18:00 *Symposium 11*
CARDIAC INNERVATION PATTERNS GOVERNING CARDIOVASCULAR FUNCTION IN HEALTH AND DISEASE
Chairs: Olujimi Ajijola (University of California, USA)
Zixi Jack Cheng (University of Central Florida, USA)

16:00 – 16:20 **Innervation of the human heart and changes associated with cardiomyopathy**
Peter Hanna (*University of California, USA*)

16:20 – 16:40 **Cardiac sympathetic neurons: victims and culprits in Arrhythmogenic Cardiomyopathy (ACM)**
Tania Zaglia (*University of Padova, Italy*)

16:40 – 17:00 **Cardiac vagal innervation of myocardial vasculature in the ovine heart**
Julia Shanks (*University of Auckland, New Zealand*)

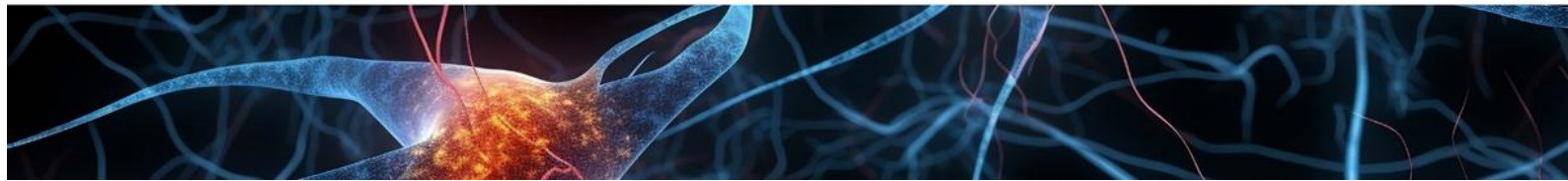
17:00 – 17:20 **Heterogeneous cardiac sympathetic innervation gradients promote arrhythmogenesis in murine dilated cardiomyopathy**
Olujimi Ajijola (*University of California, USA*)

Selected Abstracts

17:20 – 17:35 **Spinal Afferent Innervation from the Left Dorsal Root Ganglia in Flat- Mounts of Whole Ventricles of Rats: Anterograde Tracing**
Cheng Zixi (*University of Central Florida, USA*)

17:35 – 17:50 **Organ-selective sympathetic preganglionic neurons across metabolic organs reveal segregated circuits and distinct molecular signatures**
Sang-Hyeon Ju (*KAIST, AI-CRED, Republic of Korea*)

17:50 – 18:00 Discussion



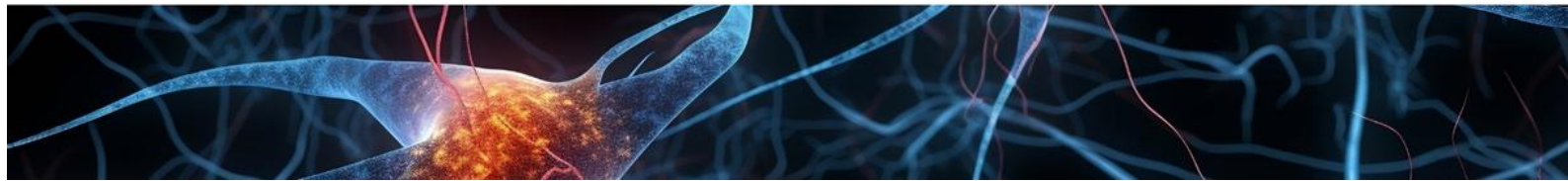
THURSDAY, 3 SEPTEMBER 2026

ROOM C

- 16:00 – 18:00** *Symposium 12*
AUTONOMIC DYSFUNCTION IN MULTIPLE SCLEROSIS: FROM MECHANISMS TO CLINICAL IMPLICATIONS
Chairs: Claire Hentzen (Sorbonne Université, France)
Mario Habek (University Hospital Center Zagreb, Croatia)
- 16:00 – 16:20** **COMPASS-31 and Tilt-Test HRV Parameters as Biomarkers of Disease Activity in Pediatric IBD**
Mario Habek (University Hospital Center Zagreb, Croatia)
- 16:20 – 16:40** **Central autonomic network disturbance in multiple sclerosis: implications for the clinic and research**
Giorgio Guido (IRCCS San Raffaele Scientific Institute, Italy)
- 16:40 – 17:00** **Urogenital and gastroenterological dysfunction in multiple sclerosis: implications for the clinic and research**
Claire Hentzen (Sorbonne University, France)

Selected Abstracts

- 17:00 – 17:15** **Characterizing sweating problems in multiple sclerosis: insights from QSART, SUDOSCAN, and COMPASS-31**
Magdalena Krbot Skorić (University Hospital Centre Zagreb, Croatia)
- 17:15 – 17:30** **Autonomic–Immune Interactions and MRI Activity in Multiple Sclerosis**
Katarina Tešija (University Hospital Centre Zagreb, Croatia)
- 17:30 – 17:45** **Fingolimod-induced cardiac autonomic changes in patients with relapsing-remitting multiple sclerosis seem reversible after Fingolimod-discontinuation**
Ruihao Wang (University of Erlangen-Nuremberg, Germany)
- 17:45 – 18:00** Discussion



FRIDAY, 4 SEPTEMBER 2026

ROOM B

08:30 – 10:30

Symposium 13

DYSFUNCTION OF THE AUTONOMIC NERVOUS SYSTEM IN CARDIOVASCULAR DISEASE

Chairs: Molly O'Reilly (Academic Medical Centre, Netherlands)

Laura Fedele (King's College London, UK)

08:30 - 08:50

Early Sympathetic Network Remodeling Precedes Structural Disease and Shapes the Arrhythmogenic Substrate in Desmoplakin Cardiomyopathy

Induja Perumal Vanaja (University of Padova, Italy)

08:50 - 09:10

Neurovascular interactions in the ageing heart

Julian Wagner (University of Frankfurt, Germany)

09:10 - 09:30

Superior Cervical Ganglion: a driver of carotid bodies hyperexcitation in hypertension

Igor Felipe (University of Auckland, New Zealand)

09:30 - 09:50

Sympatho-vagal cross talk in health and disease

Marmar Vaseghi (University of California, USA)

Selected Abstracts

09:50 - 10:05

Pathways involved in regulating the excitability of hiPSC-derived sympathetic neurons

Laura Fedele (King's College London, UK)

10:05 - 10:20

Opposite cardiac autonomic responses to different blood components in a rat model of subarachnoid hemorrhage

Luca Alberti (University of Bologna, Italy)

10:20 – 10:30

Discussion



FRIDAY, 4 SEPTEMBER 2026

ROOM A

08:30 – 10:30 *Symposium 22*
INTERDISCIPLINARY STUDIES OF NERVOUS SYSTEMS ASSOCIATED WITH THE GASTROINTESTINAL TRACT AND BEYOND
Chairs: Hiromi Tamada (University of Fukui, Japan)
Shinji Tanaka (The University of Tokyo Hospital, Japan)

08:30 - 08:50 **Neuronal Diversity and Connectivity in the Murine Gastrointestinal Tract.**
Ulrika Marklund (Karolinska Institutet Biomedicum Quarter, Sweden)

08:50 - 09:10 **Advances in our understanding of sensory nerves in the gut-brain axis –**
Nick Spencer (Flinders University, Australia)

09:10 - 09:30 **Volume-EM analysis for exploring new comprehension in gut innervation regulatory system**
Hiromi Tamada (University of Fukui, Japan)

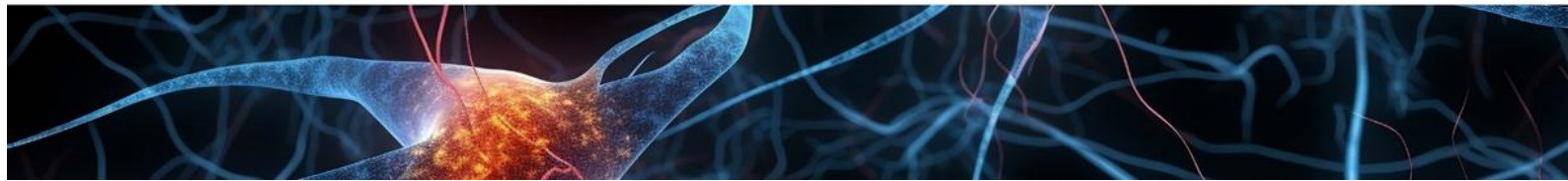
09:30 - 09:50 **GLP-1 released from the gut protects the kidney through the nervous system**
Shinji Tanaka (The University of Tokyo Hospital, Japan)

Selected Abstracts

09:50 - 10:05 **Improved gut function and prevention of enteric neuropathy as candidate mechanisms of diet induced weight prevention with conditional knockout of neural SARM1**
Lila Dabill (Washington University in St. Louis, USA)

10:05 - 10:20 **Cerium mimics the torpor-like effects of lithium, altering behavior and physiology via the gut-brain axis**
Oscar Vawser (Flinders University, USA)

10:20 – 10:30 Discussion



FRIDAY, 4 SEPTEMBER 2026

ROOM G

- 08:30 – 10:30** *Symposium 15*
NEUROPEPTIDES AS CORE INTEGRATORS OF CARDIAC AUTONOMIC FUNCTION
Chairs: Julia Shanks (University of Auckland, New Zealand)
Neil Herring (University of Oxford, UK)
- 08:30 - 08:50** **The Cardio-Protective Mechanism of CGRP**
Susan Brain (King's College London, UK)
- 08:50 - 09:10** **Rapid Measure and Closed-Loop Control of Neurotransmitters in the Porcine Heart**
Corey Smith (Case Western Reserve University, USA)
- 09:10 - 09:30** **Glucagon-like peptide 1 as a peptide modulator of cardiac electrophysiology**
Anniek Frederike Lubberding (University of Copenhagen, Denmark)
- 09:30 - 09:50** **NPY Signalling in Human Cardiomyocytes and the Parallels in Patients Experiencing Myocardial Infarction**
Neil Herring (University of Oxford, UK)

Selected Abstracts

- 09:50 - 10:05** **A combination of GLP1 receptor agonist and P2X3 receptor antagonist ameliorate high blood pressure and high blood sugar in a novel rat model of “glucotension”**
Pratik Thakkar (University of Auckland, New Zealand)
- 10:05 - 10:20** **Oxygen not included: chemoreflex modulation by GLP-1 and α -MSH in cardiovascular disease**
Audris Pauza (ISAN, University of Auckland, New Zealand)
- 10:20 – 10:30** Discussion



FRIDAY, 4 SEPTEMBER 2026

ROOM C

- 08:30 – 10:30** *Symposium 16*
MULTIPLE SYSTEM ATROPHY: FROM BENCH TO BEDSIDE
Chair: Alessandra Fanciulli (University of Innsbruck, Austria)
- 08:30 - 08:50 **MSA: mechanisms of disease**
Antonio Heras-Garvin (*Innsbruck Medical University, Austria*)
- 08:50 - 09:10 **Advances in AI-supported MSA diagnostics and biomarker research**
Christopher Gibbons (*Harvard Medical School, USA*)
- 09:10 - 09:30 **Cure MSA**
Margherita Fabbri (*University Hospital Toulouse, France*)
- 09:30 - 09:50 **Care for people living with MSA**
Alessandra Fanciulli (*University of Innsbruck, Austria*)

Selected Abstracts

- 09:50 - 10:05 **Cardiovascular Autonomic Failure in Multiple System Atrophy: Multimodal Characterization and Longitudinal Progression in 211 Patients from the MSA-BO Cohort**
Giannicola Carrozzo (*University of Bologna, Italy*)
- 10:05 - 10:20 **Pain in Multiple System Atrophy: a healthcare professionals' survey**
Nicole Campese (*Ospedale Santa Chiara Trento, Italy*)
- 10:20 – 10:30 Discussion



FRIDAY, 4 SEPTEMBER 2026

POSTER AREA

10:30 – 11:30 POSTER SESSION 3 (and refreshment)

ROOM B

11:30 – 12:30 **KEYNOTE LECTURE**

Erica K. Sloan; Monash University, Australia

Cancer neuroscience: the autonomic nervous system regulates cancer progression and treatment response

12:30 – 13:30 *Lunch*

ROOM A

13:30 – 15:10 *Symposium 17*

RETHINKING THE DEFINITION OF SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEMS

Chair: Thiago Moreira (University of Sao Paulo, Brazil)

13:30 – 13:50 **The emergence of the terms sympathetic and parasympathetic. Scientific and clinical consequences**

Alexandru Barboi (Indiana University, USA)

13:50 – 14:10 **The sympathetic and other related systems of nerves**

Jean Francois Brunet (Paris Sciences & Lettres Research University, France)

14:10 – 14:30 **Novel insights into neuro-humoral aspects involved in urinary bladder control**

Monica A Sato (Centro Universitario FMABC, Brazil)

14:30 – 14:50 **The autonomic nervous system: just a bunch of central pattern generators?**

Vaughan Macefield (Monash University, Australia)

Selected Abstracts

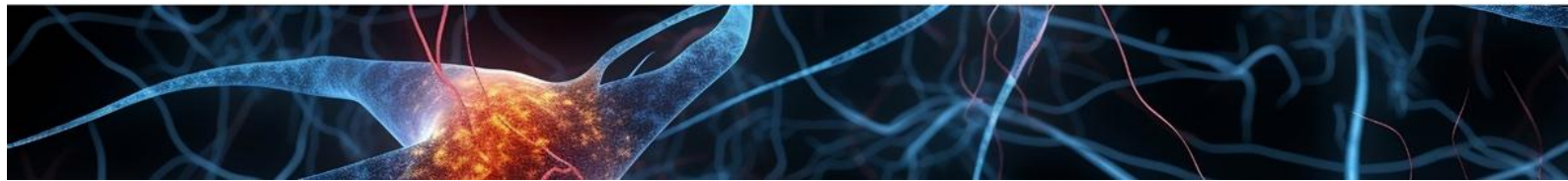
14:30 – 14:45 **Lineage and Organ Signals Sequentially Build Organ Intrinsic Nervous Systems**

Hsu I-Uen "Yvonne" (Yale University School of Medicine, USA)

14:45 – 15:00 **The interoceptive/homeostatic reset system: a neurological model for therapeutic grounding in dissociation and trauma-related dysregulation**

Pascale Carrive (University of New South Wales, Australia)

15:00 – 15:10 Discussion



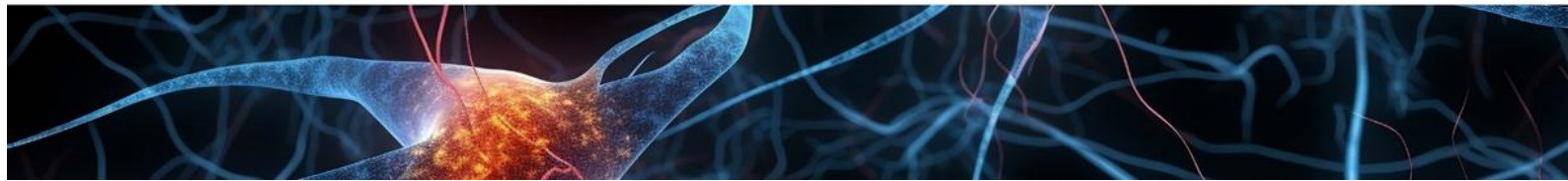
FRIDAY, 4 SEPTEMBER 2026

ROOM C

- 13:30 – 15:30** *Symposium 18*
TRANSCRIPTOMIC SIGNATURES OF AUTONOMIC GANGLIA IN HEALTH AND DISEASE
Chairs: Olujimi Ajijola (University of California, USA)
Neil Herring (University of Oxford, UK)
- 13:30 – 13:50** **Defining a glia-mediated barrier in the peripheral nervous system**
Rejji Kuruvilla (Johns Hopkins University, USA)
- 13:50 – 14:10** **Molecular heterogeneity and sensory coding in visceral afferent and parasympathetic pathways**
Tongtong Wang (Johns Hopkins University, USA)
- 14:10 – 14:30** **Intrinsic Cardiac Ganglia & transcriptomic signatures in human cardiovascular disease**
Peter Hanna (University of California, USA)
- 14:30 – 14:50** **Spatial transcriptomic mapping of autonomic circuits in cardiovascular pathology**
Karin A. Ziegler (Technical University of Munich, Germany)

Selected Abstracts

- 14:50 – 15:05** **P2X3 receptor expression in the human stellate ganglion**
Carol Bussey (University of Auckland, New Zealand)
- 15:05 – 15:15** **Pathogenic CHRNA3 gene variants demonstrates variable clinical expression in familial autonomic ganglionopathy**
Shibao Cyndya (Vanderbilt University Medical Center, USA)
- 15:15 – 15:30** Discussion



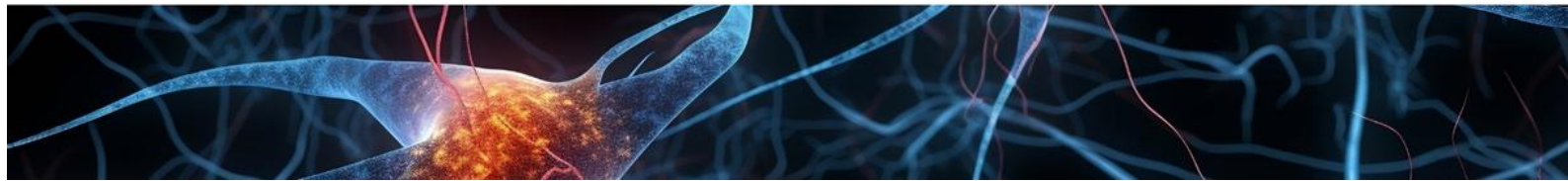
FRIDAY, 4 SEPTEMBER 2026

ROOM G

- 13:30 – 15:00** *Symposium 19*
ALTERED REGULATION OF SYMPATHETIC NERVE ACTIVITY IN HEART FAILURE WITH PRESERVED EJECTION FRACTION
Chair: Rohit Ramchandra (University of Auckland, New Zealand)
- 13:30 – 13:50** **Control of muscle sympathetic nerve activity during rest and dynamic exercise in HFpEF**
Mark B. Badrov (Lunenfeld-Tanenbaum Research Institute, Canada)
- 13:50 – 14:10** **Sex differences in sympathetic neural control in HFpEF**
Qi Fu (The University of Texas Southwestern Medical Center, USA)
- 14:10 – 14:30** **Control of cardiac sympathetic nerve activity in ovine hypertensive HFpEF**
Joshua Chang (University of Auckland, Australia)

Selected Abstracts

- 14:30 – 14:45** **Restoring cardiorespiratory coupling to improve exercise capacity in hypertensive HFpEF sheep**
Mirdula Pachon (University of Auckland, Australia)
- 14:45 – 15:00** **Old drug, new purpose – the effects of tadalafil on carotid body activity in heart failure**
Agnieszka Swiderska (University of Manchester, UK)



FRIDAY, 4 SEPTEMBER 2026

ROOM B

13:30 – 15:30 *Symposium 20*

INTERPLAY OF INTEROCEPTION AND THE AUTONOMIC NERVOUS SYSTEM IN HEALTH AND DISEASE

Chair: Roland Thijs (Epilepsie Instellingen Nederland (SEIN), The Netherlands & Leiden University Medical Centre, Netherlands)

13:30 – 13:50 **The new science of interoception and its relationship with the autonomic nervous system**

Lucia Ricciardi (George's University of London, UK)

13:50 – 14:10 **Measuring brain-heart and other organs interactions**

Diego Candia-Riveira (Sorbonne Université, France)

14:10 – 14:30 **Clinical implications of interoceptiveautonomic changes**

Diogo Carneiro (ULS Coimbra, Portugal)

Selected Abstracts

14:30 – 14:45 **A Study of Interrelationship Between Heart Rate Variability, Anthropometric Profiles, Physical Fitness, and Happiness.**

Om Lata Bhagat (All India Institute of Medical Sciences, India)

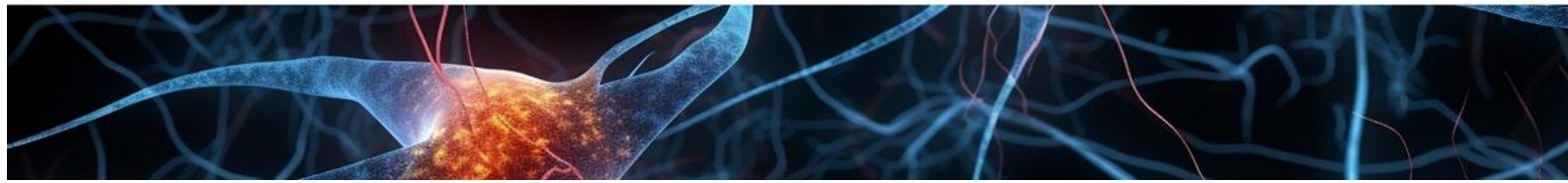
14:45 – 15:00 **The liver modulates afferent hepatic vagal nerve activity to affect parasympathetic and sympathetic tone at skeletal muscle and glucose homeostasis.**

Benjamin Renquist (University of Arizona, USA)

15:00 – 15:15 **Sensory circuits for the recruitment of swallow**

Dempsey Bowen (Macquarie University, Australia)

15:15 – 15:30 Discussion



FRIDAY, 4 SEPTEMBER 2026

POSTER AREA

15:30 – 16:30 POSTER SESSION 4 (and refreshment)

ROOM B

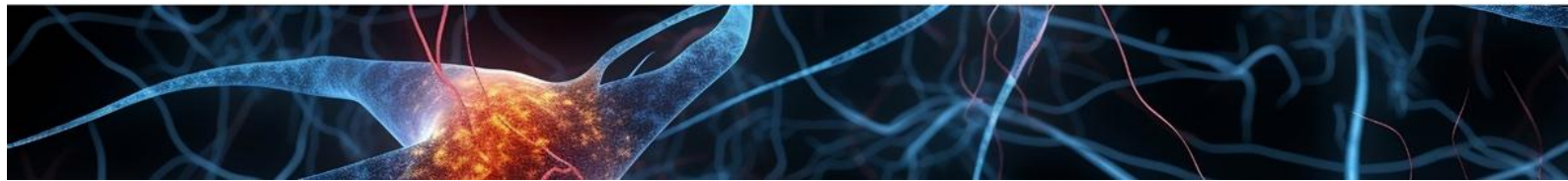
16:30 – 17:30 ISAN AGM

19.30

Conference Dinner

Circolo della Caccia – Palazzo Spada

(Via Castiglione 25 – Bologna)



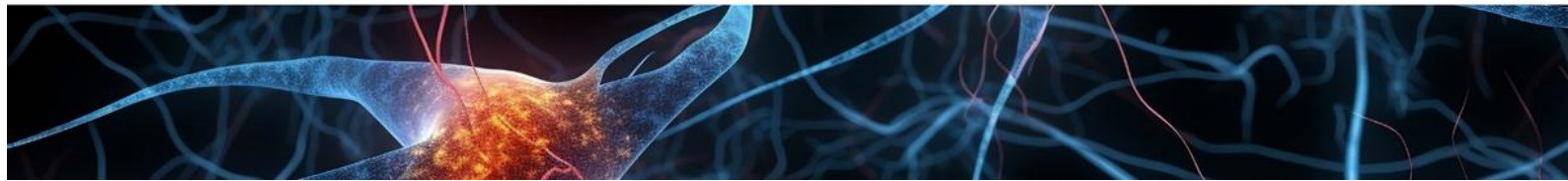
SATURDAY, 5 SEPTEMBER 2026

ROOM G

- 08:30 – 10:15** *Symposium 21*
**INFLAMED CIRCUITS: BRAIN IMMUNE CELLS SHAPING
 CARDIOVASCULAR OUTCOMES**
Chairs: Vagner R. Antunes (University of Sao Paulo, Brazil)
Song T. Yao (The University of Melbourne, Australia)
- 08:30 - 08:50** **The effects of exercise training on blood pressure, microglia activation and BBB function.**
Paula Gomes (University of Sao Paulo, Brazil)
- 08:50 - 09:10** **Inflammation in the area postrema after cardiopulmonary bypass in sheep**
Lindsea Booth (The Florey Institute, Australia)
- 09:10 - 09:30** **IL-1b mediated increases in blood pressure in the area postrema via direct projections to the rostral ventrolateral medulla**
Song Yao (The University of Melbourne, Australia)
- 09:30 - 09:50** **Neuroimmune Crosstalk in Hypertension: ROR γ t as a Mediator of Angiotensin II-Induced Microglial Activation and BBB Breakdown**
Shunguang Wei (University of Iowa, USA)

Selected Abstracts

- 09:50 - 10:05** **Which Antibodies are we still missing? 15 years later and still – when in doubt – glucocorticoids to the rescue! A case of seronegative autoimmune autonomic ganglionopathy**
Pavelic Antun Rudolf (University Hospital Tulln, Austria)
- 10:05 – 10:15** Discussion



SATURDAY, 5 SEPTEMBER 2026

ROOM C

08:30 – 10:15

Symposium 14

VAGUS NERVE STIMULATION IN EPILEPSY

Chairs: Vaughan Macefield (Monash University Melbourne, Australia)

Ayse Dereli (Université catholique de Louvain, Belgium)

08:30 - 08:50

Electrophysiological biomarkers for VNS in patients with refractory epilepsy

Riem El Tahry (Cliniques universitaires Saint-Luc, Belgium)

08:50 - 09:10

Neurophysiological Effects of Vagus Nerve Stimulation in Humans: Vagal Microelectrode Recordings and Sympathetic Nerve Activity in Drug-Resistant Epilepsy

Mikaela Patros (Monash University, Australia)

09:10 - 09:30

Vagus nerve activity modulations during absence seizures, NREM sleep, wake, and hypercapnia in epilepsy rat models

Elise Collard (Institute of Neuroscience, Belgium)

09:30 - 09:50

Hypercapnic cardiorespiratory responses in epileptic rat models

Ayse Dereli (Université catholique de Louvain, Belgium)

Selected Abstracts

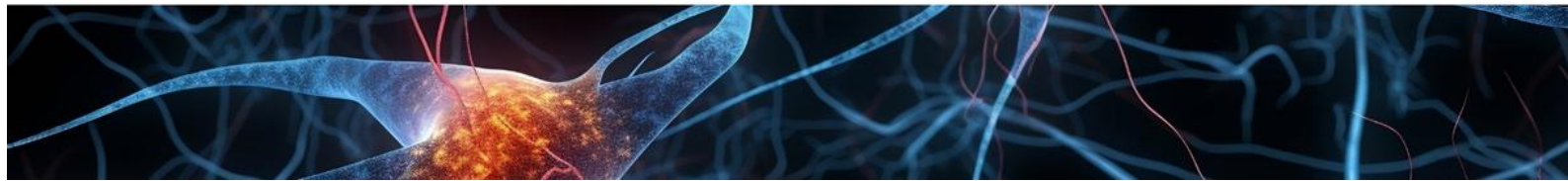
09:50 - 10:05

Convulsive Seizures Alter Autonomic Balance, Increase Cardiac Output and Arterial Pressure and Induce Arrhythmias in Non-Anaesthetized Sheep

Clive May (Florey Institute of Neuroscience and Mental Health, Australia)

10:05 – 10:15

Discussion



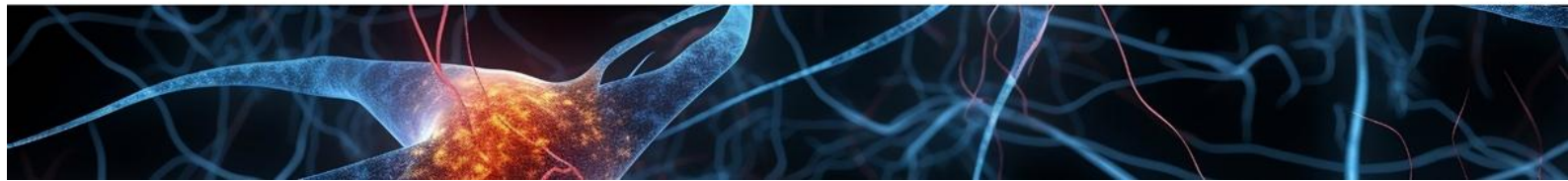
SATURDAY, 5 SEPTEMBER 2026

ROOM B

- 08:30 – 10:30** *Symposium 23*
**AUTONOMIC REGULATION IN CARDIOVASCULAR DISORDERS:
 MECHANISMS AND INTERVENTIONS**
Chairs: Satish R. Raj (University of Calgary, Canada)
Peter Hanna (University of California, Los Angeles, USA)
- 08:30 - 08:50** **Interactions between Stroke Volume and Cerebral Blood Flow Dynamics**
Martin Miranda-Hurtado (Pontificia Universidad Católica de Chile, Chile)
- 08:50 - 09:10** **Autonomic Dysfunction in Atrial Fibrillation- Does Targeting the ANS Alter Outcomes**
Varun Malik (University of Adelaide, Australia)
- 09:10 - 09:30** **Stellate Ganglionectomy for Ventricular Arrhythmias.**
Peter Hanna (University of California, Los Angeles, USA)
- 09:30 - 09:50** **Carbon Dioxide as a Treatment for Orthostatic Hypotension.**
Satish Raj (University of Calgary, Canada)

Selected Abstracts

- 09:50 - 10:05** **Autonomic Adaptation in Pregnancy: Preserved Responsiveness with Reduced Modulation Across Gestation**
Federica Piani (Medical University of Graz, Austria)
- 10:05 – 10:20** **Blunted sympathetic vascular transduction in treated compared to untreated hypertensive adults**
Giorgio Manferdelli (The University of Texas Southwestern Medical Center, USA)
- 10:20 – 10:30** Discussion



SATURDAY, 5 SEPTEMBER 2026

ROOM A

- 09:00 – 10:30** *Symposium 24*
CIRCADIAN SYSTEM AND AUTONOMIC REGULATION
Chairs: Pietro Cortelli (University of Bologna, Italy)
Max Hilz (Universitätsklinikum Erlangen, Germany & Icahn School of Medicine at Mount Sinai, USA)
- 09:00 - 09:30 **Anatomy of Circadian System**
Eduardo Benarroch (*Mayo Clinic, USA*)
- 09:30 - 10:00 **Circadian disorders and the Autonomic Nervous System**
Federica Provini (*University of Bologna, Italy*)
- 10:00 - 10:30 **Resetting the Circadian Clock: Emerging Approaches**
Ambra Stefani (*Innsbruck Medical University, Austria*)
- 10:30- 11:00 Morning refreshment

ROOM B

- 11:00 – 12:00** **KEYNOTE LECTURE**
Alexander A. Steiner; University of Sao Paulo
Immunoregulation by sympathetic nerves: can neutrophils be selectively targeted?
- 12:00- 13:00** **Closing Ceremony**

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Available on the official website
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TIME TABLE

WEDNESDAY, 2 SEPTEMBER 2026

	ROOM A <i>Ground Floor</i>	ROOM B <i>First Floor</i>	ROOM C <i>Ground Floor</i>	ROOM G <i>First Floor</i>
10:00 - 13:00			EFAS SCHOOL Teorical & Practical session	
13:00 - 14:00	Registration			
14:00 - 15:00		Opening ceremony		
15:00 - 16:00		Keynote lecture Ana Domingos; <i>University of Oxford.</i> Sympathetic neuroimmunity in obesity		
16:00 - 18:00	<i>Symposium 1</i> Chemoreflex and Autonomic Dysfunction: From Mechanisms to Therapeutic Targets Across Disease	<i>Symposium 2</i> Central and peripheral investigation of the autonomic regulation of cardiovascular function in health, disease and injury	<i>Symposium 4</i> Early detection and monitoring of disease progression in protein misfolding diseases and lysosomal storage disorder	<i>Symposium 3</i> Beyond the Average Human: New Insights from Interindividual Variability in Autonomic Control
18:00 - 20:00	Welcome cocktail			



TIME TABLE

THURSDAY, 3 SEPTEMBER 2026

	ROOM A <i>Ground Floor</i>	ROOM B <i>First Floor</i>	ROOM C <i>Ground Floor</i>	ROOM G <i>First Floor</i>
08:30 - 10:30	<i>Symposium 7</i> Neuroimmune interaction: how much more do we have to discover?	<i>Symposium 5</i> Cardiovascular Autonomic Disorders in Clinical Practice	<i>Symposium 8</i> Autonomic Dysfunction in Neurodegenerative Disorders: From Mechanisms to Therapies	<i>Symposium 6</i> The Failing Dialogue: Molecular and Cellular Drivers of Cardiac Autonomic Dysfunction
10:30 - 11:00			Sponsor Speech by FINAPRESS	
11:00 - 11:30	Poster session 2 (and refreshment)			
11:30 - 12:15		Keynote lecture Pietro Cortelli; <i>University of Bologna</i> Sleep and the Autonomic Nervous System: Clinical Insights and Pathophysiology		
12:15 - 12:45		Presentation of the bids to host ISAN 2028		
12:45 - 13:45	Lunch			
13:45 - 15:15		Hot topic Session		
15:15 - 16:00	Poster session 2 (and refreshment)			
16:00 - 18:00	<i>Symposium 9</i> Electroceuticals for controlling cardiorespiratory diseases	<i>Symposium 11</i> Cardiac innervation patterns governing cardiovascular function in health and disease	<i>Symposium 12</i> Autonomic Dysfunction in Multiple Sclerosis: From Mechanisms to Clinical Implications	<i>Symposium 10</i> Precisely what is torpor? Can we synthesise it?



TIME TABLE

FRIDAY, 4 SEPTEMBER 2026

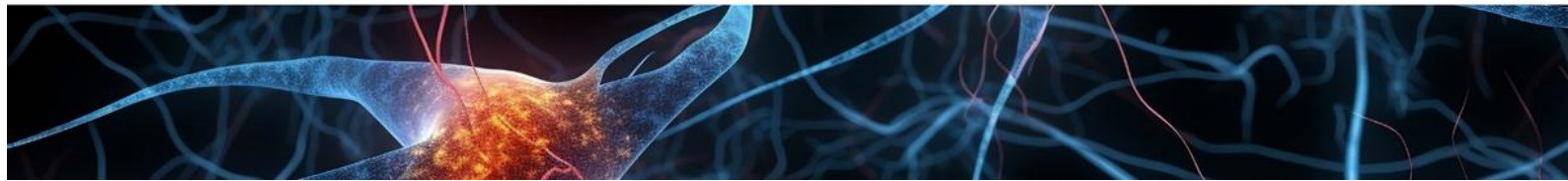
	ROOM A <i>Ground Floor</i>	ROOM B <i>First Floor</i>	ROOM C <i>Ground Floor</i>	ROOM G <i>First Floor</i>
08:30 - 10:30	<i>Symposium 22</i> Interdisciplinary studies of nervous systems associated with the gastrointestinal tract and beyond	<i>Symposium 13</i> Dysfunction of the autonomic nervous system in cardiovascular disease	<i>Symposium 16</i> Multiple system atrophy: from bench to bedside.	<i>Symposium 15</i> Neuropeptides as Core Integrators of Cardiac Autonomic Function.
10:30 - 11:30	Poster session 3 (and refreshment)			
11:30 - 12:30		Keynote lecture Erica K. Sloan <i>Monash University</i> Cancer neuroscience: the autonomic nervous system regulates cancer progression and treatment response		
12:30 - 13:30	Lunch			
13:30 - 15:10	<i>Symposium 17</i> Rethinking the definition of sympathetic and parasympathetic nervous systems	<i>Symposium 20</i> Interplay of interoception and the autonomic nervous system in health and disease	<i>Symposium 18</i> Transcriptomic Signatures of Autonomic Ganglia in Health and Disease	<i>Symposium 19</i> Altered regulation of sympathetic nerve activity in heart failure with preserved ejection fraction
15:10 - 15:30				
15:30 - 16:30	Poster session 4 (and refreshment)			
16:30 - 17:30		ISAN AGM		
19:00 - 23:00	Conference dinner			



TIME TABLE

SATURDAY, 5 SEPTEMBER 2026

	ROOM A <i>Ground Floor</i>	ROOM B <i>First Floor</i>	ROOM C <i>Ground Floor</i>	ROOM G <i>First Floor</i>
08:30 - 09:00		<i>Symposium 23</i> Autonomic regulation in cardiovascular disorders: mechanisms and interventions	<i>Symposium 14</i> Vagus nerve stimulation in epilepsy.	<i>Symposium 21</i> Inflamed Circuits: Brain Immune Cells Shaping Cardiovascular Autcomes
09:00 - 10:15	<i>Symposium 24</i> Circadian Biology and Autonomic Regulation			
10:15 - 10:30				
10:30 - 11:00	Morning refreshment			
11:00 - 12:00		Keynote lecture Alexander A. Steiner; <i>University of Sao Paulo</i> Immunoregulation by sympathetic nerves: can neutrophils be selectively targeted?		
12:00 - 13:00	Closing ceremony			



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Alma Mater Studiorum – University of Bologna - Via Andreatta, 8 - 40126 Bologna

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HEALTH ASSISTANCE - AMBULANCE: Tel. 118

TAXI: Tel. + 39 051 4590 /Tel.+ 39 051 372727

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