Monday, July 29, 2013

**Evening session: Opening and Plenary #1:** Robin M. McAllen, AUS: The differentiation of sympathetic drives

Tuesday, July 30, 2013

8:30 - 9:15  **Plenary #2:** Chris J. Mathias, UK: The Rapidly Changing Spectrum of Autonomic Disorders in the New Millenium

9:15 – 9:30  **Coffee break**

9:30 – 12:00  **Symposia 1 and 2**

**Symposium 1**  
**Molecular Genetics and Transcriptional Control of Autonomic Neuron Development**  
Chair: Marthe Howard, USA

9:30 – 10:00  Gene regulatory interactions underlying neural crest migration  
Marianne Bronner, USA

10:00 – 10:30  Molecular mechanisms causing cellular reprogramming of cardiac neural crest to a sympathetic ganglion fate  
Anthony B. Firulli, USA

10:30 - 11:00  Profiling enteric progenitor populations to identify gene networks in development of the enteric nervous system  
Michelle Southard-Smith, USA

11:00 – 11:30  Role of Phox2b in assembly of the circuits of the autonomic nervous system  
Eva Coppola, F

11:30 – 12:00  Short presentations selected from abstracts

12:00 – 13:00  **Lunch**

**Symposium 2**  
**Neurogenic Lower Urinary Tract and Sexual Dysfunction**  
Chairs: David B. Vodušek, SLO, and Max Hilz, GER

9:30 – 10:00  Neural control of lower urinary tract and sexual function  
Gert Holstege, NL

10:00 – 10:30  Lower urinary tract dysfunction in neurological patients  
Jalesh Panicker, UK

10:30 – 11:00  Sexual dysfunction in patients with CNS disorders (TBA)

11:00 – 11:30  Sexual dysfunction in patients with peripheral nervous system disorders  
David B. Vodušek, SLO

11:30 – 12:00  Short presentations selected from abstracts

12:00 – 13:00  **Lunch**

13:00 – 15:00  **Poster session 1**

15:00 – 17:30  **Symposia 3 and 4**

**Symposium 3**  
**Central Modulation of Cardiovascular Responses to Stress**  
Chairs: Caroline Sévoz-Couche, F, and Paul Pilowsky, AUS

15:00 – 15:30  Activation of PAC(1) and VPAC receptor subtypes elicits differential physiological responses from sympathetic preganglionic neurons in the
Control of sympathetic vasomotor tone by catecholaminergic C1 neurons of the rostral medulla oblongata
Alexander Gourine, UK

Orexin microinjection in the medullary raphe increases heart rate and arterial pressure but does not reduce tail skin blood flow in the awake rat
Pascal Carrive, AUS

Dysautonomia in chronic stress-induced anxiety-like state: involvement of dorsomedial hypothalamus
Caroline Sevoz-Couche, F

Short presentations selected from abstracts

Coffee break

ISAN Business Meeting

Symposium 4
Neuropneumology
Chairs: Christina Nassenstein, GER, and Jean-Pierre Timmermans, Belgium

Mechanisms of activation of bronchopulmonary C-fibers
Bradley Undem, USA

Pharmacology of cough
Maria Belvisi, UK

Novel insights in the postnatal role of pulmonary neuroepithelial bodies
Jean-Pierre Timmermans, Belgium

Tasting the airway lining fluid
Gabriela Krasteva-Christ, GER

Short presentations selected from abstracts
Wednesday, July 31, 2013

8:30 – 9:15 Plenary #3: Beth Habecker: Post-infarct remodeling of cardiac sympathetic nerves

9:15-9:30 Coffee break

9:30 – 12:00 Symposia 5 and 6

Symposium 5
Sympathetic Ganglionic Remodeling and Cardiovascular Disease
Chair: Beth A. Habecker, USA

9:30 – 10:00 Extra-cardiac neural remodeling in humans with cardiomyopathy and arrhythmias
Ajjiola Olujimi, USA

10:00 – 10:30 Sympathetic neuroplasticity following T5 spinal cord transaction increases the susceptibility to ischemia-induced sustained ventricular tachycardia
Stephen diCarlo, USA

10:30 - 11:00 Regulatory mechanisms of sympathetic innervation density: the impact of high frequency electrical fields, mechanical stretch and age
Erol Saygili, GER

11:00 - 11:30 IFNγ causes dendrite retraction and synapse loss in rat sympathetic neurons in vivo
Pamela Lein, CA

11:30 – 12:00 Short presentations selected from abstracts

12:00 – 13:00 Lunch

Symposium 6
Molecular and Cellular Steps from Sympathetic Progenitor Cells to Neuroblastoma
Chair: Hermann Rohrer, GER

9:30 – 10:00 From neurogenesis in the autonomic nervous system to neuroblastoma: a developmental biology approach
Hermann Rohrer, GER

10:00 – 10:30 Molecular and cellular mechanisms underlying autonomic neurocriostopathy
Hideki Enomoto, JPN

10:30 - 11:00 Mouse models support a central role of MYCN in neuroblastoma and reveal potential new therapeutic strategies
Johannes H. Schulte, GER

11:00 - 11:30 Mutation spectrum and pathway signatures mark neuroblastoma cells reflecting multiple developmental stages
Rogier Versteeg, NL

11:30 – 12:00 Short presentations selected from abstracts

12:00 – 13:00 Lunch

13:00 – 15:00 Symposia 7 and 8

Symposium 7
Update on Multiple System Atrophy
Chairs: Janice Holton, UK, and Gregor K. Wenning, A

13:00 – 13:30 Molecular neuropathology of MSA
Janice Holton, UK

13:30 – 14:00 Translational target validation in experimental MSA models
Nadia Stefanova, A
14:00- 14:30  Natural history and biomarkers
              Wassilios Meissner, F
14:30 – 15:00  Recent phase 2 and 3 trials in MSA
              Gregor K. Wenning, A
15:00 – 15:30  Coffee break

Symposium 8  
Processing of Visceral Sensory Signals
Chairs: Michael Schemann, GER, and Paul Enck, GER
13:00 – 13:30  Sensory signalling in the enteric nervous system
              Gemma Mazzuoli, GER
13:30 – 14:00  Extrinsic sensory signalling – from molecules to drugs
              David Grundy, UK
14:00 - 14:30  Central processing of visceral signals
              Lukas VanOudenhoven, BEL
14:30 – 15:00  Short presentations selected from abstracts
15:00 – 15:30  Coffee break

15:30 – 18:00  Symposia 9 and 10

Symposium 9  
Autonomic Cardiorespiratory Control at Rest and During Exercise after Spinal Cord Injury
Chair: Chris Mathias, UK
15:30 – 15:45  Introduction: Autonomic nervous system control and spinal cord injury
              Chris Mathias, UK
15:45 – 16:15  Cerebrovascular and blood pressure control at rest and during exercise in SCI
              David Low, UK
16:15 – 16:30  Short presentation selected from abstracts
16:30 – 17:00  Cardiorespiratory limitations in SCI athletic performance: significance countermeasures and classification
              Christopher West, CA
17:00 – 17:15  Short presentation selected from abstracts
17:15 – 17:45  Cardiovascular control at rest and during exercise after SCT: implications for health
              Dick Thijssen, NL
17:45 – 18:00  Short presentation selected from abstracts
18:00  EFAS Business Meeting

Symposium 10  
Pre-Neuronal Acetylcholine: Cholinergic Regulation of Sensory Function
Chairs: Koichiro Kawashima, JPN, and Eberhard Weihe, GER
15:30 – 16:00  Regulatory roles of ACh on physiological responses in main olfactory epithelium
              Tatsuya Ogura, USA
16:00 – 16:30  Pre-neuronal acetylcholine: Non-neuronal cholinergic cells communicate to sensory neurons.
              Wolfgang Kummer, GER
16:30 – 17:00  Target-derived growth factor modulation of nicotinic receptor expression in sensory neurons
              Kathy M. Albers, USA
17:00 – 18:00  Short presentations selected from abstracts
Thursday, August 1, 2013

8:30 - 9:15  **Plenary #4: Christo Goridis, F: CO₂, Phox2b and the Drive to Breathe**

9:15 - 9:30  **Coffee break**

9:30 – 12:00  **Symposia 11 and 12**

**Symposium 11**
Cardiorespiratory Adjustments to Hypoxia
Chair: Benedito Machado, BRA

9:30 – 10:00  Hypoxia-induced augmented cardiorespiratory responses
Thomas E. Dick, USA

10:00 – 10:30  Medullary respiratory network drives sympathetic overactivity and hypertension
in rats submitted to chronic intermittent hypoxia
David Jose de Almeida Morales, BRA

10:30 – 11:00  Central respiratory and sympathetic adaptations induced by sustained hypoxia
Daniel B. Zoccal, BRA

11:00 – 11:30  Targeting the carotid body as a therapeutic strategy for controlling
sympathetically mediated disease
Julian F. R. Paton, UK

11:30 – 12:00  Short presentations selected from abstracts

12:00 – 13:00  **Lunch**

**Symposium 12**
Quantifying Sympathetic Nerve Activity: Implications for Studying Abberant Sympathetic Outflow
Chair: Kevin Shoemaker, CAN

9:30 – 10:00  Subpopulations and latency variations in multi-unit action potentials from
human sympathetic nerve recording: impact of age and disease
Kevin Shoemaker, CAN

10:00 – 10:30  Firing properties of single sympathetic neurones in humans in health and
disease.
Vaughan Macefield, AUS

10:30 – 11:00  Multi-unit and single-unit recordings of rodent sympathetic nerve activity
Mark Knuepfer, USA

11:00 – 11:30  The character of sympathetic neural rhythms
Susan Barman, USA

11:30 – 12:00  Short presentations selected from abstracts

12:00 – 13:00  **Lunch**

13:00 – 15:00  **Poster session 2**

15:00 – 17:00  **Symposium 13**
Interstitial Cells and their Autonomic Interactions in the Lower Urinary Tract
Chairs: Keith Brain, UK, and John Young, UK

15:00 – 15:30  Functional and morphological diversity of interstitial cells in the urinary tract
Hikaru Hashitani, JPN

15:30 – 16:00  Functional innervation of bladder interstitial cells
Karen McCloskey, UK

16:00 – 16:30  Cholinergic and nitrergic regulation of urethral interstitial cells
Noel McHale, IRE

16:30 – 17:00 Short presentations selected from abstracts

17:30 Busses leave for dinner

Symposium 14
Update on Orthostatic Hypotension
Chair: Jean-Michel Senard, F

15:00 – 15:30 What definition for orthostatic hypotension?
Wouter Wieling, NL

15:30 – 16:00 Arterial stiffness and cardiovascular frailty in neurogenic orthostatic hypotension
Atul Pathak, F

16:00 - 16:30 Update on orthostatic hypotension pharmacotherapy
Jean-Michel Senard, F

16:30 – 17:00 Short presentations selected from abstracts
Friday, August 2, 2013

8:30 - 9:15  **Plenary #5**: Max J. Hilz, GER: Autonomic Dysfunction in Stroke and Epilepsy

9:15 - 9:30  **Coffee break**

9:30 – 12:00  **Symposia 15 and 16**

**Symposium 15**  
How Do You Feel? Recent Advantages in Neuroimaging of Emotional Processing and the Generation of Autonomic Responses  
Chair: Vaughan Macefield, AUS

9:30 – 10:00  Psychophysiology of neural, cognitive and affective integration  
Hugo Critchley, UK

10:00 – 10:30  From the bottom of my heart – autonomic regulation of the body and emotion  
Marcus Gray, AUS

10:30 - 11:00  Correlations between skin sympathetic nerve activity and fMRI during emotional arousal and introspection  
Cheree James, AUS

11:00 - 11:30  Hippocampus-autonomic interactions in healthy subjects and in depressed patients  
Karl-Jürgen Bär, GER

11:30 – 12:00  Short presentations selected from abstracts

12:00 – 13:00  **Lunch**

**Symposium 16**  
Consequences of Disruption of the Sympathetic Innervation on Effector Tissues  
Chairs: Elspeth McLachlan, AUS, and Gunnar Wallin, SE

9:30 – 10:00  Consequences and mechanisms of sympathetic axon degeneration  
Peter G. Smith, USA

10:00 – 10:30  Unexpected consequences of damage to the sympathetic innervation on neurovascular transmission  
James A. Brock, AUS

10:30 – 11:00  Cardiac sympathectomy in humans: rationale, results & mechanistic insights  
Kalyanam Shivkumar, USA

11:00 – 11:30  Mechanisms of sympatho-inhibition following renal and cardiac denervation in heart failure  
Irving H. Zucker, USA

11:30 – 12:00  Short presentations selected from abstracts

12:00 – 13:00  **Lunch**

13:00 – 17:30  **Symposia 17, 18 and 19**

**Symposium 17**  
Neuronal Nicotinic Receptors in Autonomic Ganglia – from Subunits to Synaptic Integration in Health and Disease  
Chair: John P. Horn, USA

13:00 – 13:30  Reconstructing integration in sympathetic ganglia  
John P. Horn, USA

13:30 – 14:00  Genetic dissection of nicotinic acetylcholine receptors in sympathetic neurons  
Sigismund Huck, A

14:00 – 14:30  Neuronal nicotinic acetylcholine receptor-subtype selective conotoxins
14:30 – 15:00  
David J. Adams, AUS
Short presentations selected from abstracts

15:00 – 15:30  
**Coffee break**

15:30 – 16:00  
Ganglionic amplification as assessed using intact ganglia and dynamic clamp in cell culture
Paul H. M. Kullmann, USA

16:00 – 16:30  
Diabetes depresses synaptic transmission in sympathetic ganglia by inactivating postsynaptic nirotinic acetylcholine receptors
Ellis Cooper, CAN

16:30 – 17:00  
PACAP regulates presynaptic function. Implications for stress disorders
Joseph F. Margiotta, USA

17:00 – 17:30  
Short presentations selected from abstracts

**Symposium 18**  
**Genetics of ANS Disorders**
Chairs: Pietro Cortelli, ITA, and Eduardo Benaroch, USA

13:00 – 13:30  
Catecholamine disorders and HSAN
Eduardo Benaroch, USA

13:30 – 14:00  
Inherited neuropathies with autonomic involvement
Roy Freeman, USA

14:00 – 14:30  
Laminopathies and prion diseases and their role on autonomic function
Pietro Cortelli, ITA

14:30 – 15:00  
Short presentations selected from abstracts

15:00 – 15:30  
**Coffee break**

**Symposium 19**  
**The ANS and Irritable Bowel Syndrome/Inflammatory Bowel Disease**
Chairs: Bruno Bonaz, F, and Yvette Taché, USA

15:30 – 16:00  
ANS and irritable bowel syndrome
Paul Enck, GER

16:00 – 16:30  
Complementary alternative medicine and autonomic nervous system and functional bowel disorders
Qasim Aziz, UK

16:30 – 17:00  
The vagus nerve: a modulator of intestinal inflammation
Jean-Eric Ghia, CAN

17:00 – 17:30  
Vagus nerve stimulation in gastro-intestinal disorders from basic to clinical application
Bruno Bonaz, FR

17:30  
**Closing session, Awards, Invitation ISAN 2015**