



The 3rd Annual ASAN Conference
October 23-24, 2025
 Flinders Health and Medical Research
 Institute



Thursday, October 23			
9:00		Registration, tea & coffee	
10:00		Nick Spencer Flinders University Adelaide, Australia	Opening remarks
Session 1		Chair: Elisa Hill	
10:15	O.1	Tyler Browne University of Newcastle Newcastle, Australia	Ascending spinal axon collaterals of lumbar spinoparabrachial neurons: a potential contributor to spinal reflexes.
10:30	O.2	Emma Brunton Coherence Cambridge, United Kingdom	Electrical modulation of the sympathetic nervous system: a new therapy for pancreatic cancer.
10:45	O.3	Benjamin Czapl University of Melbourne Melbourne, Australia	Impact of microplastics ingestion on neonatal gut development in a mouse model
11:00	O.4	Julie Dalziel AgResearch Group - Bioeconomy Science Institute Palmerston North New Zealand	Social isolation stress during adolescence enhanced recognition memory and altered hippocampal and prefrontal cortex gene expression in female rats
11:15	O.5	David Farmer Monash University Melbourne, Australia	Microelectrode recordings from the human cervical vagus nerve associated with food-induced gastric activity
11:30	O.6	Lujith Fernando Flinders University Adelaide, Australia	The role of serotonin in lithium's inhibitory effect on autonomic function and behaviour in mice
11:45	O.7	Candice Fung KU Leuven, Leuven, Belgium	Signaling between neurons in the mesentery and myenteric neurons in the mouse ileum
12:00	O.8	John Furness University of Melbourne and Florey Institute, Melbourne, Australia	Regional specialisation in innervation, neural control and patterns of motility in the rat stomach
12:15	O.9	Myat Noe Han University of Melbourne, Melbourne, Australia	Chronic GLP-2 Receptor Activation improves gut barrier integrity and motor function in a Parkinson's disease model
12:30-14:30 Lunch & Posters			

Session 2		Chair: Daniel Poole	
14:30	O.10	Lisa Hong University of Melbourne, Melbourne, Australia	Inflammation in the area postrema after cardiopulmonary bypass in sheep
14:45	O.11	Natasha Kumar University of New South Wales Sydney, Australia	Identification and analysis of putative chemoreceptor neurons in the adult human brainstem
15:00	O.12	Yuansong Li RMIT University Bundoora, Australia	Modulation of gut barrier function by oral bacteriophage cocktail therapy in the Neuroligin-3R451C preclinical model of autism
15:15	O.13	Vic Lin RMIT University Bundoora, Australia	Gastrointestinal permeability and immune profiles in the Shank3B-/- mouse model of autism are modulated by the microbial metabolite-sequestering drug, AB-2004
15:30	O.14	Vaughan Macefield Monash University Melbourne, Australia	First in-human microelectrode recordings of vagus nerve activity in heart failure
15:45	O.15	Annabel Manoleras Monash Institute of Pharmaceutical Sciences Melbourne, Australia	Remodelling of the sympathetic nervous system impairs chemotherapy control of metastatic breast cancer.
16:00	O.16	Jerico Matarazzo Bionics Institute, Melbourne, Australia	A biomarker for closed-loop vagus nerve stimulation for inflammatory bowel disease
16:15	O.17	Robin McAllen Florey Institute, Melbourne, Australia	Central nervous pathways of the autonomic inflammatory reflex
16:30	O.18	Fiona McBryde University of Auckland Auckland, New Zealand	A NO-brainer: harnessing nitrite treatment to protect the brain during ischemic stroke
16:45	O.19	Erica Sloan Monash University Melbourne, Australia	Communication from the peripheral nervous system drives progression of cancers in the body.
17:15-17:45 ASAN Annual General Meeting			
17:45-18:15 ISAN Annual General Meeting			
18:45-21:45 Dinner @ Luciano's on the Marina, Glenelg Buses will leave FHMRI at 18:25pm for dinner. Attendees make their own way back to their accommodation			

Friday, October 24			
Session 3		Chair: Simon Brookes	
8:45	O.20	Yee Lian Chew Flinders University Adelaide, Australia	What makes a memory? Identifying molecular requirements for learning in a simple brain
9:00	O.21	Rachel McQuade University of Melbourne Melbourne, Australia	Age-related remodelling of the gastrointestinal tract: early barrier dysfunction and neuroimmune changes in C57BL/6 Mice
9:15	O.22	Ravinder Mittal University of California, San Diego, USA	Mechanistic insights into esophageal peristalsis in health & disease
9:30	O.23	Victor Ortega-Bernal The University of Melbourne Melbourne, Australia	Three-dimensional analysis of microglia morphology in the paraventricular nucleus of the hypothalamus reveal subtle differences in hypertensive and normotensive rats.
9:45	O.24	Parham Raygan Flinders University Adelaide, Australia	The basolateral amygdala: how one of the most evolutionarily conserved brain regions influences brown adipose tissue thermogenesis
10:00	O.25	Hayley Rhodes Flinders University Adelaide, Australia	Autonomic neural control of motor activity in the intestine of the euryhaline barramundi (Lates calcarifer)
10:15	O.26	Weifang Rong University School of Medicine, Shanghai, China	The G protein-coupled estrogen receptor (GPER) in the enteric nervous system (ENS)
10:30	O.27	Matthew Rowe Monash Institute of Pharmaceutical Sciences Melbourne, Australia	Investigating the neural regulation of Goblet cells
10:45	O.28	Marie-Claire Seeley The University of Adelaide Adelaide, Australia	Differential pro-inflammatory cytokine signature in postural orthostatic tachycardia syndrome, post-acute sequelae of COVID-19, and healthy controls
11:00-11:30 Morning Tea			

Session 4		Chair: Vaughan Macefield	
11:30	O.29	Julia Shanks University of Auckland Auckland, New Zealand	SGLT2 inhibition and vagal activity: Direct neural effects in an ovine model
11:45	O.30	Nick Spencer Flinders University Adelaide, Australia	Does the vagus nerve detect sensory stimuli from lower abdominal organs?
12:00	O.31	Daniel Thorpe Flinders University Adelaide, Australia	Enterochromaffin cell-mediated gastrointestinal osmolarity sensing regulates drinking behaviour.
12:15	O.32	Klaas Van Mechelen University of Melbourne Melbourne, Australia	Unlocking the neurogenic potential of enteric glial cells for Hirschsprung Disease therapy
12:30	O.33	Joshua Voger University of Melbourne Melbourne, Australia	Investigating the effects of physical manipulation of the vagus nerve on the inflammatory response in a rodent sepsis model
12:45	O.34	Jasenka Zubcevic University of South Florida Tampa, USA	Intestinal serotonergic vagal signaling as a mediator of microbiota-induced hypertension
13:00 - 15:00 Lunch & Posters			
Special Symposium: Andrew Allen's contribution to autonomic neuroscience Chair: Lindsea Booth			
15:00	S.1	Simon McMullan Macquarie University Sydney, Australia	A one-touch algorithm for registration of mouse brain histology
15:25	S.2	Mariana Del Rosso de Melo University of Melbourne Melbourne, Australia	The respiratory and motor effects induced by stimulation of the preBötzinger Complex are frequency-dependent
15:50	S.3	Clément Menuet INMED-INSERM Marseille, France	A hypothalamus-preBötzinger complex-nucleus ambiguus neuronal pathway for the oxytocinergic amplification of respiratory heart rate variability
16:15	S.4	Rohit Ramchandra University of Auckland Auckland, New Zealand	Restoration of respiratory heart rate variability alters cardiac mitochondrial pathways to improve heart function and exercise tolerance
16:40		Andrew Allen University of Melbourne Melbourne, Australia	Final remarks
17:00-17:30 Awards and announcement of ASAN2026			
17:30-18:00 Farewell drinks (wine & cheese)			
Level 8 HMRB, Flinders Health & Medical Research Institute			

Posters		
P.1	Christin Bird Bionics Institute Melbourne, Australia	Efficacy of abdominal anterior and posterior vagus nerve stimulation in a moderate to severe model of collagen-induced-arthritis
P.2	Daniel Boulton Western Sydney University Sydney, Australia	Neural pathways underlying muscle sympathetic nerve activity (MSNA) during handgrip exercise: an fMRI-MSNA coupled study
P.3	Annaliese Eymael Macquarie University Sydney, Australia	Classification and phenotype of swallowing neurons from the nucleus tractus solitarius of the mouse
P.4	Tim Hibberd Flinders University Adelaide, Australia	Ultradian organization of autonomic functions revealed by simultaneous electrocardiography, intestinal electromyography and body temperature recordings in free moving mice
P.5	Tomoko Hyakumura Bionics Institute Melbourne, Australia	Efficacy of abdominal vagus nerve stimulation in chemically induced awake rat model of seizure
P.6	Jiawei Jian Flinders University Adelaide, Australia	Validation of wireless ex vivo recording of gut electrical activity and wireless optogenetic stimulation using a fully implantable battery-free device
P.7	Lee Travis Flinders University Adelaide, Australia	Novel technique to simultaneously record from the brain and GI-tract in freely moving animals using a fully implantable wireless battery-free device
P.8	Vlad Zagorodnyuk Flinders University Adelaide, Australia	Control of inflammatory bladder pain by peripherally restricted CB1 and CB2 cannabinoid receptor agonists
P.9	Daniel Boulton Western Sydney University Sydney, Australia	Muscle metaboreflex disturbances in chronic fatigue syndrome
P.10	Monique Foster Western Sydney University Sydney, Australia	Case characterisation and autonomic impacts of chronic fatigue syndrome following COVID-19 infection (long-COVID)
P.11	Philip Jobling University of Newcastle, Newcastle, Australia	Understanding the mechanisms of chronic pelvic pain
P.12	Baha Mustafa Royal Melbourne Institute of Technology Bundoora, Australia	Developmental dynamics of intestinal macrophages in rats: phenotypic shifts and compartmental distribution across postnatal atages
P.13	Hiroyuki Nakamori Nagoya City University Nagoya, Japan	Primary bile acids (BA) are converted to secondary BAs by the resident microflora in the proximal colon

P.13	Jacqui Scott The University of Adelaide Adelaide, Australia	The neurotoxic anti-myeloma drug bortezomib causes altered gastrointestinal motility and neuroinflammation in nodose ganglia
P.14	Oscar Vawser Flinders University Adelaide, Australia	Cerium induces acute hypothermia and behavioural inhibition in mice
P.15	Gemma Wilson The University of Adelaide Adelaide, Australia	Exploring the value of multidisciplinary care in Postural Orthostatic Tachycardia Syndrome (POTS): a cross-sectional analysis of 12-month outcomes
P.16	Finbar Argus The University of Auckland Auckland, New Zealand	Hypothesis testing with a mechanistic computational model of autonomic function and dysfunction
P.17	Chloe Taylor Western Sydney University Sydney, Australia	Guidelines on the use of sex and gender in cardiovascular research