

# **Innovations in Cardiovascular Science:**

The Intersection of Vascular Biology, Cardiac Biology, and Organ Cross-Talk













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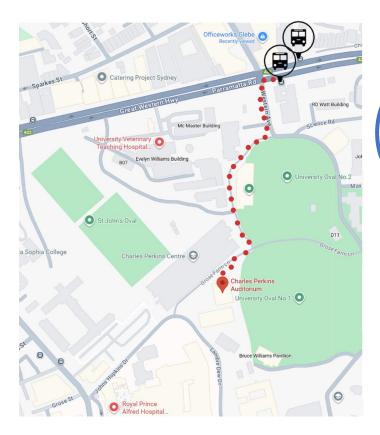








## **Getting to the Sydney Cardiovascular Symposium**





Charles Perkins Centre (CPC Auditorium) is located below the café.

Enter the auditorium area through the doors on the left of the café (outlined in the blue circle)

Building, D17 Johns Hopkins Dr, Camperdown NSW 2037

#### From Central train station and the Four Points by Sheraton (approx. 20 minutes)

Take a bus from Central Railway Square to the Ross Street Gate (Stop: Forest Lodge 203768) located on Parramatta Road (opposite Officeworks Glebe). Get off, then turn right along Western Avenue and walk until you arrive the Charles Perkins Centre (CPC). The auditorium is below the café so enter through the door on the left according to the image above.

#### From Newtown train station (approx. 20 minutes)

Leave Newtown station, turn right and walk north along King Street until you reach Missenden Road. Turn left on Missenden Rd, then walk until you reach the Royal Prince Alfred Hospital (RPAH) Emergency and head down John Hopkins Drive (on the right) to arrive at the Charles Perkins Centre. The café and auditorium will be on your right.

#### WIFI Access (connect to UniSydney-Guest)

Username: scvs2025

Password: 908415

#### **FREE COFFEE!**

Get your free coffee/tea from each morning of the Symposium. Show your Sydney Cardiovascular Symposium registration badge to claim your free drink.









www.sydneycvsymposium.org.au





## Program: Thursday 20th November, 2025

08:30-09:00	Coffee and registration
09:00-09:10	Welcome to Country
	Speaker: TBD
09:10 - 09:15	Welcome to the Sydney Cardiovascular Symposium 2025
	Speaker: Andrew Coats
09:15 - 10:00	Sydney Cardiovascular Symposium Lecture
	Sponsored talk by OHMR
	Chair: TBD
	Prof Dana Dawson, The University of Aberdeen, UK
	Takotsubo cardiomyopathy- organ cross-talk and clinical trials
10:00 - 10:50	Session 1: Organ cross-talk in health and disease
	Chair: TBD
10:00	Prof Andrew Coats, The Heart Research Institute, NSW
	Sponsored talk by AstraZeneca
	Organ cross-talk: Clinical perspective of co-morbidities in heart failure
10:25	Prof Luigi Fontana, The University of Sydney, NSW
	The Role of Nutrition and Exercise in Modulating Cardiometabolic
	Health: Strategies for Prevention and Optimisation

### **MORNING TEA 10:50 - 11:10**

11:10 – 12:25	Session 2: Heart and brain Chairs: TBD
11:10	<u>Prof Perminder Sachdev</u> , <i>The University of New South Wales, NSW</i> The interplay of heart and brain health
11:35	<u>Dr Lin Yee Chen</u> , <i>University of Minesota, USA</i> Atrial Myopathy - A Target for Stroke and Dementia Prevention
12:00	<u>Dr Sonali Gnanenthiran, The George Institute, NSW</u> Blood Pressure Control after Stroke: Current evidence and emerging frontiers

#### LUNCH 12:30 – 14:00 POSTER JUDGING SESSION 13:00 – 14:00













## Program: Thursday 20th November, 2025

14:00 – 15:30		Session 3: Inflammation and Organ Cross-Talk Chairs: TBD
1	14:00	<u>Prof Ed Fisher</u> , <i>NYU Langone Health, USA</i> Metabolic and Psychological Stress and Atherosclerosis: Intersection at the Bone Marrow
1	14:25	<u>Dr Sian Cartland</u> , <i>The Heart Research Institute</i> , <i>NSW</i> Reprogramming Inflammation: Can Myeloid-Derived Suppressor Cells be Therapeutic Targets in Atherosclerosis?
1	14:50	<u>Prof John O'Sullivan</u> , <i>The University of Sydney, NSW</i> Metainflammatory driven strategies for HFpEF – A 21 <sup>st</sup> Century Epidemic
14:50 – 15:30		Flash talks Chairs: TBD
1 1 1	14:58 15:06 15:14	Presenter: TBD Presenter: TBD Presenter: TBD Presenter: TBD Presenter: TBD Presenter: TBD
AFTERNOON TEA 15:30 - 15:50		

15:50 - 16:50	Session 4: Panel Discussion on Research Career
	Progression/Pathways

Chairs: TBD Panellists:

- 1. Prof Bronwyn Kingwell, CSL
  - 2. Prof Mathias Francois, University of Sydney
  - 3. Dr Gavin Recchia, Davies Collision Cave

## 17:00 POSTER SESSION (VIEWING) AND NETWORKING DRINKS

#### 18:30 SPEAKER'S DINNER BY INVITATION













## **Program: Friday 21st November, 2025**

08:30-09:00		Coffee and registration
09:00 - 10:15		Session 1: Cardiometabolism Chairs: TBD
	09:00	Prof Leonie Heilbronn, Adelaide University, SA Time restricted eating/intermittent fasting and cardiometabolic outcomes
	09:25	Prof Nigel Turner, Victor Chang Cardiac Research Institute, NSW Reduced nicotinamide mononucleotide improves metabolic profile of high fat diet-fed mice
	09:50	<u>Prof Alex Brown</u> , <i>The Australian National University, ACT</i> Precision Medicine in Indigenous Health
		MORNING TEA 10:15 - 10:45
10:45 – 12:30		Session 2: Heart and organ cross-talk Chairs: TBD
10:45 – 12:30	10:45	
10:45 – 12:30		Chairs: TBD <u>Prof Natasha Rogers</u> , Western Sydney Local Health District NSW
10:45 - 12:30 11:30 - 12:10		Chairs: TBD  Prof Natasha Rogers, Western Sydney Local Health District NSW Finding missing links in cardiorenal syndrome  Dr Eva Li, The Heart of Research Institute, NSW
11:30 – 12:10	11:05 11:30 11:38 11:46 11:54	Chairs: TBD  Prof Natasha Rogers, Western Sydney Local Health District NSW Finding missing links in cardiorenal syndrome  Dr Eva Li, The Heart of Research Institute, NSW NOTCH3 at the Fat–Artery Crossroads in Atherosclerosis  Flash talks









**LUNCH 12:30 - 13:10** 





## Program: Friday 21st November, 2025

13:10 – 14:30	Session 3: Rising stars award	
	Chairs: TBD	

13:10 Presenter 1: TBD13:30 Presenter 2: TBD13:50 Presenter 3: TBD

**14:10 – 14:30** Flash talks

Chairs: TBD

14:10 Presenter: TBD 14:18 Presenter: TBD

#### 14:30 – 15:45 Session 4: Heart disease: Early origins and diabetes

Chairs: TBD

14:30 <u>Prof Sally Dunwoodie</u>, *Victor Chang Cardiac Research Institute, NSW* NAD Deficiency and Congenital Heart Disease

14:55 <u>Dr Madga Montgomery</u>, *The University of Melbourne, VIC*, Understanding the endocrine function of the heart in type 2 diabetes

15:20 A/Prof Mary Kavurma, The Heart Research Institute, NSW
Sex differences and mitochondrial endothelial health influence vascular recovery in diabetes-associated peripheral artery disease

#### **AFTERNOON TEA 15:45 – 16:05**

16:05 – 17:20 The Princesses' Lecture

Sponsored by UNSW CVMM

Chairs: TBD

Prof Filip K. Swirski, Mount Sinai, USA

Heart-Brain Communication in Health and Disease

17:20 Symposium close Julie McMullen

#### **NETWORKING DRINKS AND AWARDS 17:30 – 18:30**













### The Princesses' Lecture: Professor Filip Swirski

Cardiovascular Research Institute, Icahn School of Medicine at Mount Sinai, USA

"Heart-Brain Communication in Health and Disease"



The Princesses' Lecture, named in honour of Diana, Princess of Wales and Mary, Crown Princess of Denmark, will be given by Professor Filip Swirski. Filip obtained his PhD at McMaster University in Canada and completed postdoctoral studies at Brigham and Women's Hospital, Havard. He was a Professor at Havard Medical School and Massachusetts General Hospital before he joined Mount Sinai in 2021. Filip is currently the Director of the Cardiovascular Research Institute, Icahn School of Medicine at Mount Sinai in the USA. Filip is recognised internationally for his work on 1) Immune and inflammatory processes in atherosclerosis, 2) Systems physiology and inter-organ communication in health and disease, and 3) Hematopoiesis and its modulation in disease.













### **Sydney Cardiovascular Symposium Lecture: Professor Dana Dawson**

School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, UK

"Acute takotsubo cardiomyopathy at multiple levels"



The Sydney Cardiovascular Symposium Lecture will be given by Professor Dana Dawson. Dana first qualified in medicine at University of Medicine "Grigore T. Popa", Iasi, Romania. This was followed by completion of her MRCP with the Royal College of Physicians and then read for her *D. Phil* in Cardiovascular Medicine at Merton College, University of Oxford. She further trained in Cardiovascular medicine in Edinburgh, Oxford and London in the UK, and at the University of Virginia, Charlottesville in the USA. Dana moved to the University of Aberdeen in 2010, where she is Professor of Cardiovascular Medicine and Consultant Cardiologist at Aberdeen Royal Infirmary, in the United Kingdom. Dana is recognized internationally for her work on acute takotsubo cardiomyopathy which includes preclinical research, cell work, organ cross-talk, registries, mechanistic clinical studies and clinical trials.















Andrew Coats
Heart Research Institute, NSW, Australia

"Organ cross-talk: Clinical perspective of co-morbidities in heart failure"

Professor Andrew Coats has been a Scientific Director and CEO at the Heart Research Institute since 2022. He is an experienced academic leader and entrepreneur with three decades of international experience in four of the world's top 50 universities. He has over 800 peer-reviewed full papers, over 200,000 career citations and an H-Index of 170.



Luigi Fontana
Charles Perkins Centre, University of Sydney, NSW, Australia

"The Role of Nutrition and Exercise in Modulating Cardiometabolic Health: Strategies for Prevention and Optimization"

Professor Fontana is the Leonard P. Ullmann Chair of Translational Metabolic Health at the Charles Perkins Centre, where he directs the Charles Perkins Centre Royal Prince Alfred Clinic and the Health for Life Research, Clinical & Educational Program. He is also a Professor of Medicine and Nutrition in the Faculty of Medicine and Health at the University of Sydney and a Clinical Academic in the Department of Endocrinology at the Royal Prince Alfred Hospital. His work focuses on preventative medicine, the role of nutrition and physical exercise in retarding the aging process, and in preventing the accumulation of metabolic and molecular damage leading to multiple age-associated chronic disease.











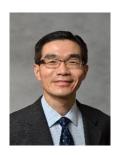




Perminder Sachdev
University of New South Wales, NSW, Australia

"The interplay of heart and brain health"

Perminder Sachdev AM MBBS MD FRANZCP PhD FAHMS is Scientia Professor of Neuropsychiatry, Co-Director of the Centre for Healthy Brain Ageing (CHeBA), UNSW Sydney, Research Director of the Neuropsychiatric Institute (NPI) at the Prince of Wales Hospital, Sydney, and Director of the Centre of Research Excellence in Vascular Contributions to Dementia. His major areas of research are drug-induced movement disorders, brain imaging, cognitive ageing and dementia, especially vascular cognitive impairment. He has published over 900 peer-reviewed journal papers and 6 books, including one for lay readers (The Yipping Tiger and other tales from the neuropsychiatric clinic) and a book of poems (A migrant's musings). In 2011, he was appointed Member of the Order of Australia (AM) for services to medical research. He was awarded the Ryman Prize in 2022 by an international jury for the most significant contributions world-wide toward the health of older people.



Lin Yee Chen
Lillehei Heart Institute, University of Minnesota, USA

"Atrial Myopathy - A Target for Stroke and Dementia Prevention"

Dr. Chen is a tenured Professor of Medicine, an ABIM board-certified cardiologist and cardiac electrophysiologist, and an NIH-funded physician-scientist. He is the Director of the Lillehei Heart Institute, at University of Minnesota Medical. His patient-oriented research on atrial fibrillation and atrial myopathy is focused on 3 themes: (1) To identify novel risk factors for atrial fibrillation and atrial myopathy, and discover new strategies to prevent both conditions, (2) To characterize the relationship of atrial fibrillation and atrial myopathy to cardiovascular and neurocognitive outcomes such as stroke and dementia, and to elucidate the underlying mechanisms, and (3) To discover novel strategies to prevent atrial fibrillation and atrial myopathy-related stroke and dementia. Dr. Chen was elected to the American Society for Clinical Investigation in 2024 and the Association of University Cardiologists in 2025.















The George Institute for Global Health, NSW, Australia

Association Paul Dudley White International Scholar Award.



Dr Sonali Gnanenthiran (MBBS [Hons I], PhD, FRACP, FCSANZ) is a cardiologist at The George Institute for Global Health and Concord Hospital, Australia. Her clinical and research interests include cardiovascular disease prevention and risk assessment. She completed a PhD with the University of Sydney. She was a recipient of the John Chalmers Fellowship at The George Institute, and a Heart Foundation post-doctoral fellowship. She has >50 publications and has been awarded >\$18.5 million in research funding. She is the lead investigator of the national LOTUS trial that assesses new secondary prevention models for ischaemic stroke. She has been awarded the 2023 American Heart Association Karl Link Award for Thrombosis, 2022 American Heart Association Paul Dudley White International Scholar Award, 2021 Scientific Medal of the Thrombosis and Haemostasis Society of Australia and New Zealand, and 2020 American Heart



Ed Fisher

NYU Langone Health, USA

"Inflammation and organ Cross-talk"

Our laboratory has a longstanding interest in two major areas. One is the cell biology of the assembly and secretion of the macromolecular complexes that transport lipids (mainly triglycerides and cholesterol) made in the liver to other tissues, where they are used for a number of essential purposes. Some of the strongest risk factors for cardiovascular disease - the leading killer not just in the U.S., but worldwide - are related to the levels of certain lipoproteins in the blood. Thus, information about the mechanisms on how they are formed is of great value in understanding how to regulate the levels of the cardiovascular disease-causing lipoproteins. Recently, we have discovered factors that coregulate lipoprotein assembly and secretion and the formation of the types of lipid droplets that can accumulate to cause "fatty liver", a serious and increasingly common health problem associated with obesity.















**Siân Cartland** *Heart Research Institute, NSW, Australia* 

"Reprogramming Inflammation: Can Myeloid-Derived Suppressor Cells be Therapeutic Targets in Atherosclerosis?"

Dr Siân Cartland is Group Leader of the Cardiovascular Immunotherapy Unit at the Heart Research Institute. Her research focuses on how immune cells, especially myeloid-derived suppressor cells and macrophages, drive vascular inflammation in atherosclerosis and peripheral artery disease, aiming to uncover mechanisms and develop targeted therapies that address residual inflammatory risk.



John O'Sulilivan University of Sydney, NSW, Australia

"Metainflammatory driven strategies for HFpEF – A 21st Century Epidemic"

Professor John O'Sullivan is the inaugural Professor of Cardiometabolic Medicine at the University of Sydney and Department of Cardiology, Royal Prince Alfred Hospital. He is a Level 2 NHF Future Leader Fellow, and co-Director of the HFpEF ("Stiff Heart Failure") Clinic at RPAH. He is Director of the Heart Failure Alliance across SLHD and WSLHD, incorporating RPAH, Concord, Westmead, and Blacktown Hospitals. John's clinical practice focusses on Heart Failure and Early Prevention of Atherosclerotic Cardiovascular Disease (ASCVD). John's basic science discoveries have been translated to clinical biomarkers, Medicare Item Numbers, and new diagnostic assays.



**Leonie Heilbronn** *University of Adelaide, SA, Australia* 

"Time-Restricted Eating: Impacts on 24-Hour Blood Pressure Profiles and Cardiometabolic Outcomes"

Professor Leonie Heilbronn is a clinical research scientist based at the University of Adelaide. Her work is focused on understanding the impact of meal timing on circadian regulation of metabolism and on developing individualised strategies to optimise glycaemia and other aspects of metabolic health. She has authored over 150 research papers and currently serves as an Associate Editor for Obesity and the European Journal of Endocrinology and is the immediate past President of the Australia New Zealand Obesity Society.









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Nigel Turner
Victor Chang Cardiac Research Institute, NSW, Australia

"Reduced nicotinamide mononucleotide improves metabolic profile of high fat diet-fed mice"

Professor Nigel Turner is head of the Cellular Bioenergetics Laboratory at the Victor Chang Cardiac Research Institute. He completed a PhD in comparative physiology and biochemistry at the University of Wollongong and undertook postdoctoral studies in the area of mitochondrial metabolism and insulin action at the Garvan Institute of Medical Research. From 2012-2021 he was head of the Mitochondrial Bioenergetics Laboratory in the School of Biomedical Sciences at UNSW Sydney, and in 2022 established his current research group at the Victor Chang Cardiac Research Institute. Nigel's research focuses on understanding how aberrations in cellular energy metabolism contribute to the pathogenesis of conditions including diabetes, cardiovascular disease and cancer.



Alex Brown
The Kids Research Institute Australia; Australian National University
"Precision Medicine in Indigenous Health"

Professor Alex Brown is a leading Indigenous medical doctor and genomics researcher. He directs the National Centre of Indigenous Genomics and leads the Australian Alliance for Indigenous Genomics. From the Yuin nation, his work advances equity in health, empowers Indigenous researchers, and influences national policy to address chronic disease and health disparities in Indigenous communities.



Natasha Rogers Westmead Hospital, University of Sydney, NSW, Australia

"Finding missing links in cardiorenal syndrome"

Natasha Rogers is Professor in Nephrology and Transplantation Medicine at the University of Sydney. She is Head of Kidney, Pancreas, and Islet Transplantation at Westmead Hospital, and Co-Director of the Centre for Transplant and Renal Research at the Westmead Institute for Medical Research. Her main focus of research is matrix protein signalling.















**Eva Li**Heart Research Institute, NSW, Australia

"NOTCH3 at the Fat-Artery Crossroads in Atherosclerosis"

Dr. Eva Li is an early career researcher in the Atherosclerosis and Vascular Remodelling Group at the Heart Research Institute. She was awarded her PhD in June 2025, with a research focus on targeting cell phenotypes to stabilise atherosclerotic plaques. Her work has been acknowledged through notable awards such as the 2023 Sydney Cardiovascular Symposium Rising Star Award and the 2024 Faculty of Engineering Career Advancement Award.



Sally Dunwoodie

Victor Chang Cardiac Research Institute, NSW, Australia

"NAD Deficiency and Congenital Heart Disease"

Dunwoodie is Co-Deputy Director of the Victor Chang Cardiac Research Institute and heads the Embryology Laboratory and the Congenital Heart Disease Research Program. She is recognised for her work in identifying the genetic causes of congenital malformations. Her research explores the functional effects of human gene mutations during embryogenesis and examines how gene-environment interactions disrupt embryogenesis in mice.















Magda Montgomery
University of Melbourne, VIC, Australia

"'Understanding the endocrine function of the heart in type 2 diabetes"

Dr Magda Montgomery is the Head of the 'Metabolic Tissue Crosstalk Laboratory' in the Department of Anatomy and Physiology (University of Melbourne), previous NHMRC Early Career Fellow (2014 – 2018) and NHMRC Career Development Fellow (2018 – 2022) and leads one of four major programs in the School of Biomedical Sciences, the Metabolism Program. Dr Montgomery leads an innovative research program aimed at understanding how defects in lipid metabolism and the endocrine function of metabolic tissues drive progression of metabolic liver disease and type 2 diabetes. Dr Montgomery received her PhD at the University of Wollongong in 2011, and her postdoctoral training at the Garvan Institute in Sydney, at the University of New South Wales (Sydney), and at Monash University (Melbourne). Dr Montgomery published 60+ papers in high-impact peer-reviewed journals (Nature, Nature Communications, Science Translational Medicine) and is the Editor-in-Chief for a new metabolism journal with the Nature Portfolio (npj Metabolic Health and Disease).



Mary Kavurma
Heart Research Institute, NSW, Australia

"Sex differences and mitochondrial endothelial health influence vascular recovery in diabetes-associated peripheral artery disease"

Dr Mary Kavurma leads the Centre for Peripheral Artery Disease at the Heart Research Institute and heads the Vascular Complications Group. An Associate Professor at the University of Sydney, her research focuses on cellular mechanisms of atherosclerosis. She has held national leadership roles, secured major fellowships and grants, co-directs ACvA's Disease Mechanisms flagship. In 2009 she received a Young Tall Poppy Science Award.







