



MEETING PROGRAM

5TH AUSTRALIAN CANCER & METABOLISM MEETING

15-17 May 2024

SAHMRI | North Tce | Adelaide | South Australia

ACMM
2024

 **SAHMRI**
South Australian Health &
Medical Research Institute

Welcome

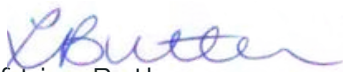
On behalf of the organising committee we warmly welcome you to the 5th Australian Cancer & Metabolism Meeting (ACMM) 2024 taking place on the traditional lands of the Kuarna people.

As Australia's only research and clinical meeting focused on cancer and metabolism, we are excited to bring together clinicians and research specialists from across the world to share their research and expertise.

The 5th ACMM in 2024 will be a great opportunity for researchers and clinicians to network with research specialists from across Australia and see the latest emerging research. We have a program curated to promote the exchange of up-to-date knowledge and information. This year's program will include 5 international expert lectures, presentations by leading national experts, abstract submitted talks, flash talks and posters sessions .

We sincerely hope the 5th Australian Cancer & Metabolism Meeting 2024 will enable you to successfully build a global network and exchange valuable insights and information for cancer research and treatment.

Co-Chairs of the ACMM Organising Committee:



Prof Lisa Butler

Solid Tumour Program Leader SAHMRI

Principal Research Fellow- SAiGENCI, The University of Adelaide



Associate Professor Daniel Thomas

Blood Cancer Program Leader SAHMRI

Consultant Haematologist, The Royal Adelaide Hospital

Associate Professor - Adelaide Medical School, The University of Adelaide



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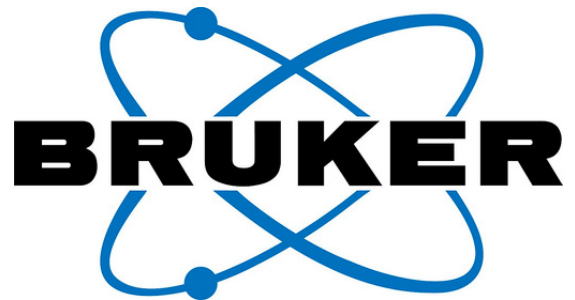


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International Speaker

Professor M. Celeste Simon

University of Pennsylvania, USA



Professor Simon is the Arthur H. Rubenstein Professor of cell & developmental biology, the scientific director of the Abramson Family Cancer Research Institute, and the associate director of the Abramson Cancer Center Core Facilities, at the University of Pennsylvania Perelman School of Medicine. Her research focuses on cancer cell metabolism, angiogenesis, and immunology.

Professor Simon earned a Bachelor of Arts from Miami University in 1977, and a Masters of Science from Ohio State University in 1980, both in microbiology. She earned a Ph.D. in molecular biology from The Rockefeller University in 1985. She did postdoctoral research with Joseph Nevins at Rockefeller, and with Stuart Orkin at Harvard Medical School.

In 1992, she became an Assistant Professor of Medicine and Molecular Genetics and Cell Biology at the University of Chicago. She became a professor at the University of Pennsylvania School of Medicine in 1999.

Professor Simon was an Howard Hughes Medical Institute investigator from 1994 to 2014. In 2017, she was awarded the National Cancer Institute Outstanding Investigator Award. She was elected to the National Academy of Medicine in 2018. In 2021, she was elected member of the U. S. National Academy of Sciences.

International Speaker

Professor Johannes Swinnen

Katholieke Universiteit Leuven, Belgium.



Professor Johannes Swinnen is professor at the University of Leuven (KU Leuven) in Belgium, former chair of the Department of Oncology and Vice-chair of the Leuven Cancer Institute.

He is director of the KU LeuvenLipidomics Core Facility Lipometrix (www.lipometrix.be).

Johan has a long-standing interest in the rewiring of lipid metabolism in cancer and other complex diseases. To map the heterogeneity of alterations in lipid metabolism, he employs and combines various lipidomics and other spatial and bulk omics approaches. His main focus is on the discovery and exploitation of lipid-related vulnerabilities to enhance therapy response in the context of personalized precision medicine.

International Speaker

Associate Professor David P Labbé

McGill University, Canada



David Labbé is Associate Professor in the Department of Surgery and Scientist at the Research Institute of MUHC at McGill University and is an Associate Member of the Rosalind & Morris Goodman Cancer Research Centre. He trained as a Food Scientist (Université Laval) but was inspired to cancer research during his M.Sc. (Université du Québec à Montréal). Dr. Labbé completed his doctoral education (McGill University) studying the role of protein tyrosine phosphatase 1B in prostate cancer using genetically engineered mouse models and undertook postdoctoral training at the Dana-Farber Cancer Institute / Harvard Medical School working on diet-induced epigenetic reprogramming and aggressive prostate cancer.

His laboratory specialises in high-throughput experiments, bioinformatics analyses, animal models and patient-derived tissues to uncover the basis to aggressive prostate cancer & molecular underpinnings to diet-dependent prostate cancer progression. His goal is to use precision nutrition to expose vulnerabilities that could be exploited through precision oncology strategies to improve outcomes for men with lethal prostate cancer.

He is the recipient of a number of high profile awards including the 2022 William Dawson Scholar of McGill University and a 2023 Young Investigator of the Society for Basic Urologic Research.

International Speaker

Professor Marcia Haigis

Harvard Medical School, USA



Marcia Haigis is a Professor in the Department of Cell Biology, co-Director of the Paul F. Glenn Center for the Biology of Aging Research, and the Director of Gender Equity for Faculty in Science at Harvard Medical School. She obtained her Ph.D. in Biochemistry from the University of Wisconsin and performed postdoctoral studies at MIT studying mitochondrial metabolism. Dr. Haigis is an active member of the Dana Farber/Harvard Cancer Center and the Ludwig Center at Harvard Medical School.

Her research has made fundamental contributions to our understanding of how mitochondria contribute to human health and diseases of aging. Her studies identified that mitochondria mediate metabolic reprogramming in cancer, including identifying nodes of metabolic vulnerability in cancer, as well as identifying metabolic recycling of ammonia to generate amino acids important for tumor growth. Her work has shed light on our understanding of how diet and obesity regulate anti-tumor immunity.

She is the recipient of numerous honors and awards, including the Brookdale Leadership in Aging Award, the Ellison Medical Foundation New Scholar Award, the American Cancer Society Research Scholar Award, the National Academy of Medicine Emerging Leaders in Health and Medicine Program, and the 2023 Samsung Ho-Am Prize in Medicine.

International Speaker

Professor Christian Metallo

Salk Institute, USA



Christian Metallo is a Professor at the Salk Institute for Biological Studies and holds the Daniel and Martina Lewis Chair. He is also an Adjunct Professor of bioengineering at UC San Diego.

His laboratory integrates engineering approaches, stable isotope tracing, mass spectrometry, and molecular biology tools to dissect how metabolic dysregulation contributes to human disease. Key focus areas include cancer, macular disease, neurodegeneration, and diabetes.

Christian received his Ph.D. in Chemical Engineering from the University of Wisconsin-Madison and was an American Cancer Society Postdoctoral Fellow at the Massachusetts Institute of Technology before starting his lab at UC San Diego in 2011. He was the recipient of a Searle Scholar Award and a Camille and Henry Dreyfus Teacher-Scholar Award, and he is a fellow in the American Institute for Medical and Biological Engineering.

Invited National Speakers



A/Prof Kristin Brown
Peter MacCallum Cancer
Centre



A/Prof Lev Kats
Peter MacCallum Cancer
Centre



A/Prof Andrew Cox
Peter MacCallum Cancer
Centre



Prof Lisa Horvath
Chris O'Brien Lifehouse



Prof Lenka Munoz
The University of Sydney



Dr Nirmal Robinson
UniSA



For patients
with **AML**

Knowledge is Power

CBF - FLT3 - IDH1 - IDH2 - NPM1

**Integrate molecular profiling into
your front-line treatment decisions**



IDH1: isocitrate dehydrogenase-1; IDH2: isocitrate dehydrogenase-2; FLT3: fms like tyrosine kinase-3; NPM1: nucleophosmin-1; CBF: core-binding factor
References for genetic alterations: Döhner H et al. *Blood*. 2022;140:1345-1377
NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines[®]) for Acute Myeloid Leukemia V.3.2023
Servier Laboratories (Aust) Pty. Ltd. ABN 54 004 838 500. Level 4, Building 9, 588A Swan Street, Burnley VIC 3121. For more information please contact
Servier Medical Information on 1800 153 590 or scan the QR code.
104947TIBS242DIGI. Material prepared May 2024.



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Invited National Speakers



A/Prof Pilar Blancafort
University of Western
Australia



A/Prof Devendra Hiwase
SA Health/ SAHMRI



Prof Matt Watt
The University of Melbourne



Dr Lauren Thurgood
Flinders University



Dr Katherine Wongtrakul-Kish
Macquarie University



For patients
with **CCA**

Knowledge is Power

BRAF - FGFR2 - HER2/neu - IDH1 - IDH2 - NTRK - PIK3CA

**Testing for actionable genetic alterations
can help you improve treatment outcomes¹⁻³**



References: 1. Vogel A et al. *Ann Oncol.* 2023;34:1277-140 2. Lamarca A et al. *J Hepatol* 2020;73:170-185 3. Simile MM et al. *Medicina (Kaunas).* 2019;55:42.
Servier Laboratories (Aust) Pty. Ltd. ABN 54 004 838 500. Level 4, Building 9, 588A Swan Street, Burnley VIC 3121. For more information please contact
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Organising Committee



Prof Lisa Butler
University of Adelaide/
SAHMRI
Adelaide, SA



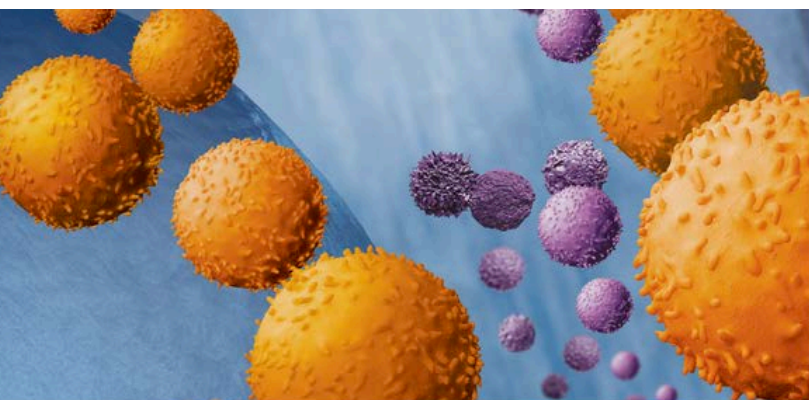
A/Prof Daniel Thomas
University of Adelaide/
SAHMRI
Adelaide, SA



A/Prof Luke Seth
Flinders University
Bedford Park SA



Dr Nirmal Robinson
UniSA,
Adelaide, SA



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Day 1

Day 1: Wednesday 15th May 2024	
11.00am	Registration Desk is open
1.00 - 1:10pm	Welcome Address from Meeting Conveners Prof Lisa Butler and A/Prof Dan Thomas
1.10 - 2.20pm	Session 1: Lipid metabolism in cancer microenvironment Chair: Prof Lisa Butler, SAIGENCI- The University of Adelaide
1.10 - 1.50pm	Invited International Speaker Professor Johannes Swinnen - Katholieke Universiteit Leuven, Belgium Spatial multi-omics as a tool to identify exploitable lipid metabolic vulnerabilities in cancer
1.50 - 2.05pm	Monika Kutyna Mesenchymal stromal cells from patients with therapy-related myeloid neoplasms exhibit a unique metabolic phenotype with defective adipocyte differentiation.
2.05 - 2.20pm	Jacob Truong Identifying Prognostic Lipid Signatures Associated with Disease Relapse After Surgical Intervention in Patients with Localised Prostate Cancer by Mass Spectrometry Imaging.
2.20 - 3.00pm	Afternoon Tea
3.00 - 4.05pm	Session 2: Metabolic reprogramming and therapy resistance Chair: A/Prof Andrew Hoy, Charles Perkins Centre, University of Sydney
3.00 - 3.25pm	Invited National Speaker A/Prof Kristin Brown - Peter MacCallum Cancer Centre, Vic Metabolic regulation of tumour immune evasion.
3.25 - 3.50pm	Invited National Speaker Prof Lenka Munoz – The University of Sydney, NSW Epigenetic and metabolic adaptations in drug-tolerant persister cells
3.50 - 4.05pm	Raj Kumar Shrestha ACSM1 and ACSM3 regulate prostate cancer fatty acid metabolism to promote tumour growth and constrain ferroptosis.
4.05 - 5.00pm	Flash Talks from Poster Presenters (5 mins per presenter) Chair: A/Prof Dan Thomas, SAHMRI, SA Health and The University of Adelaide
	Flash Talk 1: Jenny Wang Investigating the effect of physiological culture on the metabolism of estrogen receptor-positive breast cancer cells (Poster: FP 3)
	Flash Talk 2: Alana White Exploring ceramide metabolism as an avenue for novel therapeutic approaches in chronic lymphocytic leukaemia. (Poster: FP 4)

Day 1- continued

Day 1: Wednesday 15th May 2024 Continued	
4.05 - 5.00pm	Flash Talks from Poster Presenters (5 mins per presenter) Chair: A/Prof Dan Thomas, SAHMRI, SA Health and The University of Adelaide
	Flash Talk 3: Mohammad Ismail Exploiting a potential synthetic lethal interaction between SPOP mutation and glutathione metabolism pathway as a targetable metabolic dependency in prostate cancer (Poster: FP 5)
	Flash Talk 4: Jamshid Motalebzadeh Interferon gamma stimulates upregulation of tryptophan flux to kynurenine in triple-negative breast cancer through IDO1 enzyme: implications for immunotherapy (Poster: FP 1)
	Flash Talk 5: Ruhi Polara CD47 regulates cellular and metabolic plasticity in glioblastoma (Poster: FP 6)
	Flash Talk 6: Neil Portman A bedside-to-bench analysis of metastatic castrate-resistant prostate cancer patient plasma establishes a link between a lipid biomarker and cancer cell viability. (Poster: FP7)
	Flash Talk 7: Michelle Santella Exploring novel biomarkers in MRN complex and inflammatory CCL genes in head and neck squamous cell carcinoma. (Poster: FP 8)
	Flash Talk 8: Tasnova Tasnim Nova IDH1 mutation blocks cell differentiation and increases susceptibility of cholangiocarcinoma cells towards metabolic inhibition (Poster: FP 9)
5.00 - 7.00pm	Poster Sessions and Welcome Reception

Day 2

Day 2: Thursday 16th May 2024	
9.00 - 10.25am	Session 3: Metabolic targets in cancer Chair: Dr Nirmal Robinson, University of South Australia, SA
9.00 - 9.25am	Invited National Speaker Prof Lisa Horvath - <u>Chris O'Brien Lifehouse, NSW</u> The role of lipid metabolism in metastatic prostate cancer – lab to clinic
9.25 - 9.40am	Charles Bidgood Targeting Succinate-Dependent Cancers via the Development of Novel Mitochondrial-Targeted Therapeutics
9.40 - 9.55am	Bridget Mooney AMP-Activated Protein Kinase (AMPK) is required to promote cell division following salt stress.
9.55 - 10.10am	Kanu Wahi Macropinocytosis mediates resistance to loss of glutamine transport in triple-negative breast cancer.
10.10 - 10.25am	Zeyad Nassar Utilising Activated Enzymes And Intermediates Of Fatty Acid Oxidation As Therapeutic And Prognostic Markers In Prostate Cancer
10.25 - 11.00am	Morning Tea
11.00am - 12.30pm	Session 4: Metabolic vulnerabilities of blood cancers Chair: A/Prof Dan Thomas, SAHMRI, SA Health and The University of Adelaide
11.00 - 11.25am	Invited National Speaker A/Prof Lev Kats - <u>Peter MacCallum Cancer Centre, Vic</u> Heme biosynthesis is a therapeutic vulnerability in leukaemia
11.25 - 11.50am	Invited National Speaker A/Prof Devendra Hiwase – <u>SA Health and SAHMRI, SA</u> Metabolic vulnerabilities of myeloid neoplasm and autoimmune disease
11.50am - 12.05pm	Ilaria Stefania Pagani Tyrosine kinase inhibitor-responsive chronic myeloid leukaemia is associated with reduced OXPHOS capacity and mtDNA mutations likely contribute to this.
12.05 - 12.30pm	Invited National Speaker Dr Lauren Thurgood - <u>Flinders University, SA</u> Hold the sugar, pass the fat: Exploiting lipid dependencies in chronic lymphocytic leukemia for disease monitoring and therapeutics
12.30 - 1.30pm	Lunch

Day 2 - continued

Day 2: Thursday 16th May 2024	
1.30 - 2.50pm	Session 5: Epigenetics, gene regulation and metabolism in cancer Chair: A/Prof Luke Selth - Flinders University, SA
1.30 - 2.10pm	Invited International Speaker Dr David Labbe - McGill University, Montréal, Canada Diet-dependent tumor addictions in prostate cancer: a basis to precision nutrition strategies?
2.10 - 2.25pm	Joshua Hodgson Resistance to CDK4/6 inhibition in prostate cancer is associated with metabolic re-writing to protect from ferroptosis.
2.25 - 2.50pm	Invited National Speaker Dr Andrew Cox - Peter MacCallum Cancer Centre, Vic Exploring cancer metabolism through the lens of developmental biology
2.50 - 3.20pm	Afternoon Tea
3.20 - 4.40pm	Session 6: Systemic Metabolic changes and tumour biology Chair: Prof Lisa Horvath - Chris O'Brien Lifehouse, NSW
3.20 - 3.45pm	Invited National Speaker Prof Matthew Watt - The University of Melbourne, Vic Targeting lipid metabolism for prostate cancer therapy
3.45 - 4.00pm	Hannah Prsa Macronutrient intake has differential effects on primary and metastatic breast cancer progression that is linked to altered immunometabolism.
4.00 - 4.15pm	Aparna Rao Understanding the effect of high-fat diet and targeted therapies on tumour metabolism in BRAF-mutant melanoma.
4.15 - 4.40pm	Invited National Speaker Dr Katherine Worgtrakul-Kish - Macquarie University, NSW Can we find ascites glycosylation markers to guide treatment choice for ovarian cancer?
4.40 - 5.10pm	SPECIAL PANEL DISCUSSION The Valley of Death: How to gain clinical traction for metabolic target discovery. <ul style="list-style-type: none"> • Lisa Horvath • Aparna Rao • Dan Thomas (commercialisation obstacles) Three 5 min presentations followed by 15 min of Q&A
5.10 - 6.30pm	Free time
6.30 - 8.30pm	Meeting Dinner and Wine Tasting Event National Wine Centre of Australia, North Tce, Adelaide (City East)

Day 3

Day 3: Friday 17th May 2024	
9.00 - 10.45am	Session 7: Reprogramming metabolite flux in cancer Prof Nigel Turner, Victor Chang Cardiac Research Institute
9.00 - 9.40am	Invited International Speaker - Virtual Prof Marcia Haigis -Harvard Medical School, USA The role of metabolites in Cancer during aging.
9.40 - 10.20am	Invited National Speaker - Virtual Prof Christian Metallo - Salk Institute, USA Title: TBA
10.20 - 10.45am	Invited National Speaker Prof Pilar Blancafort -University of Western Australia, WA Reprogramming stress-induced cellular metabolism to improve therapy responses in ovarian cancer
10.45 - 11.15am	Morning Tea
11.15am - 12.45pm	Session 8: Interplay between Tumour Immunology and Metabolism Chair: Prof Renea Taylor, Monash University, Vic
11.15 - 11.55am	Invited International Speaker Prof Celeste Simon - The University of Pennsylvania, USA Can Tumor Metabolism Be Targeted for Effective New Therapies.
11.55am - 12.10pm	Zaklina Kovacevic The metastasis suppressor NDRG1 significantly alters pancreatic cancer cell metabolic cross-talk with fibroblasts and immune cells in the tumour microenvironment.
12.10am - 12.35pm	Invited National Speaker Dr Nirmal Robinson - University of South Australia, SA Unraveling Glioblastoma's Metabolic Vulnerabilities: Insights from CD47 "Don't Eat Me" Signaling.
12.35 - 12.45pm	Prizes and Meeting Wrap Up Co Conveners: Prof Lisa Butler and A/Prof Dan Thomas
12.45 - 1.30pm	Event Closing Light Refreshment

ACMM Meeting Dinner

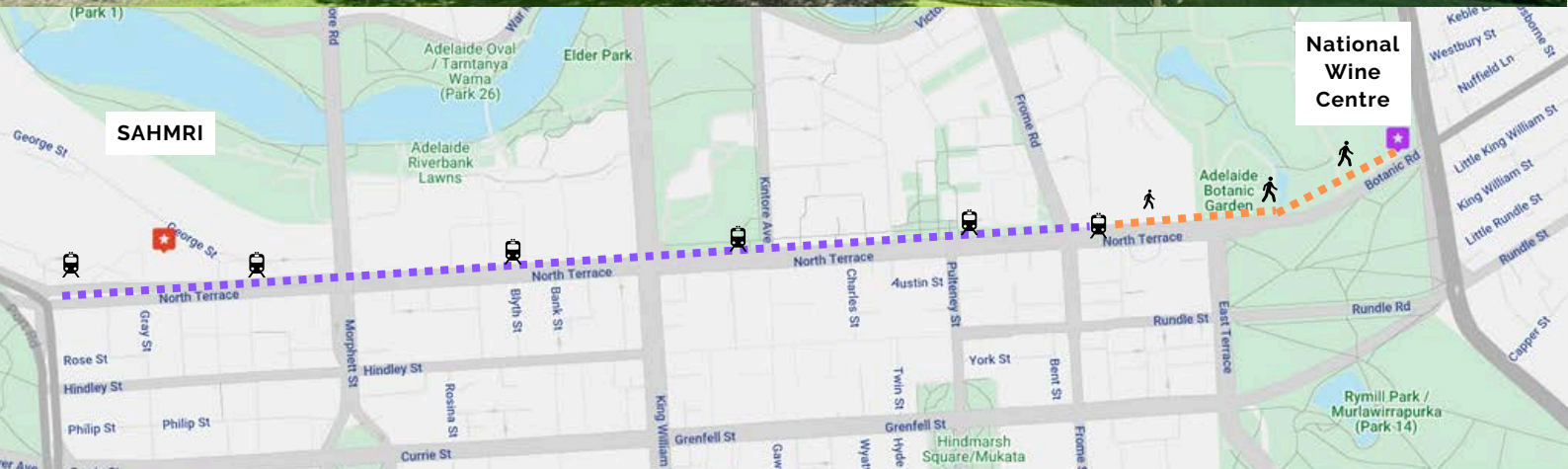
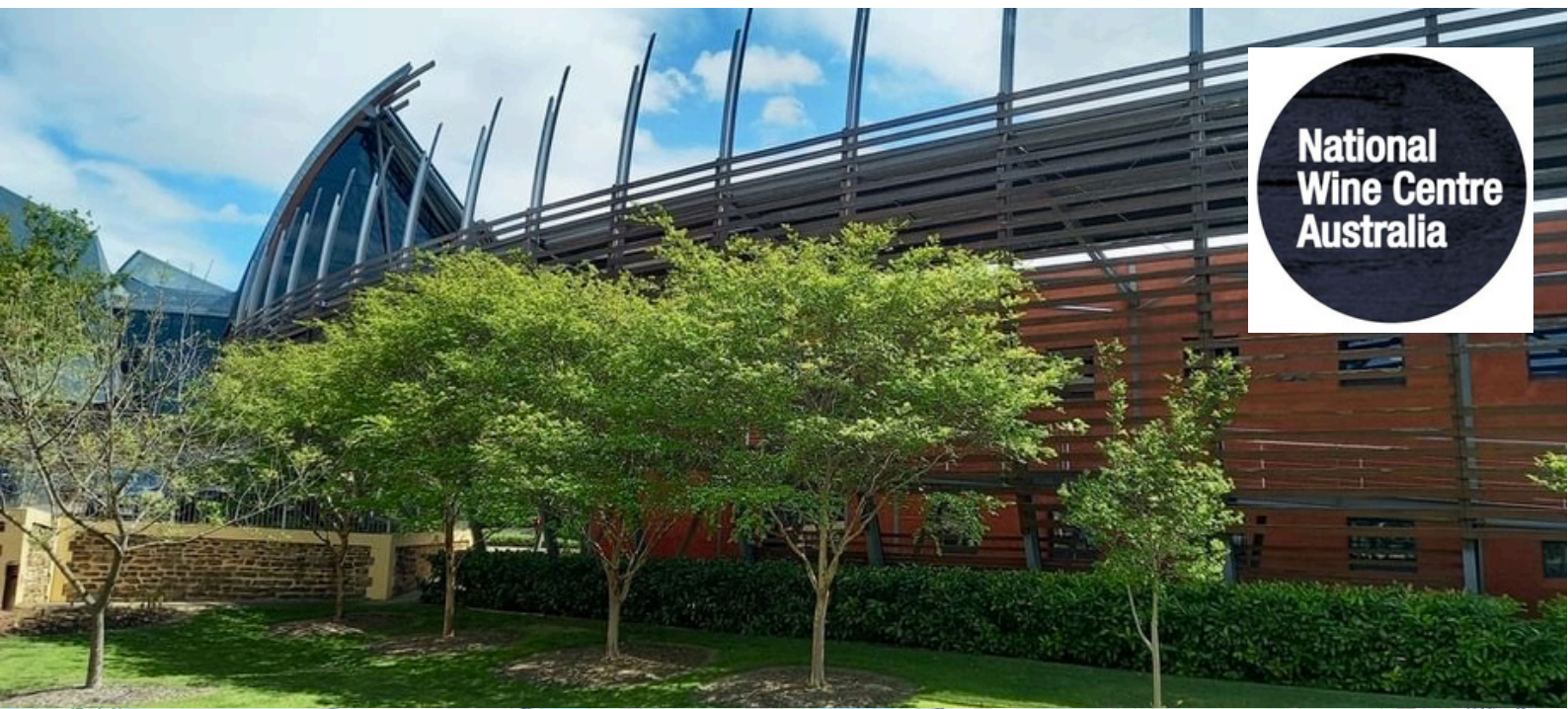
For those of you that have purchased a ticket to attend The 5th ACMM Dinner, the details are below:

6.30 pm Thursday 16 May
The National Wine Centre of Australia,
Corner of Hackney Rd &, Botanic Rd, Adelaide.

The event will include a wine tasting, dinner and wine service.

To travel to the venue via free public transport:

- Take free east bound Botanic Tram (Tram sign "BTANIC") from any tram stop on North Tce. (If you're catching trams from King William St or other tram stops south of the city please disembark at Adelaide Railway Station stop to transfer to a Botanic Tram).
- Disembark at Botanic Gardens Tram Stop (approx 287 North Tce). Walk 7 mins east on Botanic Rd to the venue.



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