



# SAHMRI

## Annual Report

### 2023





## ACKNOWLEDGEMENT OF COUNTRY

The South Australian Health and Medical Research Institute (SAHMRI) acknowledges the Kurna people as the Traditional Custodians of the Adelaide plains, where our buildings are located.

We recognise the Kurna people's cultural, spiritual, physical and emotional connection with the land. We honour and pay our respects to Kurna elders both past and present and all generations of Kurna people, now and into the future.

We acknowledge other Traditional Owners who live across South Australia and Australia, where SAHMRI research is conducted.

Pictured: A segment from SAHMRI's Inaugural Reconciliation Action Plan (RAP) 2018-2020 Artwork *Karrawirra Pari* by Allan Sumner

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# LETTER FROM THE BOARD CHAIR

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## The Hon. Hieu van Le AC

The role of leading the Board is both exciting and challenging as the Board works to provide the supports necessary to continue SAHMRI's excellent research program.

The past 12 months have indeed been eventful as we celebrated SAHMRI's 10th anniversary and many successful research achievements whilst commencing detailed planning to ensure SAHMRI's sustainability and advancement for the next 10 years.

During the past year, there have been many notable scientific achievements, publications, awards and grants across all our research themes, registries and health policy centre, the detail of which can be found in this report.

In August we welcomed Professor Maria Makrides as our new leader. Maria is one of SAHMRI's founding research leaders, most recently serving as Deputy Executive Director and Women and Kids Theme Leader. Maria comes to the role with a comprehensive understanding of SAHMRI, its vision and important role in the ongoing development of health and medical research within South Australia.

I welcome the appointment of Kathryn House AM DSJ as chair of our newly established Public Engagement and Philanthropy Committee. Kathryn brings extensive fund-raising expertise and community engagement experience to the role and together with her fellow esteemed committee members will expand our community engagement and philanthropic activities.

One of our most exciting new initiatives is the Discovery Circle, which brings together a group of donors with a shared passion for life-changing research, who are determined to make a powerful

impact on improving the health and wellbeing of our community. This exclusive group of benefactors commit to investing a minimum of \$5,000 each per year and are given the opportunity to watch SAHMRI researchers pitch their ideas and decide as a team which projects to fund.

This year has seen several successful community engagement events, most notably SAHMRI's annual Open Day and the BRIGHT Walk. I thank the 5,000 enthusiastic participants and their donors who contributed to its success.

One of the priorities for the Board this year has been our focus on our current and emerging challenges. As with many other independent research institutes across the country, SAHMRI exists within a difficult funding environment and faces significant financial challenges. I am appreciative of the close working relationship established with the South Australian and Commonwealth Governments, the Universities, SA Department of Health and Wellbeing, Local Health Networks and all our other partners for their collaboration and support in working towards a resolution to these challenges.

Our other significant challenge is the establishment of the Australian Bragg Centre for Proton Therapy and Research (ABCPTR), a subsidiary of SAHMRI. I am grateful for the leadership provided by Dr Tony Sherbon in chairing the ABCPTR Board and in developing a strong collaborative relationship with the Commonwealth and State Governments and other partners to deliver Australia's first proton therapy centre here in Adelaide. The support of the radiation oncologists and other clinicians and Local Health Networks in this endeavour has been invaluable as we work to provide this essential cancer treatment for the community.



As the merger between the University of Adelaide and the University of South Australia is progressing the Board is keenly monitoring the evolution of the new university and the opportunities this may bring to SAHMRI.

Finally, I would like to thank our outstanding researchers, technicians, support staff and philanthropic supporters for their dedication and hard work. It is through this dedication to innovation and driving medical breakthroughs that SAHMRI's vision of inspired research leading to better health for all can be achieved.

I am excited by the work of our researchers and support staff and am optimistic for the future of SAHMRI. I look forward to working with my fellow Directors and the Executive as we chart a pathway for long term sustainability and ongoing research excellence.

# LETTER FROM THE EXECUTIVE DIRECTOR

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## Prof. Maria Makrides

It is with pride that I write my first Annual Report letter as SAHMRI's Executive Director. SAHMRI is an organisation and a community that has been such a special part of my life and the lives of so many others since the doors to our headquarters opened a decade ago.

The 2023 year has been one of new beginnings, as we collectively emerged from the shadows of COVID-19 to refocus all our efforts on our core business of research excellence. This year we welcomed people to our SAHMRI family while fondly farewelling others, including our inaugural Executive Director, Professor Steve Wesselingh.

When Steve joined SAHMRI 12 years ago our institute was little more than an idea. This thriving research community now numbering in the many hundreds was then no more than a dozen people operating out of a small, rented office space on King William Street.

I'd like to thank Steve personally for his wisdom and friendship over many years, and also thank him on behalf of our entire community for all that he has done to bring SAHMRI to where we stand today.

This year we also farewelled Professor Chris Proud, who's entered a very well-earned retirement after nearly 10-years in various leadership roles across SAHMRI.

November 29 this year marked 10 years since SAHMRI's major research operations began. Personally, the most gratifying aspect of our week of anniversary celebration events was the realisation of just how much SAHMRI has achieved in such a relatively short time. Those successes have been driven in no small part by our many and varied supporters – the public, philanthropists

both corporate and private, our research partners including SA's major universities, the public and private health systems, collaborating medical research institutions and the State and Federal Governments. So much of the credit for our success must of course go to the many hundreds of brilliant, dedicated researchers who have called SAHMRI home over the years.

It was humbling to see the extensive coverage our first 10 years of achievements received across publications such as SA Life magazine, The Advertiser's SA Weekend magazine, Cosmos Magazine and the Australian Health Journal; and was particularly touching that our local representative, the State Member for Adelaide, The Hon. Lucy Hood MP, dedicated her parliamentary address to congratulating and thanking SAHMRI for our contributions to health and medical research and to the state more generally.

As an institute, SAHMRI's contribution to SA's health and economy grows year-on-year. From a purely research perspective, our achievements have been diverse – leading the establishment of the SA Aboriginal Health Research Accord which lays out the principles by which all Indigenous research should be conducted; a world-leading program of research into how omega-3 can be employed to significantly reduce preterm birth; continuing validation of next-generation treatments that have reduced chronic myeloid leukaemia from a death sentence to a readily manageable chronic condition for many people; clinical cardiac research demonstrating how to dramatically reduce the risk of repeat heart attacks; the development of a cellular medium for growing replica brain organoids to direct test pre-approved drugs; creation of an 'Outcome Monitoring System' that is driving



reform and care improvements across Australia's residential aged care system; and partnering in the development of a novel medication offering relief to millions of sufferers of chronic visceral pain across the world.

These considerable accomplishments speak to a decade of success, however we at SAHMRI are more motivated by our next discovery than content with past achievements. We have begun an evolution of personnel, research focus and research support that will see us best placed for success in this dynamic and ever-changing health and medical research sector.

This year also saw the completion the Australian Bragg Centre building which is the designated site of Australia's first proton therapy unit to treat people with rare tumours and those close to vital organs, in particular children. SAHMRI's role in the proton therapy centre will focus on research into what is still a relatively new technology.

While 2023 is memorable largely for milestones and celebrations, I also reflect on disappointment with the outcome of the Indigenous Voice to Parliament referendum. The referendum campaign, and ultimate rejection, was a time of sorrow for many at SAHMRI, in particular the many members of our community who identify as Aboriginal and/or Torres Strait Islander people and the broader Indigenous communities with which they work so closely.

While respecting the rights of all members of our community to make a personal decision about the referendum, SAHMRI as an organisation supported the establishment of the Voice because, through our work, we see the benefits that flow when Indigenous Australians are given a say over decisions that directly affect their lives.

Despite the result, I am personally drawing strength from SAHMRI's commitment to seek, and listen to, the voices of Indigenous Australians, which is as strong as ever. Led by Wardliparingga and our Aboriginal Communities and Families Health Research Alliance teams, we continue meaningful engagement with Indigenous communities to undertake research that tangibly improves their lives. We saw this in action during the pandemic when rapid community consultation and action played a major role in minimising the impact of COVID in regional and remote populations.

The 2023 year has continued a period of transition and growth for SAHMRI, symbolising of an exciting new chapter in our evolution. As we navigate the challenges and opportunities that lie ahead, we remain steadfast in our commitment to serving humanity through the pursuit of knowledge to advance health and healthcare. Together, we will continue to push the boundaries of possibility, harnessing the power of collaboration and innovation to create a better future, leaving an indelible mark on the world and inspiring generations to come.

## BOARD OF DIRECTORS



### THE HONOURABLE HIEU VAN LE AC

**Non-executive Chair**

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During his time as Governor of South Australia from September 2014 until August 2021, The Hon. Hieu Van Le served as Patron to SAHMRI. He was appointed Chair of the SAHMRI Board on 21 December, 2021.

Mr Le was born in the Vietnamese province of Quang Tri before moving to Australia in the aftermath of the war in 1977. He received a Master of Business Administration and an Economics degree from the University of Adelaide, is a member of the Australian Society of Certified Practising Accountants and a Fellow Member of the Financial Services Institute of Australasia.



### PROFESSOR JUSTIN BEILBY

**Non-executive Director**

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Professor Justin Beilby is an inaugural member of the SAHMRI Board who returned to the role in 2010 after a period of absence.

He is an academic general practitioner with expertise in primary care and aged care research, health service evaluation, intervention studies and the translation of research findings into policy and clinical practice.



### MR EDDIE FRY

**Non-executive Director**

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Eddie Fry is an experienced businessman whose worked extensively in the resources sector and specialises in financial and human resource management as well as Indigenous and Native Title issues.

Mr Fry is a Dagoman man who is the first SAHMRI Board member who identifies as Aboriginal or Torres Strait Islander. He was appointed to the SAHMRI Board in June 2020.





## MR ROSS HASLAM

**Non-executive Director**

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Ross Haslam is a chartered accountant with extensive expertise in corporate responsibility, audit procedures, investment due diligence and company restructures.

He has widespread experience across the health sector and is also a Director of the Women's and Children's Health Network (WCHN) Governing Board.

Mr Haslam is Chair of the Board's Audit, Finance and Risk Committee. He was appointed to the Board on 31 July 2018.



## MS JENNY RICHTER AM

**Non-executive Director**

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Jenny Richter was previously the Chief Executive Officer (CEO) of Central Adelaide Local Health Network (CALHN) and the Deputy Chief Executive of SA Health.

She holds non-executive directorships with the Southern Adelaide Local Health Network, Cancer Council SA, Cancer Council Australia and the Independent Hospital Pricing Authority.

Ms Richter was appointed to the Board on 16 February 2018.



## KATHRYN HOUSE AM

**Non-executive Director**

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Kathryn House was appointed as a Director to the SAHMRI Board in August, 2022. She has a passion for, and distinguished professional background in, the not-for-profit sector and as an educator and social entrepreneur.

As a committed philanthropist, Ms House devotes herself to not just helping individuals and not-for-profit organisations, but also raising the profile of philanthropy and the culture of giving throughout our community. Her significant contributions in these areas were recognised by her being appointed as a Member of the Order of Australia (AM) in the 2020 Queen's Birthday Honours list.



## **PROFESSOR KATE SCHRODER**

### **Non-executive Director**

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Professor Kate Schroder was appointed as a Director of the SAHMRI Board in August, 2022. She brings invaluable scientific knowledge, integrity and leadership to this position.

Professor Schroder is an NHMRC Leadership Fellow who leads the Inflammasome Laboratory at the University of Queensland's Institute for Molecular Bioscience and is also the Director of the IMB Centre for Inflammation and Disease Research. She has published more than 100 articles in top journals and in 2020 was honoured with the Australian Academy of Science Nancy Millis Medal.



## **DR TONY SHERBON**

### **Non-executive Director**

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Dr Tony Sherbon was appointed as a Director to the SAHMRI Board in August, 2022. He brings significant experience across business, government and the health care sector to this role.

From the year 2000, Dr Sherbon spent more than a decade overseeing large health services as the Chief Executive of the Illawarra Area Health Service, ACT Health and SA Health.

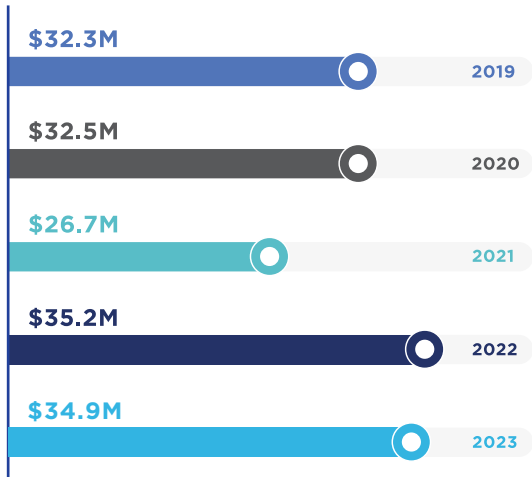
After almost five years as CEO with the Independent Hospital Pricing Authority, Dr Sherbon joined EY, where he served as the Client Service Partner for the Commonwealth Department of Health.



# GROWTH AT A GLANCE



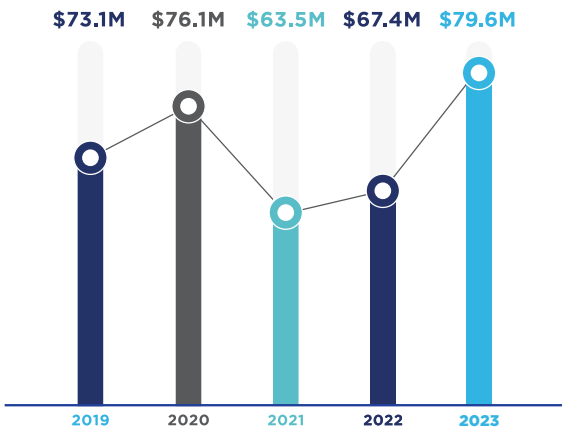
## RESEARCH FUNDING



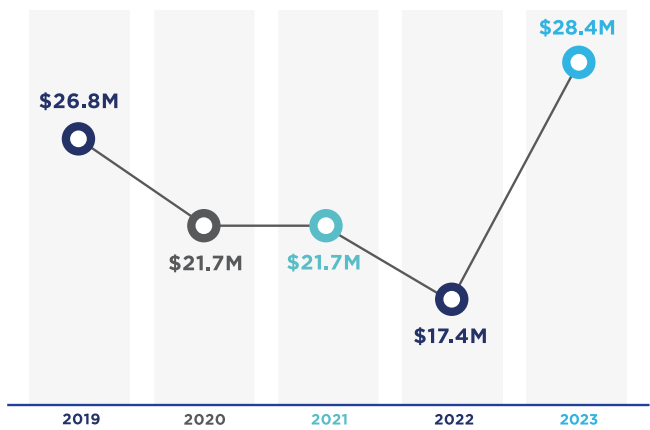
SAHMRI remains committed to recruitment and retention of the best health and medical researchers

SAHMRI is home to 503 staff, 286 students, 539 partners and 75 volunteers, increasing our community by over 100 in the past calendar year.

## SAHMRI TURNOVER



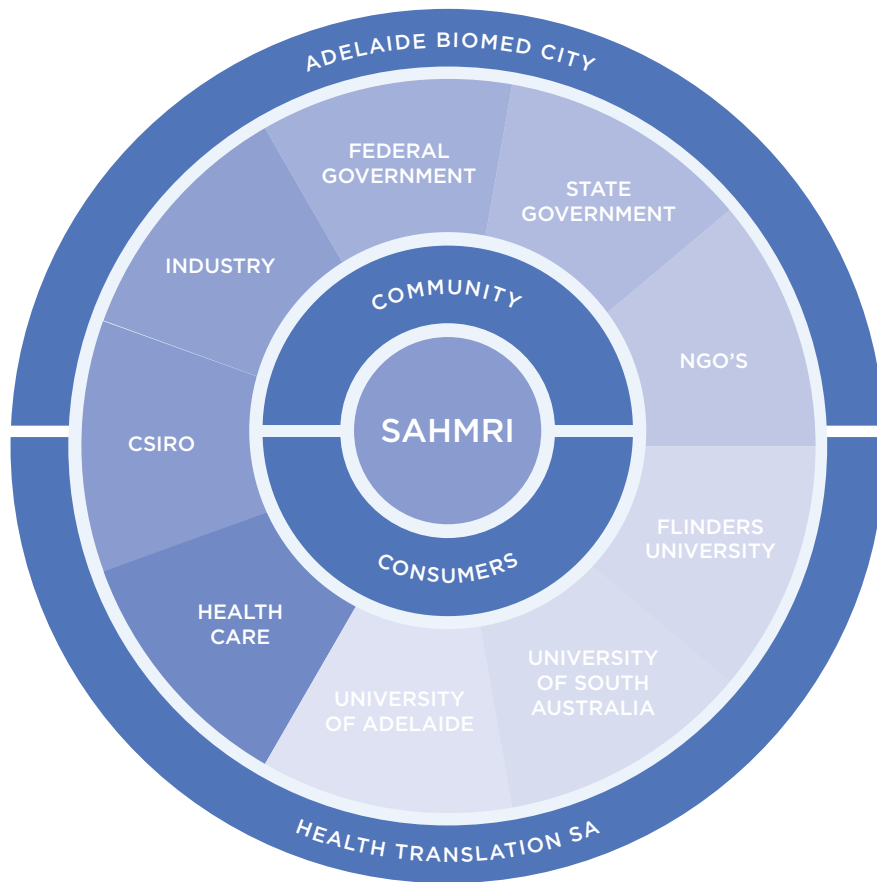
## COMMERCIAL INCOME



# PARTNERSHIPS

Collaboration and innovation are in the DNA of SAHMRI.

We would like to highlight the integration of SAHMRI's partnerships and how they create a strong foundation for translational research.





## OUR COMMITMENT TO RECONCILIATION

**MS KIM MOREY**  
RAP Committee Co-chair

When I reflect on Reconciliation at SAHMRI across the 2023 year it is difficult to not focus on the Indigenous Voice to Parliament referendum. This was obviously an event of great importance nationally, but was enormously significant to the SAHMRI community specifically as so much of what we do is intrinsically linked to the essence of what the Voice represents.

Through our work at SAHMRI, in particular our Wardliparingga Aboriginal Health Equity Theme and our Aboriginal Communities and Families Health Research Alliance, we see in practice the progress that is made when Indigenous communities have a direct and active role in decisions that impact them.

The rejection of the Voice to Parliament caused great sorrow among many of our community. For many that sorrow still lingers. I personally believe Australia ignored the chance to make meaningful progress in our Reconciliation journey, but have taken comfort from again seeing the strength and resilience of Aboriginal and Torres Strait Islanders – and our many non-Indigenous allies – to continue striving to heal past wrongs and walk together towards a united future.

The referendum campaign highlighted the very best of SAHMRI – as an organisation we made an informed, evidence-based decision to support

a ‘Yes’ vote, while welcoming our individual community members to weigh the decision for themselves and come to their own conclusions.

We hosted and presented a broad range of educational events and resources in the lead up to the referendum, and were even privileged to welcome the Prime Minister, the Hon. Anthony Albanese, to SAHMRI as he travelled the nation discussing the Voice proposal.

SAHMRI is at a significant juncture in our Reconciliation journey. Our initial Innovate Reconciliation Action Plan has officially ended and we are nearing endorsement of our Stretch phase. Our near-completed proposal for our Stretch RAP has been designed around SAHMRI becoming an even more visible advocate and leader in Reconciliation – in our sector, in our precinct and in our state.

We also this year appointed a new RAP Coordinator, Clyde Rigney. Clyde is a Ngarrindjeri man from the Lower Murray River, Lower Lakes and Coorong of South Australia. He comes to us from Yamagigu



Consulting and has been involved in Aboriginal community development for more than 20 years, giving him vast leadership and governance experience as well as cultural knowledge.

As well as our progression to our Stretch RAP, Clyde has been driving our Indigenous STEM Mural project, which is on track for launch early next year, and our Indigenous room naming initiative which is also edging closer to fruition.

National Reconciliation Week was again a highlight of the year for SAHMRI. Our major event for the week was the awarding of the Neville Fazulla Aboriginal Health Scholarship which this year was earned by Kelli Owen.

Kelli's work focuses on dialysis, primarily in reducing the burden for Aboriginal and Torres Strait Islander people accessing and understanding care.

The scholarship is in memory of Neville Fazulla, whose life's work was dedicated to improving the health system's response to the unique needs of Aboriginal and Torres Strait Islander people. The

scholarship represents Reconciliation in action - supporting and empowering Aboriginal and Torres Strait Islander people to study at university within non-clinical health related fields, so they can become the leaders of tomorrow.

The 2023 year, from a Reconciliation perspective, ends with the shadow of the referendum rejection still hanging over us. But as you can see from the few examples I mention above, meaningful action towards Reconciliation is still happening, with Reconciliation Australia advocating that Now More Than Ever reminds us that, no matter what, the fight for justice and the rights of Aboriginal and Torres Strait Islander people will - and must - continue. There are so many reasons to look optimistically towards a more reconciled Australia in the future. I am very proud to say SAHMRI is playing a key role in this within our organisation and increasingly as an exemplar for others to follow.

# RESEARCH EVENTS & AWARDS

## SAHMRI Research Showcase

SAHMRI's 2023 Research Showcase was brought forward to November to make it part of a week of celebrations to mark the 10th anniversary of our headquarters opening.

The showcase is an opportunity to hear about the work being undertaken by our PhD and early and mid-career researchers. The two-day event features a range of 3-minute and 10-minute presentations as well as a poster competition.

The 2023 Research Showcase award winners were:

- **Poster prize:** Imanthi Illeperuma (Lifelong Health) & Jesse Kennedy (Lifelong Health)
- **PhD 3 Minute Thesis:** Naomi Wattchow (Lifelong Health)
- **PhD 10 Minute Winner:** Georgette Radford (Precision Cancer Medicine)
- **Early-Career Researcher Presentation:** Elyse Page (Precision Cancer Medicine)
- **Mid-Career Researcher Presentation:** Ilaria Pagani (Precision Cancer Medicine)

## SAHMRI Scientific Seminars

SAHMRI's Scientific Seminars are held on the first Tuesday of each month, bringing together researchers from across our institute to share insights from fields of science that they might otherwise not be exposed to.

Seminars have variously focused on the work of SAHMRI Themes and Research Groups while also explored cross-cutting issues of interest to many researchers.

Presenters in 2023 included Dr Anne-Lise Chaber discussing The Scientific Adventure of COVID Sniffer

Dogs, Professor Christopher Sweeney sharing A Few Insights into plans for The South Australian immunoGENomics Cancer Institute (SAiGENCI) and SAHMRI Board Member Professor Kate Schroder detailing her studies into inflammasomes.

## 2023 Awards Presentation

The annual SAHMRI Awards celebrate research excellence, leadership and commitment to SAHMRI's vision, values and culture. The 2023 winners were:

- **High Impact Publication**  
Jordan Hansford (Precision Cancer Medicine)
- **PhD Student**  
Georgina Irish (ANZDATA)
- **Early-Career Researcher**  
Julian Carosi (Lifelong Health)
- **Mid-Career Researcher**  
Tom Sullivan (SAHMRI Women and Kids)
- **Community Engagement**  
Aboriginal Health Equity Theme
- **Research Translation and Impact**  
Jordan Hansford (Precision Cancer Medicine)
- **Research Enabler**  
Chris Christou & Paul Herde (PIRL)
- **Research Facilitator**  
Shayan De Silva (ICT)
- **Diane Ranke Leadership Prizes**  
Leanne Lecornu (Finance) & Julia Green (ABCPTR)
- **Executive Director's Award**  
Alice De Bats (Legal)



## RESEARCH, INTEGRITY & COMPLIANCE

SAHMRI recognises the importance of good governance and encourages ethical research conduct based on mutual respect, trust and honesty for all staff, students, partners and visiting researchers. As such, SAHMRI complies with the Principles, Responsibilities and Definitions of the Australian Code for the Responsible Conduct of Research, and other national guidelines in relation to values and community engagement. In addition, SAHMRI has strong university associations and as such supports the principles of the Voluntary Code of Best Practice for the Governance of Australian Public Universities.



## FUNDRAISING & MARKETING

SAHMRI's fundraising and marketing strategy continues to raise the profile of SAHMRI's work and develop well-researched programs to secure financial sustainability in the long term.

Phase two of SAHMRI's marketing campaign rolled out in 2023, building on last year's campaign and lifting awareness of the passionate people and important projects within the 'cheesegrater' building.

Adding researchers, their work and the people who will benefit from their discoveries tells more of the SAHMRI story across multiple channels, including radio, outdoor, press and online advertising.

Market research in 2021 revealed a lack of community awareness of SAHMRI's not-for-profit status and the need for philanthropic support. A repeat of the study in 2023 showed that the advertising initiative is beginning to bear fruit. However, this remains a long-term strategy as it will take time to boost the community's willingness to donate to health and medical research in the coming years.

More than 1800 SAHMRI supporters braved a drizzly start to make July's BRIGHT Walk a rousing success.

The annual 15km night walk, raising money to help SAHMRI cure disease and save lives, took participants past the most spectacular sights of this year's Illuminate Adelaide festival and other dazzling BRIGHT-specific installations.

Almost 5000 people sponsored BRIGHT Walkers, raising \$400,000 to support SAHMRI's early and mid-career researchers to establish careers in the

highly competitive medical research sector. The advertising for the event was seen more than five million times, which is a crucial measure of success for the event, playing a part in raising awareness of SAHMRI.

The Discovery Circle is a new fundraising initiative bringing together a group of committed donors who share a passion for life-changing research and are determined to make a powerful impact on improving the health and well-being of our community.

Each member donates \$5,000 and meets with the group annually to decide which research projects to support for the year. These donations combine to create a substantial, meaningful investment in inspiring projects with the potential for wide-ranging impact.

Our strategy to increase philanthropic support includes adding regular appeals to our portfolio. Our end-of-tax-year appeal featured a plea to donate towards our Visceral Pain research team, searching for new painkilling treatments for endometriosis. At Christmas, we appealed for funds towards research at the Neil Sachse Centre for Spinal Cord Research, specifically into transverse myelitis and other spinal cord injury conditions. This activity will continue in 2024, generating funds and a larger group of committed donors to build our supporter base.

We are enormously grateful to the many trusts, foundations and major donors who remain passionate about world-leading health and medical research. Their gifts directly support a broad range of research projects.

One example from 2023 was the appointment of Dr Wang as the Ramsay Bioinformatics Fellow, thanks to generous support from James and Diana Ramsay Foundation. The foundation has significantly contributed to SAHMRI, giving \$1.5m during the last ten years.



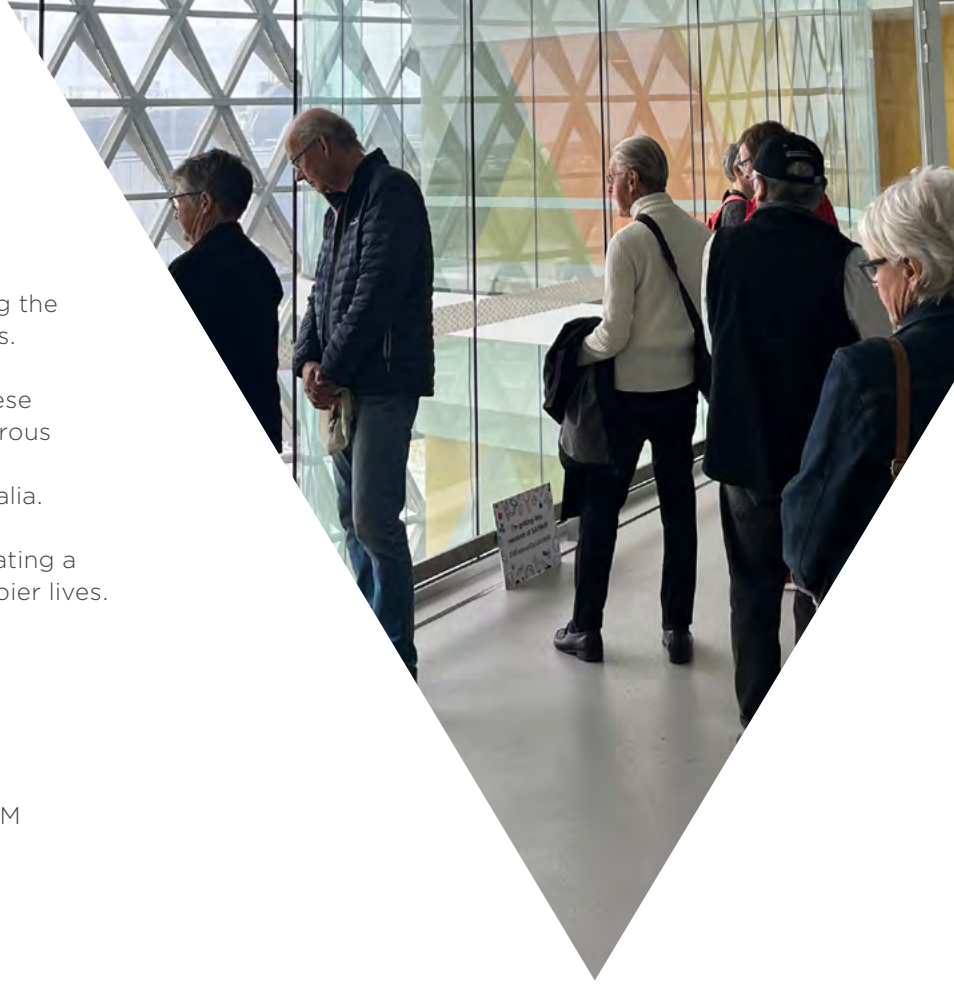
# Thank You to SAHMRI's Supporters



Philanthropic support is the key to ensuring the institute's sustainability in the coming years.

In 2023, we were grateful for gifts from these philanthropic trusts and foundations, generous benefactors and major donors who helped transform medical research in South Australia.

Thank you for supporting our vision of creating a world where everyone can live longer, happier lives.



## Platinum Supporters

**(more than \$100,000)**

- Detmold Group
- Emeritus Professor John Hopwood AM and Barbara Hopwood
- Jamie & Louisa McClurg
- McMahon Services
- Frank & Kathy Seeley
- Bruno and Bernie Simone
- Jess, Tony and Bianca Simone

## Diamond Supporters

**(more than \$50,000)**

- Richard Cavill Foundation
- Greaton Development Ptd Ltd
- Grosset Gaia Foundation
- Jimfan Foundation

## Emerald Supporters

**(more than \$25,000)**

- ANZ
- CMV Foundation Inasmuch
- Fay Fuller Foundation
- Dr Graham Fraenkel
- The Lin Huddleston Charitable Foundation
- IA Foundation
- LK Law
- The Paraplegic & Quadriplegic Association of South Australia

## Sapphire Supporters

**(more than \$10,000)**

- Astellas Pharma
- Michael and Angelique Boileau / Boileau Business Solutions
- Childhood Cancer Association
- Cops for Kids
- David & Nicole Crawford
- Croypark Holdings
- ECH Inc
- Foskett Foundation
- Peter and Sandy Hayes
- Hurley Family Foundation
- The Estate of Maxine Joy Lane
- Life Care
- The Lions Club of the City of Adelaide
- Sandy's Memorial Trust
- Sangamitha Foundation
- Silver Chain
- South Australia Police
- Bill Williams

## Ruby Supporters

(more than \$5,000)

- Doug, Kirsty and Pete Balnaves
- Paul Clancy
- Classic Owners Motor Cycle Club Inc
- Haigh's Chocolates
- Elizabeth Hallam and Sean Geoghegan
- Hewlett Packard Enterprise
- Imbrogno Family Trust
- The Indulkaninna Foundation
- Lions Medical Research Fund
- Simon Marschall
- Maxxia
- Midnight Anytime Blinds
- Willie van de Meulengraaf
- Peter and Lisa Weeks
- Edmund and George Whitlock Foundation
- ZEN Energy
- Anonymous (2)

## The Walker Society

With respect and gratitude, we recognise those who have chosen to leave a legacy to SAHMRI. Walker Society members are providing the ultimate gift in their Will to make a lasting impact on the lives of future generations. We thank the 48 people who have generously remembered SAHMRI with a gift in their Will.

## Founding Ambassadors

Even before the iconic 'cheese grater' building became SAHMRI's home, a group of people with a bold and united vision believed in a healthier future for all. This group of people are SAHMRI's Founding Ambassadors. We owe a debt of gratitude to this original group of philanthropists for investing in medical research as a long-term proposition. Their names will forever be displayed at SAHMRI to acknowledge their vision.

- Alan Young AM and Susan Young
- Alister and Susan Haigh
- Bill Williams
- Colin Dunsford AM and the Late Libby Dunsford
- David and Kathryn Simmons

- David and Nicole Crawford
- Deepankur Bhatia
- Detmold Group
- Dr Lea Thin Seow
- Dr Pam Wall OAM and the Late Dr Ian Wall OAM
- Frank Agostino
- Frank Seeley AM and Kathy Seeley
- Greg and Lynn Drew
- Hon. Tom Gray
- Hugh and Fiona MacLachlan
- In memoriam of Professor GJ Fraenkel
- Janet Forster and the Late Ron Forster
- Jeffrey Grosset and Stephanie Toole
- Jill Hammond, Amanda Buttery and Belinda Buttery
- Josh and Cathy Simons
- Julian Burton OAM and Kay Burton
- Leeann and David Willson
- Loretta Reynolds
- McMahan Services
- Nick and Nikki Heywood-Smith
- Nick House and Kathryn House AM
- Peter and Lisa Weeks
- Professor John Hopwood AM and Barbara Hopwood
- Professor Paul Zimmet AO
- Raymond and Tina Spencer
- Rob and Lisa Chapman
- Robert and Marjory Ahrens
- Sean Geoghegan and Elizabeth Hallam
- Shaun Rolevink
- Stefan and Leanne Ahrens
- Susan Hoopmann
- Teresa Girke and Professor Steve Wesselingh
- The Late David R Gunn
- The Late Robert Kennedy
- The Melissa White Family
- Vivien Zimmet

## Grant Funding

- Australian Cystic Fibrosis Research
- Beat Cancer Project
- BrightFocus Foundation
- Cancer Australia
- Cancer Council NSW
- Cancer Council SA
- Channel 7 Children's Research Foundation
- Robert Connor Dawes Foundation
- Diabetes Australia
- Diabetes SA
- Flinders Foundation
- Michael J Fox Foundation
- Bill and Melinda Gates Foundation
- Heart Foundation
- The Hospital Research Foundation
- The Leukaemia Foundation of Australia
- Leukaemia and Lymphoma Society
- Movember
- MyRoom Children's Charity
- Neurosurgical Research Foundation
- Perpetual Foundation
- The James & Diana Ramsay Foundation
- South Australian Museum
- Tour De Cure
- Vascular Foundation



Freemasons  
Centre for Male  
Health & Wellbeing

**TRAINING AND  
SUPPORTING  
YOUNG SCIENTISTS**

## SOCIAL MEDIA HIGHLIGHTS

**1,403**

TOTAL  
POSTS



**1.4M**

IMPRESSIONS



**382K**

PEOPLE  
REACHED



**27,756**

FOLLOWERS



**1,299**

POST  
SHARES



**2,714**

NEW  
FOLLOWERS





**481**

**NEW  
FOLLOWERS**



**INSTAGRAM  
LAUNCH**

**NEW  
SOCIAL ACCOUNT**

**463**

**NEW  
FOLLOWERS**



**398**

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FOLLOWERS**





# Aboriginal Health Equity (Wardliparingga)

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The Aboriginal Health Equity theme is building the nation's leading research unit focused on understanding, monitoring, responding to and reducing inequity in health and wellbeing among Aboriginal and Torres Strait Islander communities. We seek to invest in and develop the next generation of Indigenous research leaders.



## SOCIAL & EMOTIONAL WELLBEING RESEARCH

Led by Dr Rachel Reilly, the Social and Emotional Wellbeing Research program works in partnership with young people to understand their priorities and needs and the best ways to address these. This includes informing evidence-based policies and co-designing accessible and responsive health services.

### Highlight

Despite efforts to acknowledge and reduce racism, Aboriginal and Torres Strait Islander people in South Australia continue to report that incidents of racism in healthcare settings are common. Racism in all its forms leads to adverse health and well-being outcomes for Aboriginal and Torres Strait Islander people. In 2023, a team of researchers from Wardliparingga, SA Health, University of Adelaide, UniSA and Newcastle was awarded MRFF funding to pilot an innovative program designed to help non-Indigenous people recognise and address racism in themselves, others, and the healthcare system. Based on more than a decade working with Aboriginal and Torres Strait Islander people as a clinical psychologist, Mr Matt Pedler, first developed the program as a self-help 'Preparation for Reconciliation' guide for non-Indigenous people. The program draws on psychological understandings of racism, cognitive-behavioural

therapy, and stages of change theory to provide a safe environment for participants to develop the insight, knowledge and skills to identify their own biases, understand racism and develop healthy relationships with Aboriginal and Torres Strait Islander people in healthcare settings. The content resonated so strongly with Aboriginal and non-Indigenous people who engaged with it that, it is being developed and implemented as an online professional development course for health professionals and medical students called, 'Proactive Anti-Racism Training for Healthcare (PATH)'.



## HEALTH SYSTEMS RESEARCH

Led by Ms Kim Morey, the Health Systems Research program works in partnership with key health stakeholders, including Aboriginal health leaders to improve the quality, accessibility and utilisation of a broad range of healthcare services for Aboriginal and Torres Strait Islander people through the implementation and translation of our research evidence.

### Highlight

The “Aboriginal and Torres Strait Islander Diabetes-related Foot Complications Program”, coordinated through Health Systems Research and implemented in five regions across Australia, continued to deliver health services, community engagement initiatives and workforce training throughout 2023.

Health Systems Research is successfully managing ongoing operational challenges, mainly due to workforce supply issues and service delivery capacity, and is meeting the deliverables of its grant agreement with the Commonwealth Government, Department of Health and Aged Care.

A significant milestone in 2023 was the delivery of a comprehensive evaluation plan for the program, applying Indigenous research methodology and a developmental evaluation approach, suitable to assess the effectiveness of the program and adaptable to respond to any changes associated with the delivery of projects and services across the five regions.

The program’s Expert Advisory Committee (EAC), compiled of regional and national stakeholders, delivered a submission during the Inquiry into Diabetes, held by the Australian Government,

Senate Standing Committee into Health, Aged Care and Sport. The Health Systems Research team secured support from a person with lived experience of a diabetes-related amputation, Ms Tanya Hosch, to present at the hearing.

Ms Hosch is a Torres Strait Islander woman and an experienced advocate. Ms Hosch and the team delivered a powerful message, presenting a personal account, contextualised through professional service delivery experience and underpinned by research and evidence to raise the awareness of the Senate Standing Committee to the often-overlooked issue of foot health in the context of diabetes and the health system failures that contribute to the disparities in Aboriginal and Torres Strait Islander people’s diabetes-related foot health outcomes.



## POPULATION HEALTH

Led by Associate Professor Odette Pearson, the Population Health research program aims to understand the needs and priorities of groups that we know little about, including Aboriginal and Torres Strait Islander young people, men and older persons.

The program aims to inform health and social systems change and to support self-determination by collecting curated data for the purpose of measuring health and social inequalities and making this information accessible to Aboriginal communities in South Australia.

### Highlight

Indigenous data sovereignty in Australia is the right of each Aboriginal and Torres Strait Islander Community to govern the collection, ownership, and application of their data, with the aim of exercising Indigenous data sovereignty through the interrelated processes of Indigenous data governance and decolonizing data.

In 2023, the Indigenous Data Sovereignty (IDS) and Indigenous Data Governance (IDG) research continued to grow based on demand, identified by research project delivery within the Aboriginal Community Controlled Health Organisation (ACCHO) and Aboriginal Community Controlled Organisation (ACCO) sectors and key developments around Closing the Gap.

The ATLAS+ (Aim 4) project is a response to building on the outcomes of the ATLAS project to continue to look at the current state, governance, needs, capability and infrastructure data requirements of the ACCHO sector through the further development of the 30 ACCHO Network

members of ATLAS, with the aim to grow the number of ACCHO Network members across Australia.

At a state level, the South Australian Aboriginal Community Controlled Organisation Network (SAACCON) and the South Australian Government have also entered into a formal Partnership Agreement on Closing Gap. The partnership will ensure all parties work together in achieving targets in both the National Agreement and the South Australian Implementation Plan, with shared access to data, partnership development and capacity building central to the priority reforms of the agreement.

Both projects highlight the needs for IDS and IDG capacity building within the ACCHO and ACCO sectors, and for genuine partnerships based on shared priorities to Close the Gap and overcome the entrenched inequality of life outcomes of Aboriginal and Torres Strait Islander people. As a result, we were to explore how IDS and IDG support the aspirations and capability of the ACCHO and ACCO sectors and also investigate how IDS and IDG supports the wellbeing needs of their Aboriginal clients. These projects add to our previous research in data and evidence-driven reforms in aged care and will contribute important findings to inform actions in future research.



## IMPLEMENTATION SCIENCE

Led by Associate Professor Natasha Howard, the Implementation Science program applies strategies and methods to further understand what actions can be taken to improve the social determinants of health and other critical health issues for Aboriginal and Torres Strait Islander health equity.

### Highlight

A partnership with the University of Melbourne and funding from the NHMRC Centre for Research Excellence in Healthy Housing, has uniquely enabled targeted work relating to Aboriginal and Torres Strait Islander housing to be led by the Wardliparingga Aboriginal Health Equity Theme.

The program seeks to understand how different actions to address unmet housing needs translate to gains in healthy life years and life expectancy for Aboriginal and Torres Strait Islander peoples.

We will be able to estimate how much better people's health would be if we take housing actions that the community has prioritised.

In this way, we can find solutions that will have the biggest positive impact on health. The evidence to be created through this partnership has the potential to strengthen advocacy and conversations with policy makers by showing the human and economic gains that can be achieved by investing in solutions that promote healthy housing for Aboriginal and Torres Strait Islander peoples.

# CARDIOMETABOLIC DISEASE

Led by Kim Morey, the Cardiometabolic Disease research program investigates the burden, causes, consequences and mitigation of heart disease, diabetes, cancer and mental illness to help improve the health and wellbeing of Indigenous communities.

## Highlight

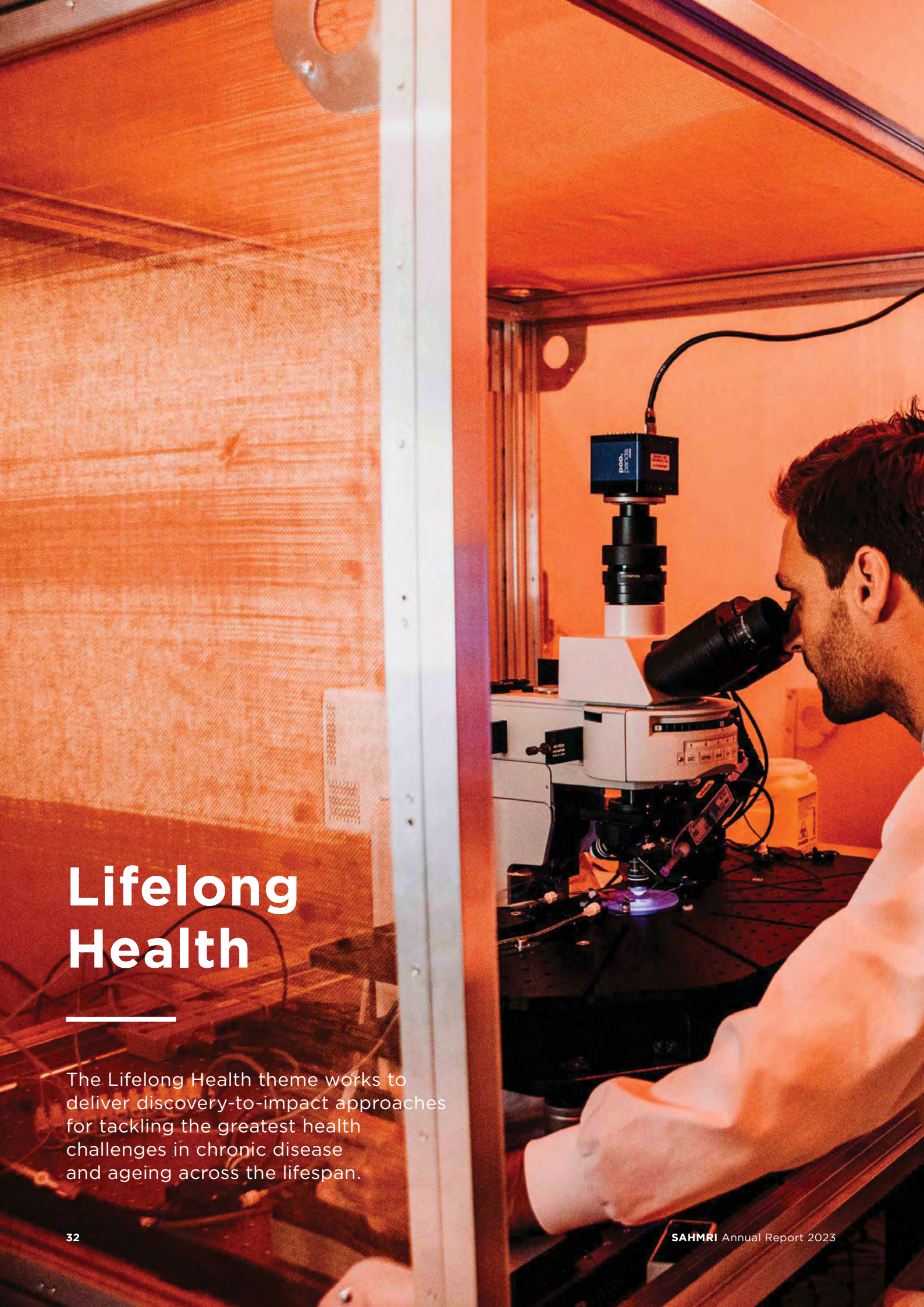
One of our landmark programs the Predicting Renal Ophthalmic and Heart Events in the Aboriginal Community (PROPHECY) Cohort, known to the community as the 'Aboriginal Diabetes Study', is a world-first longitudinal study of diabetes and its complications in over 1300 Aboriginal and Torres Strait Islander people in South Australia.

The study seeks to understand the social, psychological, environmental, clinical and genomic predictors of diabetes and complication development. It will provide insights into the burden of disease and service needs into the future.

In 2023, in conjunction with continuing five year follow up assessments across South Australian communities, the research team has furthered national and international collaborations to increase understandings of genomic predictors of diabetes.

This has been done with the aim of undertaking detailed multi-omics analyses that help us to better understand T2D and its related complications like heart disease, vision loss and kidney damage.





# Lifelong Health

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The Lifelong Health theme works to deliver discovery-to-impact approaches for tackling the greatest health challenges in chronic disease and ageing across the lifespan.



## HOPWOOD CENTRE FOR NEUROBIOLOGY

Led by Professor Stuart Brierley, the Hopwood Centre for Neurobiology (HCN) is committed to identifying the causes of major neurological disorders including Alzheimer's disease, Parkinson's disease, stroke, epilepsy, depression, spinal cord injury and chronic pain. The centre targets the use of neuroimaging techniques, lifestyle interventions, novel pharmaceuticals, and stem-cell based regenerative medicine to derive therapies for these and other disorders.

### Highlight

In 2023, the HCN comprised 102 post-doctoral researchers, scientists, higher degree and undergraduate students, and published 54 research papers in journals such as Nature, British Medical Journal, and Nature Medicine.

HCN Members received \$11,613,655 in competitive research funding, from sources including the NHMRC, MRFF, National Institutes of Health (USA), Diabetes UK, and the Churchill Foundation. Dr Tim Sargeant, Dr Joel Castro and A/Prof Grigori Rychkov were awarded NHMRC Ideas Grants, and Professor Stuart Brierley was awarded an NHMRC Synergy Grant. Professor Cedric Bardy and Dr Mitchell Goldsworthy both received ARC Future Fellowships.

2021 Nobel Laureate in Medicine/Physiology Professor David Julius, and Professor Holly Ingraham visited in 2023 to support a scientific collaboration with the Visceral Pain Research Group.

The Persistent Pain Research Group led by A/Professor Tasha Stanton at the University of South Australia formally joined the HCN in 2023.





## GENE EDITING

Led by Professor Paul Thomas, the Gene Editing research program uses state-of-the-art molecular genetic technology (CRISPR) to understand and develop new therapies for common genetic diseases such as epilepsy, vision loss and muscle wasting. The Gene Editing program also includes the South Australian Genome Editing (SAGE) facility which generates genetically modified mice to study human disease-causing mutations.

### Highlight

Inherited retinal degeneration causes progressive blindness and affects more than 1.5 million people globally. Our CRISPR therapy team is developing innovative new strategies for retinal degeneration that directly target the genetic cause, potentially protecting sufferers from vision loss using a single dose. In 2023 we were awarded a highly competitive NHMRC Ideas grant to progress our candidate therapies.

Working with collaborators in Adelaide, Melbourne and the USA, we aim to generate proof of concept for our strategies using preclinical disease models. Establishing CRISPR therapy for progressive blindness would be a significant breakthrough, providing sufferers with new hope to avoid significant loss of vision.

# HEART & VASCULAR HEALTH

Led by Associate Professor Peter Psaltis, the Heart and Vascular Health research program aims to advance the ability to prevent, detect and treat cardiovascular disease with a committed focus on translating research findings into improved health outcomes for all Australians

## Highlight

The Heart and Vascular Health program enjoyed another productive year in terms of publications, citations and grant funding success, in addition to industry-sponsored research, awards and national and international presentations. On top of the list of notable achievements, Associate Professor Christina Bursill was awarded an NHMRC Ideas Grant and Professor Christopher Wong an NHMRC Investigator Grant.

Among the 2023 PhD graduation class were Victoria Nankivell, Sanuri Liyanage, Khalia Primer, Emma Solly, Zahra Lotfollahi and Benjamin Pullen from the Vascular Research Centre and University of Adelaide. For her research on the Theranostic Properties of Porphysome Nanoparticles in Atherosclerosis, Victoria won the highly coveted Ralph Reader Award as the Best Young Investigator for the Basic Science Section of the Cardiac Society of Australia and New Zealand (CSANZ) ASM. She then backed this up by winning the Rising Star Investigator Award at the Australian Atherosclerosis Society ASM.

Meanwhile, Sanuri Liyanage who received a Dean's commendation for her PhD thesis, also received the Paul Dudley White International Scholar Award for the highest ranked Australian abstract at the American Heart Association, Vascular Biology conference, along with the Outstanding Early Career Researcher Award at the Australian Society for Medical Research ASM.

2023 also saw the establishment of the National Heart Foundation's South Australian Cardiovascular Research Network (SA CVRN). This network fosters collaboration, mentorship and advocacy across the spectrum of researchers engaged in the study of cardiovascular diseases across our state. SAHMRI again hosted two all-day showcase events on behalf of the SA CVRN in 2023, including an outstanding end-of-year symposium.





## MICROBIOME & HOST HEALTH

Led by Professor Geraint Rogers, the Microbiome and Host Health research program is focused on better understanding the influences of the microbiome on human health and disease, using this information to develop ways to reduce preventable diseases while improving outcomes for both for individuals and the population.

### Highlight

A highlight of 2023 has been the progression of the GRACE study, a research project investigating resistant bacteria or 'superbugs' in residential aged care. Infections caused by resistant bacteria in residents of aged care homes is on the rise both in Australia and internationally. Funded by the National Health & Medical Research Council's Medical Research Future Fund, this study will produce new evidence to help us to improve facility management, including cleaning and hygiene practices, to prevent the spread of harmful bacteria, and ultimately improve the health of aged care residents and the wider community.



## NUTRITION, DIABETES & GUT HEALTH

Led by Professor Amanda Page, the Nutrition, Diabetes and Gut Health research program aims to understand the physiological mechanisms involved in the development of obesity, diabetes and metabolic syndromes as well as gastrointestinal disorders with the aim of developing innovative targets, therapies and nutritional strategies to prevent or manage these health issues.

### Highlight

Associate Professor Richard Young was successful in obtaining an NHMRC Ideas grant as CIA, for \$1.2M. This research builds on a collaboration between the Nutrition, Diabetes and Gut Health program and clinician academics in Endocrinology and Intensive Care at the Royal Adelaide Hospital, to provide proof-of-concept on a novel therapy to save lives in septic shock.

Septic shock is maladaptive immune hyper-response to overwhelming infection that injures healthy tissues, leading to multi-organ failure and death in 30 percent of patients.

Research will be conducted in our murine model of septic shock to confirm the safety, efficacy, and optimal timing of exogenous Corticosteroid-binding globulin (CBG) therapy and to advance knowledge on CBG tissue distribution. This research will progress towards novel development of exogenous CBG as a septic shock therapy, ahead of phase one clinical trials.



## FREEMASONS CENTRE FOR MALE HEALTH & WELLBEING

The Freemasons Centre for Male Health & Wellbeing (FCMHW) at SAHMRI brings together researchers, from across South Australia. The Centre aims to improve the health and wellbeing of all males and consequently their families and communities while upholding the principles of equity, respect and integrity.

### Highlight

2023 provided several significant program highlights, one of which was the highly successful Men's Health Breakfast, attended by 150 people, that was held at the Adelaide Oval on the 22nd of November. Hosted by the Centre's Principal Patron, Dr Roger Sexton, the Breakfast was opened by the Honourable Chris Picton MP, SA Minister for Health and Wellbeing and featured presentations by Mr Simon von Saldern, the CEO of Health Male and Mr Paul Flynn, CEO of the Hospital Research Foundation Group.

Mr Flynn also announced an Australian-first training program, aimed at improving medical practitioners' expertise in men's health and andrology, would be supported by The Hospital Research Foundation Group and run through the FCMHW.



## MENTAL HEALTH & WELLBEING

Led by Joseph Van Agteren, the Mental Health and Wellbeing research program conducts research across the mental health spectrum including depression, anxiety, resilience and wellbeing. There is a particular focus on the overlap between mental health and mental illness, with research informing the development of tools to measure and build wellbeing through Be Well Co, a social enterprise created to deliver wellbeing solutions for individuals and groups.

### Highlight

In 2023 the Be Well Co team published a special report for Beyond Blue titled, 'A guide to what works for mental wellbeing'. This guide can be used by services and supports to build mental wellbeing as an important part of improving mental health.

Developed at SAHMRI, this guide highlights more than 20 interventions that have strong evidence for improving a person's mental wellbeing. It provides useful explanation of current research to encourage wider use of mental wellbeing interventions. The guide has been designed for people seeking reliable information to inform future research, and for practitioners working in a variety of fields including in health, mental health, community wellbeing and program design. The targeted focus of this review on published, peer-reviewed intervention studies complements other knowledge sources, to help inform decision making in policy and practice.



# Precision Cancer Medicine

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The Precision Cancer Medicine theme is committed to understanding the factors that determine patient-specific responses to disease or therapeutic intervention, enabling better prediction of patient outcomes, stratification of patients to the best treatment options, and the development of more personalised, targeted interventions.



# BLOOD CANCER PROGRAM

Led by Professor Deb White, the focus of the Blood Cancer Program is research in the areas of childhood acute lymphoblastic leukaemia, adult lymphoblastic leukaemia, acute myeloid leukaemia, chronic myeloid leukaemia, myelofibrosis, myelodysplastic syndrome and therapy-related myeloid neoplasm. While this research is largely driven by clinical gaps and valued patient advocacy groups, the focus is fundamental scientific discovery using sophisticated experimental approaches to enable a greater understanding of disease and designing of new therapies. This underpins the commitment to clinical translation and the delivery of personalised medicine approaches.

## Highlight

There were many important discoveries for the Blood Cancer Program in 2023, including new metabolic treatments for cancers with IDH1 mutations, published in *Cancer Discovery*, and excellent response data using asciminib, a new oral treatment for patients with acute lymphoblastic

leukaemia and chronic myeloid leukaemia presented at the 2023 international American Society of Hematology meeting in San Diego.

One of the most significant discoveries was for patients with chronic myeloid leukaemia, a type of leukaemia that is now routinely treated using tablets rather than chemotherapy. Dr Pagani, working with A/Prof David Ross and Prof Timothy Hughes, found that only certain types of white cells in the blood actually harbor disease causing mutations over time. Many patients who are in long term remission want to stop treatment all together, and in many cases this is a safe and reasonable option. These findings were published in the prestigious journal *Blood* of The American Society for Hematology, with far reaching implications for other cancers and stopping treatment in long term remission.





## PAEDIATRIC NEURO-ONCOLOGY

The Paediatric Neuro-Oncology Program is a relatively recent entity within SAHMRI's Precision Cancer Medicine theme, headed by Affiliate Professor Jordan Hansford, program lead at SAHMRI and clinical lead in Neuro-Oncology at the Women's and Children's Hospital.

This program will explore the integration of proton radiotherapy into Australian paediatric neuro-oncology practice and seek new ways to improve the quality of life for children with brain cancer. The Paediatric Neuro-Oncology team will integrate advanced diagnostics and genomics partnerships to better understand outcomes of children. Other areas of interest include radiogenomics, diagnostic epigenomics, biobanking and precision medicine in paediatric neuro-oncology practice.

### Highlight

2023 was a successful year from our team with more than 20 peer reviewed publications and several grants worth a total of \$5 million. The highlight was a \$4m infrastructure grant from the ACRF for the establishment of the Adelaide Brain Cancer Therapy and Imaging Consortium to be centred at SAHMRI and the ABCPTR. This will allow our team to purchase a state-of-the-art small animal MRI to explore the effects of new and novel therapies, including proton radiation therapy on brain cancer. Supporting research grants are well on the way and we hope our team will continue to expand and maintain our excellent output in 2024. The Paediatric Neuro-Oncology team has started to support clinical trials for paediatric brain tumour patients and the biobank has initiated national and international collaborative agreements for sample sharing with our research colleagues around the world.



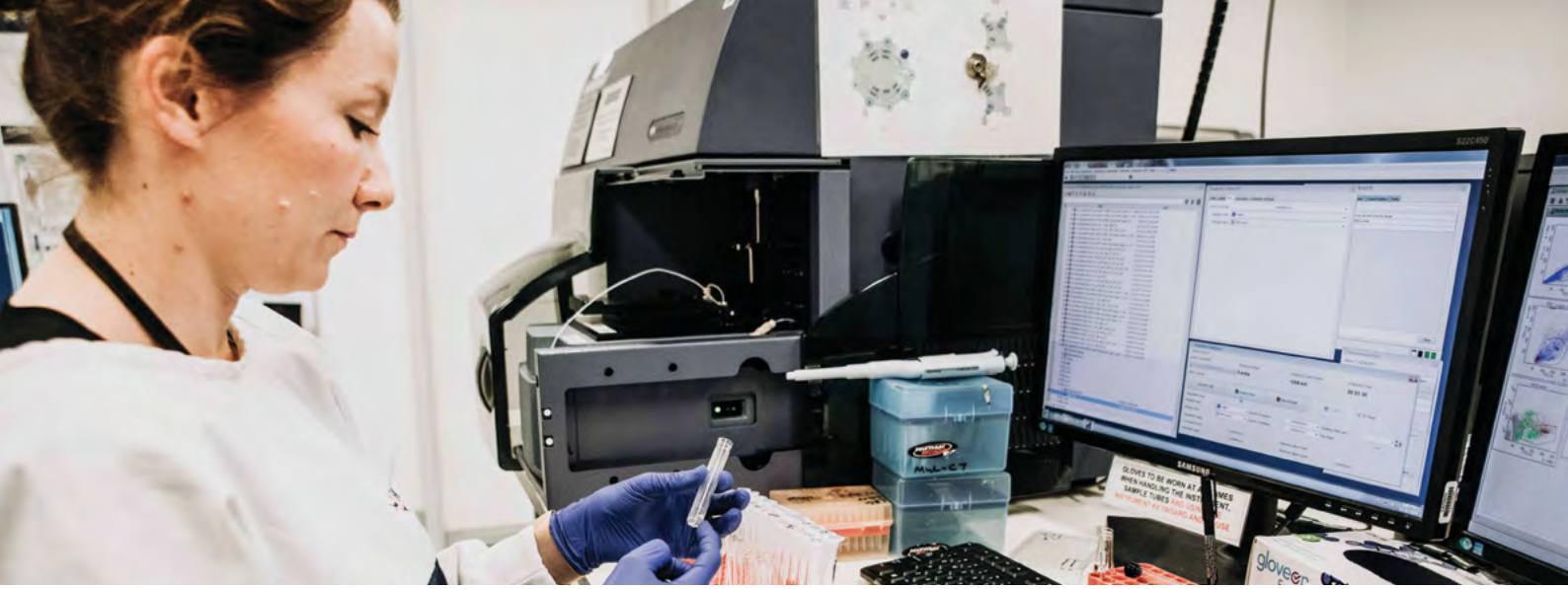
## COMPUTATIONAL SYSTEMS BIOLOGY

Led by Professor David Lynn, the Computational and Systems Biology research program is developing and employing advanced computational and experimental approaches to enhance our understanding of how systems such as the immune system are dysregulated by infectious diseases and cancer. A key research focus is investigating how microbes, both pathogenic and commensal, modulate the immune system in a range of contexts from infection, vaccination and cancer immunotherapy. Research in the program spans from computational modelling and bioinformatics software development to mechanistic studies in preclinical mouse models.

### Highlight

Publication of the BRACE trial in the New England Journal of Medicine (NEJM) was key program highlight in 2023. The trial is investigating whether Bacille Calmette-Guerin (BCG) vaccine, reduces the incidence of symptomatic and severe COVID-19, as well as other respiratory illnesses and allergic diseases. The randomised controlled clinical trial involved 6,800 healthcare workers, across five countries and 36 study sites.

Other significant COVID-related work published in 2023 included the COVIRS vaccine study published in Cell Reports Medicine, a preclinical study on COVID vaccines in the leading Gastroenterology journal, Gut and continuing research on Long COVID.



## SOLID TUMOUR PROGRAM

The Solid Tumour Program is a relatively recent entity within SAHMRI's Precision Cancer Medicine theme. The institute's former Cancer Program has evolved into two specialty programs focused on solid tumours and blood cancers. This program primarily investigates ways to better diagnose and treat multiple myeloma and cancers of the gut and prostate, but also contains groups that look to realise the potential of mesenchymal stem cells and that pursue better ways to support people undergoing cancer treatment.

### Highlight

An international team of researchers led by the Solid Tumour Program's Gut Cancer Group has engineered specialised bacteria capable of detecting mutated DNA released from colorectal cancer cells, opening the door to faster disease detection. Involving Associate Professor Susan Woods, Dr Dan Worthley, and Dr Josephine Wright from SAHMRI and the University of Adelaide, in partnership with Professor Jeff Hasty at the University of California San Diego (UCSD), the study was published in the prestigious journal, *Science*.

The study demonstrated how bacteria can be designed to detect specific DNA sequences to diagnose disease in hard-to-reach places and, in preclinical testing, the team showed that the sensor bacteria were 100% accurate in differentiating between models with and without colorectal cancer. While further studies are needed before progressing to clinical trials, there are high hopes for the future,

with this latest research representing a significant advance in the field of living diagnostics and setting the stage for the timely and accurate delivery of targeted treatments.

The above research publication in *Science* generated significant media interest. Overall, the paper was reported on in 283 stories, in over 20 countries, with an estimated reach of over 1 billion people. This work was supported by an Ideas Grant from the National Health and Medical Research Council and SAHMRI's key investigators are inventors on a provisional patent application that applies this technology. Moreover, in 2023 the Head of the Gut Cancer Group A/Prof Woods was awarded a prestigious 5-year Bushell Post-doctoral Research Fellowship from the Gastroenterological Society of Australia, which will help enable this important work to continue.





# Women & Kids

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SAHMRI Women and Kids is committed to improving the health and wellbeing of women, children and families, particularly those most at risk of poor health outcomes.



## ABORIGINAL COMMUNITIES & FAMILIES HEALTH RESEARCH ALLIANCE



Co-led by Principal Research Fellow, Karen Glover and Associate Professor, Yvonne Clark, the Aboriginal Communities and Families Health Research Alliance (ACRA) brings together researchers, Aboriginal community members and organisations, with policymakers and service providers to facilitate community-driven, culturally respectful research for the benefit of Aboriginal families and communities.

SAHMRI Women and Kids is committed to strength-based strategies to improve the health and wellbeing of women, children and families, particularly those most at risk of poor health outcomes. ACRA also prioritises knowledge exchange and translation to contribute Aboriginal excellence to research focused on health, wellbeing and service improvement, relating to parents, children and families.

### Highlight

Our 2023 highlight was the finalisation of enrolment for the Infant and Toddler Feeding project, examining the prevalence of obesity and anaemia in Aboriginal and Torres Strait Islander infants and toddlers living in South Australia.

The project included 101 families with children from urban, rural and remote areas of SA. The key findings indicate that among Aboriginal children in the age group 0-11.9 months, 24% were at risk of being overweight and 5% were overweight; while in the age group 6-11.9 months, 17% were anaemic and in the age group 12-24 months, 30% were anaemic,

with 70% of all anaemic children being from rural and remote areas.

This project was developed in response to a community request identifying the need to examine the rates of anaemia in South Australian Aboriginal and Torres Strait Islander children.

The reciprocity of information and knowledge sharing guided the research processes and informed clinical practices. ACRA is also working to address emerging concerns and to target holistic culturally safe and acceptable support to prevent and/or treat and/or manage anaemia for Aboriginal and Torres Strait Islander families with infants and toddlers. This project was funded by the Channel 7 Children's Research Foundation.



## PREGNANCY & PERINATAL CARE

Led by Professor Alice Rumbold and Professor Philippa Middleton, the Pregnancy and Perinatal Care Team is developing and implementing strategies to improve outcomes for pregnant women and young families with babies, focusing on addressing and correcting inequity. Key areas of focus include preventing preterm birth and stillbirth, improving care for premature and sick babies and optimising infant nutrition by promoting human milk feeding.

### Highlight

The Stillbirth CRE was funded by the Department of Health and Aged Care to update national guidelines for Care after Stillbirth, with Associate Professor Philippa Middleton and Anneka Bowman playing key roles.

The South Australian component of the Australian Preterm Prevention Alliance commenced with four Local Health Networks including WCHN, NLHN, SALHN and RMCLHN working collaboratively with SAHMRI to prevent preterm birth through strategies such as timing of birth and smoking cessation.

The human milk and lactation group led by Associate Professor Alice Rumbold, published a highly accessed paper in JAMA Network Open. The paper showed that a higher intake of maternal breastmilk during the neonatal unit admission was associated with higher IQ scores and fewer ADHD symptoms at seven years of age in very preterm infants.





## CHILDHOOD DISABILITY PREVENTION

Led by Professor Jozef Gecz, the Childhood Disability Prevention research program is identifying the genetic causes of childhood disabilities including learning disabilities, cerebral palsy, epilepsy and autism spectrum disorders, which combined affect one in ten children. This is helping enable earlier diagnosis, better management, treatment and prevention of these disabilities.

### Highlight

In 2023, the program implicated a dozen novel genes in diverse groups of neurodevelopmental disabilities, including one of the hardest to resolve, Aicardi syndrome.

One of the highlights was achieved through invited authoritative review from Nature Reviews Neurology, dedicated to better understanding of the current genetic aetiology of and translational impact on cerebral palsies. This review is a rightful reflection of the pioneering international research of the Childhood Disability Prevention research program and the Australian Collaborative Cerebral Palsy Research Team for the past decade.

# CHILD NUTRITION RESEARCH CENTRE

Led by Professor Tim Green, the Child Nutrition Research Centre is committed to improving the health outcomes of women and their children in Australia and worldwide through nutritional interventions, with a particular interest in reducing prematurity and the associated health consequences, supporting optimal growth and development, and reducing allergic disease in early childhood.

## Highlight

In 2023 the Child Nutrition Research Centre completed a validation study assessing whether urine ferritin can be used as a non-invasive biomarker to measure iron status in young children.

In partnership with the Telethon Kids Institute, SAHMRI researchers tested the diagnostic performance of urine ferritin in correctly identifying subjects with iron deficiency compared to the gold standard method, serum ferritin.

The alternative method showed good diagnostic performance; however, further validation is needed in populations with a high prevalence of iron deficiency. The outcome paper is currently under review.

The Centre also completed a dietary modelling project which has now been published in the Journal of Nutrition. Using population intake data from the Australian Feeding Infants and Toddlers Study (OzFITS 2021), we tested the theoretical impact of adding a serving of an iron-fortified infant cereal to the diets of 6-12m old infants.

Just one serving of an iron fortified infant cereal doubled median iron intakes in the population and reduced the percentage of infants below recommendations from 75% to 5%, suggesting this may be an effective means to improve iron intake in infants.





# Impact

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## HEALTH POLICY CENTRE

SAHMRI's Health Policy Centre conducts behavioural research, policy research, population monitoring and evaluation for preventive health. The Centre is led by Professor Caroline Miller, an NHMRC Emerging Leadership Fellow. The Centre undertakes independent, grant funded research and, as well as commissioned research for health agencies. Researchers work alongside policy makers in government and non-government organisations, providing scientific evidence for improved public health outcomes. Major ongoing research programs relate to tobacco control and vaping, ultra-processed foods and sugary drinks, and COVID-19.

### Highlight

The Centre monitors trends in tobacco use and vaping among the South Australian population, demonstrating a 7-fold increase in vaping in young South Australians by 2023. The Centre also undertook a major research program on sources of supply of vapes for young people, and the promotion of vaping and vape products. This work was integral in informing governments' responses to vaping, including campaigns, work in schools, and advances to policy and legislation.

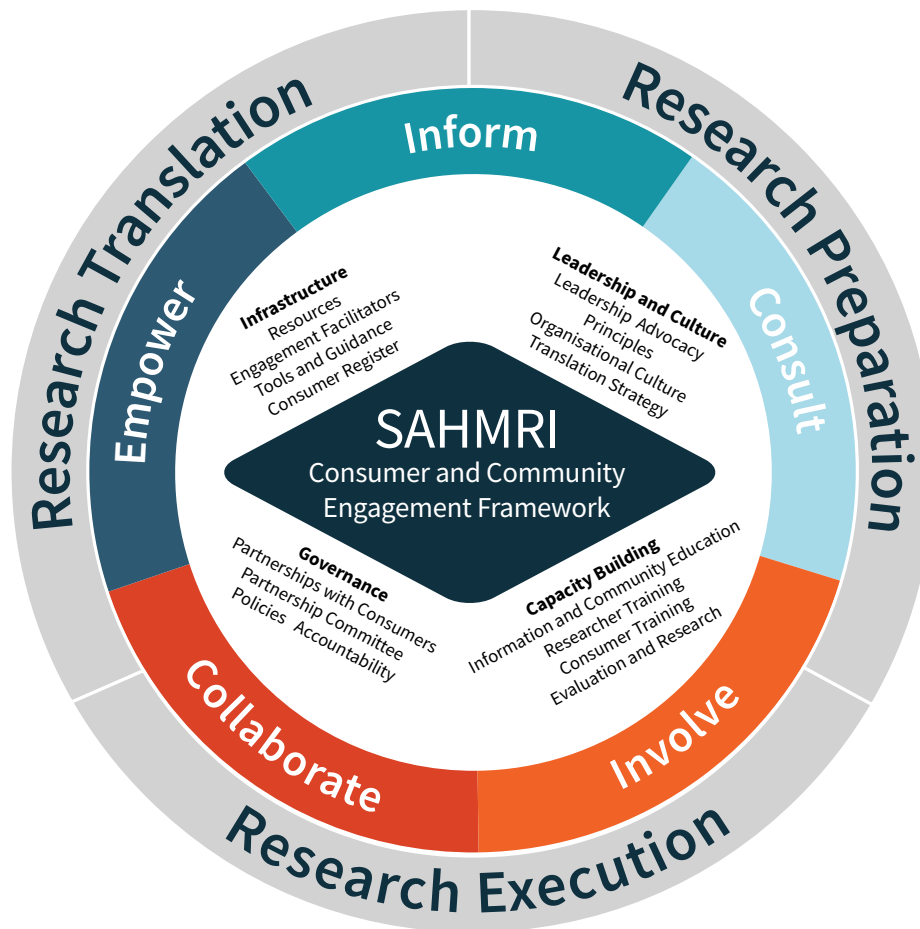
Dr Jo Dono was awarded the Australian and New Zealand Obesity Society's prestigious Young Investigator Award for her Cancer Council funded research on ultra-processed foods.

The Health Policy Centre continued to provide analysis and modelling to SA Health across a variety of issues impacting health services, including COVID-19.

Early in 2023, the Centre led data analysis that showed unvaccinated South Australians were eight times more likely to be hospitalised and five times more likely to die than those who are fully vaccinated against COVID-19.

The research analysed more than 70,000 cases of COVID-19 across SA.

# CONSUMER & COMMUNITY ENGAGEMENT



The push for community-driven research has never been stronger. It is increasingly important for achieving NHMRC and MRFF grant success and boosts the success and impact of research outcomes. But, like many aspects of research, the toughest part can be knowing where to start.

SAHMRI partners with Health Translation SA (HTSA) to provide training, resources and expertise in how to get started in partnering with the community.

HTSA also manages a Community Interest Register which has community members who are ready, willing and able to make meaningful contributions to research, right now.

A key new consumer involvement initiative that SAHMRI launched in 2023 was our INVOLVED Clinical Research Participant Register.

Individuals over the age of 18 who are living in Australia and have an interest in clinical trials and research can join the register. Individuals might be notified about clinical trials or research that is of interest to them and can respond to these emails and express their interest to receive further information.



## CLINICAL TRIALS PLATFORM

Led by Dr Karen Best, the vision of the SAHMRI Clinical Trials Platform (CTP) is to accelerate the translation of research into real-world impact by providing exceptional, participant-centred clinical trial services and support. The CTP aims to support SAHMRI Researchers while also fostering strong collaborations with partners including SA Health networks, universities and commercial clients.

### Highlight

In 2023, much progress has been made towards establishing the CTP as a quality Academic Research Organisation. Our portfolio of clinical projects has grown and we are providing specialised clinical trials services to several SAHMRI researchers in addition to external clients.

We also held our inaugural 'Spring into Trials' educational event in collaboration with Health Translation SA and the Department of Health and Wellbeing, Australian Teletrial Program - South Australia. This event had fantastic engagement with the clinical trials community and excellent attendance both in-person and online.

## REGISTRY CENTRE

2023 has been an opportunity to see the outcome of the efforts to consolidate the Registry Centre and make it sustainable, bringing the delivery of our goals to fruition.

The Registry Centre was established in 2018 to widen the institute's existing role in the registry space and to expand capacity and training in this area.

The Registry Centre continues to support a shared learning environment by delivering high quality education opportunities that build capacity within the clinical quality registry sector. This work along with our strengthening relationship with the Department of Health and Aged Care and growing profile in the sector has been instrumental in our funding success this year.

In 2023 the Registry Centre welcomed three new registries to the collaboration:

- The Australian Registry of ECGs of National Athletes (ARENA) - Sydney University
- The Australia and New Zealand Vasculitis Quality and Disease Registry (ANZVASC-QDR) - Monash University
- The Kidney Health Registry - Flinders University



A collaborative funding arrangement between SAHMRI, Australia & New Zealand Dialysis & Transplant Registry (ANZDATA) and the Registry of Senior Australians (ROSA) supported the development of the SAHMRI Registry Centre throughout 2022- 2024.

This year the Registry Centre was successful with two out of three tenders submitted in 2023. This gives the Registry Centre greater sustainability and positions us well for further ongoing funding opportunities.

The Centre is now moving to a model of project delivery through centralised project management. This model uses our expertise to expand and enhance best practices in registry science, and drive innovation and development across the 20 Centre member registries and the broader CQR Sector where appropriate.





The Centre has been funded by the Department of Health and Aged Care for the provision of activities that support continued implementation of the National Clinical Quality Registry and Virtual Registry Strategy.

1. Registry Centre of Excellence (\$500,000 over 18 months, commencing January 2024) - The Centre of excellence for Registries and Registry Science Activities include an initial 18-month work program to cover the below activities:

- a. Increasing CQR sector capability in Public Reporting
- b. Pilot CQR Advisory Service
- c. Increasing CQR value and impact - case studies and analysis
- d. Increase registry capability in data linkage

2. Consumer Friendly Information - CoFI project (\$200,000 over 18 months, commencing January 2024) is designed to create and disseminate easily understandable and reliable outcome information direct from registries, to empower consumers and their families to make informed decisions about their health and will be delivered over an 18-month period commencing January 2024. This project is a collaboration across ROSA, Australian Corneal Graft Registry (ACGR) and Transcatheter Aortic Valve Implantation (TAVI) Registry.

This expansion of funding and projects has resulted in new team members joining the Registry Centre to enable the delivery of these exciting projects. We are looking forward to a busy year of progress in 2024.



## REGISTRY OF SENIOR AUSTRALIANS



The Registry of Senior Australians (ROSA) is an Australian Clinical Quality Registry and data linkage platform designed to monitor and evaluate the health, service use, medication use, social welfare, mortality, and other important outcomes of people receiving aged care services in Australia.

### Highlight

In 2023, the ROSA Steering Committee and research team led by ROSA Director, Professor Maria Inacio and Associate Director, Professor Gillian Caughey, was selected as a finalist in the Research Australia 2023 Health and Medical Research Awards 'Data Innovation Category'.

This recognised the team's contribution to creating Australia's only national multisectoral integrated data platform designed for the population-level evaluation of quality of care, models of care and national health priority areas that affect older people.

The ROSA governance committee members, partners and research team also received a 'Highly Commended' outcome in the 'Research' category for the 2023 Future of Ageing awards administered by Inside Ageing.



## AUSTRALIA & NEW ZEALAND DIALYSIS & TRANSPLANT REGISTRY



The ANZDATA Registry provides data collection, analysis and reporting in the area of renal replacement therapy and organ and tissue donation for Australia and New Zealand. Its fundamental purpose is to report on the incidence, prevalence and outcomes of dialysis and transplant treatment for patients with end stage renal disease.

The value of collecting and assessing this information has long been understood, with the founding of ANZDATA in 1977. This value is universally recognised and all renal units in Australia and New Zealand contribute data to ANZDATA to enable the continuous assessment of treatment information and outcomes in this significant area.

The Australia and New Zealand Organ Donation (ANZOD), Australia and New Zealand Living Kidney Donation (ANZLKD) and the Eye and Tissue Donation (ANZETD) registries are also operated by the ANZDATA Registry. They record and report data on organ, eye and tissue donation and recipients benefiting from transplantation.

### Highlight

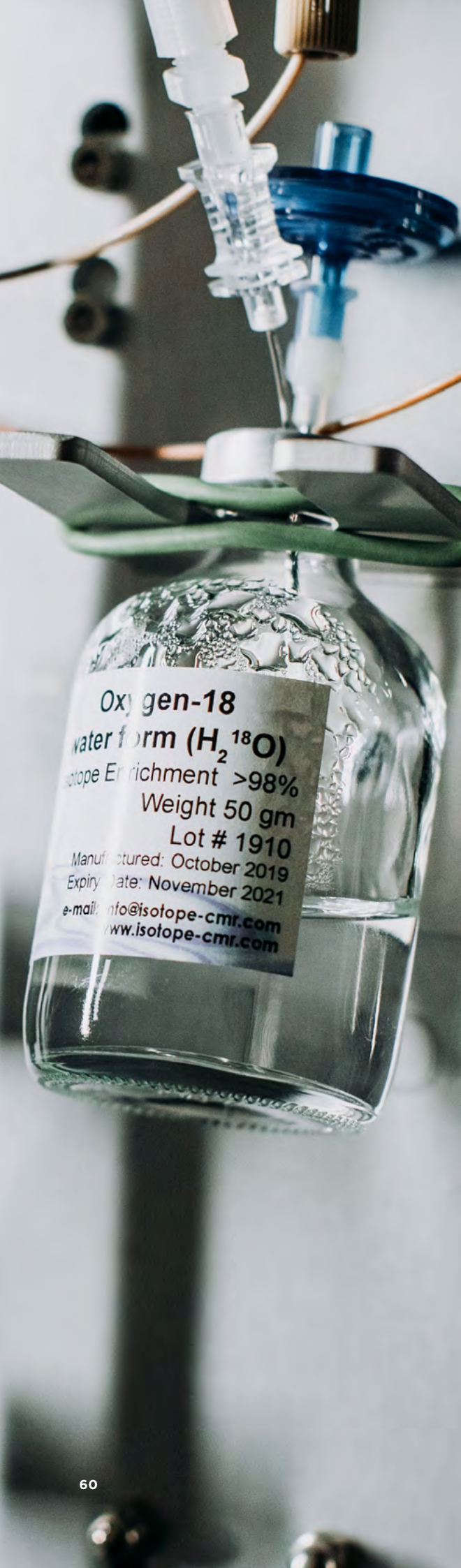
In 2023 the ANZDATA Registry achieved a major milestone, playing a significant role in facilitating a major clinical trial with the potential to revolutionise kidney transplantation worldwide.

Led by Dr Michael Collins, Senior Consultant Nephrologist at the Royal Adelaide Hospital (RAH) in collaboration with ANZDATA and the Australasian Kidney Trials Network, the BEST Fluids trial, was conducted across 16 hospitals in Australia and New Zealand, involving 808 patients with kidney failure who received a kidney transplant from a deceased donor.

The trial showed that using “balanced” fluids instead of saline as the IV fluid after kidney transplantation, can dramatically reduce the occurrence of delayed graft function in kidney transplant patients by 25%.

Finding an effective method of limiting the likelihood of this problem occurring is a momentous development in improving patient outcomes.

This simple change in practice has the potential to benefit hundreds of thousands of patients undergoing kidney transplant operations worldwide each year.



## MOLECULAR IMAGING & THERAPY RESEARCH UNIT

The Molecular Imaging and Therapy Research Unit (MITRU) has been dedicated to the research, development and manufacture of radiopharmaceuticals since its inception in 2014.

MITRU has enabled faster diagnosis and treatment, leading to better outcomes for south Australian patients. MITRU is home to South Australia's only cyclotron used to produce several isotopes used to manufacture radiopharmaceuticals compliant to the current Good Manufacturing Practices (cGMP). MITRU also developed and optimised procedures to manufacture therapeutic radiopharmaceuticals with isotopes sourced from external suppliers.

Future plans include developing additional radiopharmaceuticals which will provide access to new diagnostic procedures and treatments not currently available in South Australia.

### Highlight

MITRU has a strong track record of partnering with commercial research organisations for the manufacturing of radiopharmaceuticals for early-phase clinical trials.

In 2023, MITRU has expanded its public-private partnerships with Australian-based biotechnology companies including Telix Pharmaceuticals for the GMP manufacturing development of a therapeutic targeting metastatic solid tumours and with GlyTherix Ltd for the development of diagnostic and therapeutic derivatives of Miltuximab®, a monoclonal antibody that specifically targets Glypican-1 (GPC-1), a protein overexpressed in prostate, pancreatic, bladder, glioblastoma, esophageal, lung and ovarian cancers.

In addition, MITRU secured contract manufacturing agreements with pharmaceutical organisations to supply new radiopharmaceuticals for clinic trials for diagnostic, theragnostic and therapy.



## PRECLINICAL, IMAGING & RESEARCH LABORATORIES

SAHMRI-PIRL, located at Gilles Plains, has existed to support animal research since 1971. PIRL became part of SAHMRI in September 2012 and has an excellent track record for facilitating the translation of preclinical research into clinically applicable outcomes.

Since 2020, PIRL has been considered a business unit within SAHMRI. Our staff have extensive experience in preclinical and veterinary research. They offer a range of expertise to a broad spectrum of local, national and international clients, including grant funded university academics, biotechnology and pharmaceutical companies. Located within PIRL is South Australia's only, Germ-free research facility and the health monitoring and disease surveillance laboratory, ComPath.

### Highlight

In 2023, PIRL completed a record year for the number of GLP studies completed, with more in the pipeline. Three projects have been finalised, two are underway, one is scheduled to commence, and two are in discussions with a high likelihood of progressing. The reports from each of our GLP studies have been used by the sponsors for FDA medical product registration.

Our gross turnover was a record \$6.4 million. This has allowed us to improve our building maintenance program and upgrade facilities where necessary, including the commissioning of a back-up generator to ensure compliance with GLP and School of Anatomy provisions.

Our commercial engagement has continued to grow, and our worldwide reputation has us working not only with companies from Australia but also out of the US, Italy and the UK.

We continue to provide training workshops for medical practitioners to help maintain and up-grade their surgical skills.



## CLINICAL & RESEARCH IMAGING CENTRE

The Clinical and Research Imaging Centre (CRIC) at SAHMRI is South Australia's leading centre for advanced clinical and translational research imaging. With state-of-the-art facilities and expertise in delivering innovative research solutions, our staff collaborate with researchers through all stages of project development, protocol optimisation and acquisition of pilot data through to implementation of largescale multicentre studies. Quality assurance, GCP and governance processes are designed to meet the specific needs of the scientific community and industry.

### Highlight

This year one of the world's first MAGNETOM Cima.X magnetic resonance imaging (MRI) scanners became operational at the CRIC.

The machine, developed by Siemens Healthineers, is the latest evolution in high-end 3-Tesla (3T) MRI technology and is part of Australia's advanced imaging network - the National Imaging Facility (NIF). The arrival of the Cima.X, soon after installation of Australia's first photon counting CT scanner at CRIC, further establishes Jones Radiology at the forefront of imaging expertise in Australia.

This will ultimately provide clinicians and researchers alike with deeper insights into the human body. In addition, the Cima.X leverages next generation deep learning image reconstruction technology for faster image acquisition and signal rich super resolution images.

Being one of just a handful of locations on earth with a Cima.X also further establishes South Australia as a global centre of innovation.





## HEALTH TRANSLATION SA



Health Translation SA (HTSA) is a unique whole-of-state, collaborative, NHMRC accredited Research Translation Centre (RTC), bringing together eleven academic, research and health care agencies and the community. Working as a catalyst, leader and broker, HTSA aims to accelerate the translation of health and medical research findings into clinical practice and policy and increase whole of system research translation capacity to improve health outcomes for South Australians. Its partners encompass the full breadth of health service delivery across the state, including hospitals, primary care and aged care. SAHMRI is the administering body for HTSA, as it is an unincorporated joint venture. HTSA is one of fourteen NHMRC accredited RTC's across Australia that come together through the Australian Health Research Alliance.

### Highlight

2023 marked the launch of HTSA's Medical Research Future Fund (MRFF) Catalyst Grant Scheme. Supported by the Hospital Research Foundation Group (THRF) and the Women's & Children's Hospital Foundation, six projects were awarded funding of up to \$60,000 over a 12-month period.

The Catalyst Scheme differs from other state-based funding by prioritising projects that foster meaningful collaboration between health services and research organisations, while also promoting consumer and clinician involvement to tackle unmet healthcare needs in South Australia. Aligned with MRFF Principles and Priorities, projects funded through the Catalyst Scheme aim to increase their chances of success in future MRFF grant rounds, ultimately leading to applications for future grant opportunities.







## AUSTRALIAN BRAGG CENTRE FOR PROTON THERAPY & RESEARCH

## AUSTRALIAN BRAGG CENTRE FOR PROTON THERAPY AND RESEARCH

The Australian Bragg Centre for Proton Therapy and Research (ABCPTR) is Australia's first proton therapy centre. It is designed to become a centre of excellence for paediatric, adolescent and rare adult tumour health outcomes. The ABCPTR will occupy the ground floor and three below-ground levels of the 15-level Australian Bragg Centre building next door to SAHMRI on North Terrace.

### Highlight

In March 2023, the Australian Bragg Centre for Proton Therapy & Research (ABCPTR) welcomed its first members of the newly formed Bragg Consumer Advisory Group (BCAG). In a major milestone of the ABCPTR project, the creation of the consumer advisory group was the culmination of 12 months of training and development in consumer engagement for five clinical staff members. The ABCPTR consumer engagement team consists of a radiation oncologist, project manager, two radiation therapists and a registry manager.

2023 also saw the consolidation and expansion of the Australian Particle Therapy Clinical Quality Registry (ASPIRE) which compares the long-term toxicities of photon and proton radiation therapy.

ASPIRE is a prospective, observational, longitudinal study of paediatric, adolescent, young adult and rare adult tumour patients from a select group of tumour streams treated with radiation therapy.

The registry enrolls patients who have been treated with radiation therapy in order to better understand and compare the short and long-term benefits of the different types of radiotherapy. It collects patient information such as age, gender and post code, as well as clinical data including diagnosis, treatments and side effects.

# FINANCIAL SUMMARY

	31 DEC 2023 \$'000	31 DEC 2022 \$'000
<b>Operating revenue and other income</b>		
Category one research grants	14,496	14,450
Other research grants	17,979	17,454
Sale of products	4,855	5,347
Contract research & clinical trial income	23,822	12,101
Income for indirect costs of research	2,456	3,317
Rent and outgoings	4,554	4,144
Other income	2,701	5,114
<b>Total operating income</b>	<b>70,863</b>	<b>61,927</b>
State Government operating grant	5,506	5,506
State Government Premier's grant	3,200	-
<b>Total operating contributions</b>	<b>8,706</b>	<b>5,506</b>
State Government capital grant	251	216
Commonwealth Government PTU grant	16,723	8,876
<b>Total non-operating grants</b>	<b>16,974</b>	<b>9,092</b>
<b>TOTAL REVENUE</b>	<b>96,543</b>	<b>76,525</b>

	31 DEC 2023 \$'000	31 DEC 2022 \$'000
<b>Operating expenses</b>		
Employee expenses	(46,239)	(43,884)
Research support	(10,282)	(11,719)
Building management costs	(6,481)	(6,225)
Consumables	(7,644)	(6,436)
IT services & maintenance	(3,968)	(2,790)
Other expenses	(8,133)	(6,932)
<b>Total operating expenses</b>	<b>(82,747)</b>	<b>(77,985)</b>
Finance income	3,859	1,006
Finance cost	(6,376)	(1,319)
<b>Net finance income/(costs)</b>	<b>(2,517)</b>	<b>(313)</b>
<b>Results from operating activities before depreciation and amortisation expense</b>	<b>11,279</b>	<b>(1,775)</b>
Depreciation and amortisation expense	(12,151)	(9,486)
<b>Total depreciation and amortisation expense</b>	<b>(12,151)</b>	<b>(9,486)</b>
<b>(Deficit) for the year</b>	<b>(872)</b>	<b>(11,261)</b>
Other comprehensive income/(loss) for the year	(5)	-
<b>TOTAL COMPREHENSIVE INCOME/(LOSS) FOR THE YEAR</b>	<b>(877)</b>	<b>(11,261)</b>



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