



SAHMRI
Annual Report
2022





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 Chair of the Board

MR RAYMOND SPENCER

Sitting down to write this letter fills me with conflicting emotions. This will almost be my final official duty as SAHMRI's Chair, after being privileged to hold this position for 12 years.

The Greek philosopher Heraclitus is quoted as saying "change is the only constant", and so it is with SAHMRI. Our Constitution dictates that three consecutive four-year terms is the maximum anyone can serve and so I, along with our Deputy Chair Alan Young and fellow founding Board member Emeritus Professor John Hopwood, are vacating our seats to allow SAHMRI's board to be reinvigorated with fresh blood and ideas.

While all of our incoming board members are yet to be confirmed, it gives me great comfort to know that the Hon Hieu Van Le AC, former Governor of South Australia, has accepted the invitation to replace me as Chair. Hieu is a man of great wisdom and virtue who has been a close friend of our institute since our inception.

There are so many people I could and should thank for their contributions to SAHMRI during my time as Chair but to do them justice would double the size of this Annual Report. I must however mention all the Board Members who have sat alongside me over the journey, and specially mention the two gentlemen who I referred to earlier, Alan and John, without whom SAHMRI might never have been created.

I must also single out our Executive Director Steve Wesselingh, who has been charged with realising the ambitious plans of our Board and who has done so with passion and brilliance throughout his time in charge. I am very pleased that Steve accepted the Board's request to see out another contract, leading us until the end of 2023. The pandemic which we are

still enduring has made strength and continuity of leadership even more vital.

It is almost unfathomable for me to reflect on what SAHMRI has become to South Australia, and to the health and medical research sector, having come from such humble beginnings little more than a decade ago. What begun as just a handful of employees with an aspirational vision, operating out of a modest rented office space, now stands as an eminent institute that has made an indelible mark on South Australia physically, culturally and in terms of our contributions to better health and health care.

As I mentioned earlier, change is the only real constant in life, and so it is with SAHMRI. COVID-19 has wrought unforeseen change on all our lives and on our institute also. Pleasingly, with the vaccine rollout progressing well, we have cause for optimism that the liberties we once took for granted will return, and soon.

But much of the change SAHMRI is undergoing is more welcome and planned for. We are maturing in our operations and outlook, having grown apace since the Cheese Grater doors opened just eight years ago.

I will leave it to Steve to outline the growth and development of our core research, but that progress is apparent also in many of the complementary, cultural areas that make SAHMRI who we are.

We are closing in on ratification of the Stretch phase of our Reconciliation Action Plan journey. Whereas our near-completed Innovate RAP had an internal focus, our Stretch RAP will see SAHMRI take on a leadership role in Reconciliation, setting an example for our Adelaide BioMed Precinct and for our community more generally. We can see



this work already in action through a series of RAP committee-driven initiatives this year such as the Close the Gap Day public event, showcases at the Aboriginal Power Cup and high schools and our work experience program targeting regional and remote students.

Similarly, our Gender Equity, Diversity and Inclusion Committee is making steady progress through our commitments under the Athena Swan Bronze Award as we target Silver accreditation in the near future.

Community outreach is not just important to set a positive example but to strengthen the public's knowledge and affection for SAHMRI also. The reality of achieving our mission is that we need the support of individuals, industry and philanthropic organisations to power our research. As a relatively small and still young institute we can stand proudly by our record of success when it comes to winning grants from the large national schemes. Reaping the rewards of innovation and inspiration however requires discretionary finding that can only come from philanthropy.

To that end, I share the warmest of thank yous with Jamie and Louisa McClurg, whose recent \$1m gift is the largest single donation SAHMRI has ever received. Jamie came to know SAHMRI through his role as Executive Chairman of local developer Commercial & General, which is driving the construction of the Australian Bragg Centre adjacent to SAHMRI's headquarters. As his knowledge of who SAHMRI is, what we are out to achieve and why grew, Jamie felt compelled to use his personal resources to support SAHMRI's mission. His gift has enabled the creation of the McClurg Paediatric Brain Cancer Fellowship – a role that will attract one of the world's great clinician/researchers

to Adelaide to partner with our growing Australian Bragg Centre for Proton Therapy and Research team and like-minded professionals across our state.

As transformational as Jamie's generosity is, we are equally indebted to every person who has donated to support our research, like those who took part in or otherwise supported the second edition of our BRIGHT Walk fundraiser earlier this year. I'm cautiously optimistic that with COVID restrictions easing, we will be in a position in 2022 to make the BRIGHT Walk the collective, one-night event it was always designed to be.

Another exciting development in 2022 that greatly enhances our community outreach objectives was the successful launch of SAHMRI's new website. The site embodies the distinctive light and airy feel that you appreciate when you walk into our north terrace headquarters, and provides an attractive, easily navigable platform to share and celebrate the life-changing work that our research community undertakes.

My official ties with SAHMRI will end soon, but the institute will remain a part of me forever. I will, of course, continue to be involved with this great institute in several capacities and will forever be an ardent supporter of and advocate for the critical work SAHMRI does to help us all live longer and live better.

I sincerely thank you all, and those who have joined and left SAHMRI during my time, for the part you have played in making the institute what it is today. I wish you all every success for the future – not for you own sakes, but because the benefits of your successes are so important for people everywhere.

Letter from the Executive Director

PROFESSOR STEVE WESSELINGH

Just as the world has undergone significant changes during the COVID-19 pandemic, so too has SAHMRI. The pandemic has been a catalyst for innovation and adaptation, pushing us to find new ways of working together and fostering collaboration across different fields. Our institute has been strengthened by the challenges and I am grateful for the dedication and resilience shown by our community.

We endured yet another difficult start to the year in 2022, with the reopening of borders and relaxing of restrictions seeing many work from home as a precaution. Fortunately, the threat faded into the background and we were able to return to the office, with our wonderful Cheesegrater headquarters eventually re-opening to the public also.

The start of 2022 saw SAHMRI welcome our Research Advisory Committee (RAC) for its biennial meeting – arguably the most significant regular event on SAHMRI's calendar. The Committee, chaired by Professor Sir Edward Byrne, provided overwhelmingly positive feedback on both our direction and standard of our research, as well as the high-performing, ambitious and inclusive culture that drives it. The Committee also presented suggestions around how SAHMRI can further enhance our research agenda to continue striving for excellence in all that we do.

The RAC also endorsed SAHMRI's commitment to fostering partnerships with a diverse cross-section of research and health entities. We would not be a

world leader in health and medical research without the strength of these collaborations – with South Australia's universities, the public health system and interstate and international institutes.

The Adelaide Health Innovation Partnership (AHIP) is one of SAHMRI's relatively recent collaborations but already it is having a significant impact. In 2022, AHIP was incorporated with an independent Board, chaired by Anne Skipper, and secured funding for four of its major projects.

Most prominent of these projects is the Bragg Comprehensive Cancer Centre (BCCC), which has been allocated \$77m establishment funding from the Federal Government. The BCCC will bring together our state's top cancer expertise, forming a multidisciplinary unit of cancer-fighting resources that will save lives and improve the quality of life for people with cancer through better preventions, treatments, care and support.

The BCCC will be based in the Australian Bragg Centre, which of course will also become the site of Australia's first proton therapy unit – The Australian Bragg Centre for Proton Therapy and Research.

The proton therapy unit is just one example of SAHMRI and our partners boosting South Australia's health care capacity through the latest technology. This year also saw the addition of Australia's first Photon-Counting Computed Tomography (PCCT) machine to the SAHMRI-based Clinical Research





Imaging Centre. This scanner is the biggest advancement in CT technology in 20 years – delivering never-before-seen clarity and definition of images to identify people at risk of heart attack and examining cancer cells in much greater detail while exposing patients to less radiation. The PCCT is another example of the power of partnerships – brought about through cooperation with Jones Radiology, Siemens Healthineers and the State Government.

Just as important as partnerships in research and technology are the many partnerships SAHMRI enjoys with our supporters – from trusts and foundations to the corporate world to private philanthropists and also our grassroots donors. As an independent not-for-profit institute, we are sustained by the ongoing generosity of these groups, for which we are immensely grateful.

Change is an essential constant in medical research and 2022 saw some significant developments with SAHMRI's research leadership and structure. I extend my congratulations to our new Aboriginal Health Equity Co-Leaders Kim Morey and Associate Professor Odette Pearson, who take over from Professor Alex Brown.

Congratulations also to Professor Deb White, who joins Professor Tim Hughes as Co-Leader of our renamed Precision Cancer Medicine Theme. Deb's appointment reflects the expansion of this theme to now encompasses four major programs – the Blood

Cancer Program, now led by Associate Professor Dan Thomas, the Computational and Systems Biology Program, the Solid Tumour Program and the Paediatric Neuro-Oncology Research Program.

The head of the Paediatric Neuro-Oncology Research Program – McClurg Brain Cancer Fellow, Associate Professor Jordan Hansford – began his role at the start of 2022 as a cross-appointment with SAHMRI, the Women' and Children's Health Network, the University of Adelaide and SAiGENCI. Jordan's program consists of the Neuroblastoma Biology Group and Proton Therapy Innovations, which together will push the boundaries of paediatric brain cancer research and improve outcomes for affected children and their families.

Dr Ed Robins has been appointed as MITRU's first Head of Research and Development, bringing with him 19 years' experience working in PET pharmaceuticals research. His expertise will undoubtedly advance our understanding of molecular imaging and contribute to the development of novel diagnostic and therapeutic strategies.

SAHMRI and our research partners once again excelled beyond expectations in terms of grant success in 2022. From a total of 151 applications, 83 were awarded, representing a success rate just shy of 55%. These grants brought \$67.9m to the medical research sector in our state, including \$41.9m from the highly competitive NHMRC and MRFF funding pools.



This impressive achievement speaks to the calibre of our researchers, the quality of their work and the strength of our collaborations, as well as the diligence of our grant-writing support and administrative teams.

On a personal note, 2022 was a particularly memorable year for our Deputy Director and SAHMRI Women and Kids Theme Leader Professor Maria Makrides, who was named South Australia's Scientist of the Year. This thoroughly well-deserved honour recognises Maria's outstanding career, in particular her efforts in guiding research that has led to the world-first omega-3 Test-and-Treat program aiming to reduce preterm birth. This accolade not only reflects Professor Makrides' exceptional achievements but also showcases the broader impact of SAHMRI's work on public health and policy.

As we close the chapter on 2022, we find ourselves in a markedly different place compared to where we started the year. While some restrictions and other reminders of the pandemic persist, our collective situation in SA, Australia and around the world has significantly improved. This progress is largely due to the tireless efforts of the medical and research sectors, who have risen to the challenge in developing vaccines, preventions, treatments, and public health measures to minimise the duration and impact of the pandemic.

Now is the time for reflection on the year that has passed, and for everyone in our community and beyond to pause and recharge. I hope you enjoy this period with loved ones, finding peace and restoration. As we welcome 2023, let us return to SAHMRI with renewed energy and determination, for we have much vital work ahead of us.

Together, we will continue to push the boundaries of scientific knowledge, drive innovation and make a lasting impact on the health and wellbeing of all.

Board of Directors



MR RAYMOND SPENCER

Non-executive Chair

Raymond Spencer was born in Adelaide, studied at the University of Adelaide and has lived and worked in the US, India and Europe. He brings to the role more than 35 years' experience across international business, management planning, technology, finance, organisational culture expertise and mergers and acquisitions.

Mr Spencer was appointed to the Board as Chair on 21 December 2009.



MR ALAN YOUNG, AM

Non-executive Deputy Chair

Alan Young co-authored the Shine Young Report with Professor John Shine. The Report came out of the Review of Health and Medical Research in South Australia, commissioned by the South Australian Government in 2007, and led to the establishment of SAHMRI.

Mr Young was appointed to the SAHMRI Board on 21 December, 2009.



EMERITUS PROFESSOR JOHN HOPWOOD, AM

Non-executive Director

John Hopwood is an Emeritus Professor at The University of Adelaide and affiliate Professor in the Department of Pharmacy at the University of South Australia.

Professor Hopwood was appointed to the Board on 21 December 2009.



PROFESSOR JUSTIN BEILBY

Non-executive Director

Professor Justin Beilby is an inaugural member of the SAHMRI Board and 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.

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



MR EDDIE FRY

Non-executive Director

Eddie Fry is an experienced businessman who's 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.

Mr Fry was appointed to the SAHMRI Board in June 2020.



MR ROSS HASLAM

Non-executive Director

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.

Mr Haslam was appointed to the Board on 31 July 2018.



MS JENNY RICHTER, AM

Non-executive Director

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.



PROFESSOR ROBERT SAINT, AM

Non-executive Director

Professor Robert Saint is Deputy Vice-Chancellor (Research) at Flinders University. He was previously a member of the Australian Research Council College of Experts and was a standing member of the Prime Minister's Science, Engineering and Innovation Council.

Professor Saint was previously a member of the Board between 2014 and 2015 and was reappointed on 1 August 2017.



PROFESSOR CAROLINE MCMILLEN

Non-executive Director

Professor Caroline McMillen commenced in the role as Chief Scientist for South Australia in October 2018 after serving as Vice-Chancellor of the University of Newcastle for seven years from 2011.

Professor McMillen was previously a member of the Board between 2009 and 2011 and was reappointed to the Board on 1 February 2019.



PROFESSOR BENJAMIN KILE

Non-executive Director

Professor Ben Kile commenced as Executive Dean of the Faculty of Health and Medical Sciences with the University of Adelaide in October, 2019.

Professor Kile was appointed from the University of Adelaide in June 2020.



PROFESSOR STEVE WESSELINGH

Executive Director

Professor Steve Wesselingh is the Executive Director of SAHMRI. He is an infectious diseases physician with research interests in neurovirology, HIV, microbiome research and vaccine development.

Professor Wesselingh was appointed to the Board on 1 February 2011.

Growth at a Glance

1,297
SAHMRI
community

501
staff

500
partners

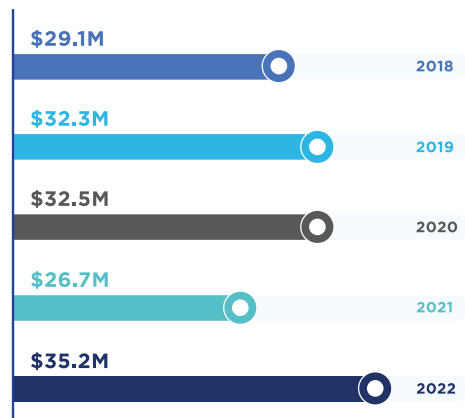
283
students

13
volunteers

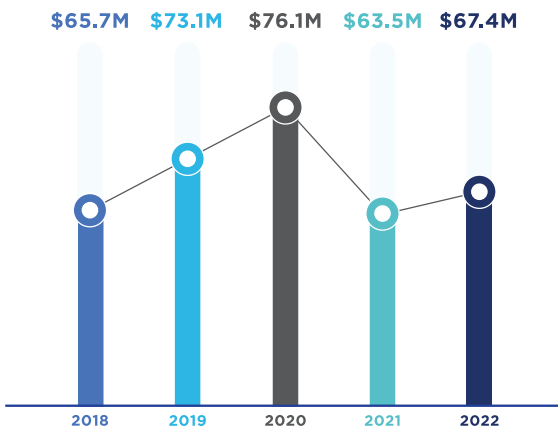
SAHMRI remains committed to recruitment and retention of the best health and medical researchers. To date, 92 SAHMRI staff from across the globe have been recruited to South Australia.

SAHMRI is home to 501 staff, 283 students, 500 partners and 13 volunteers, increasing our community by over 100 in the past calendar year.

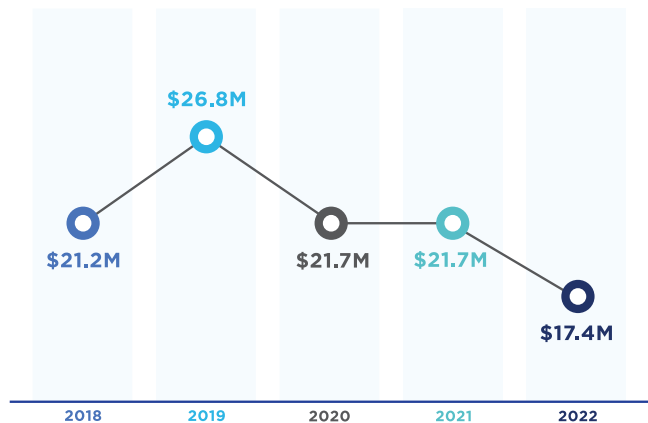
RESEARCH FUNDING



SAHMRI TURNOVER



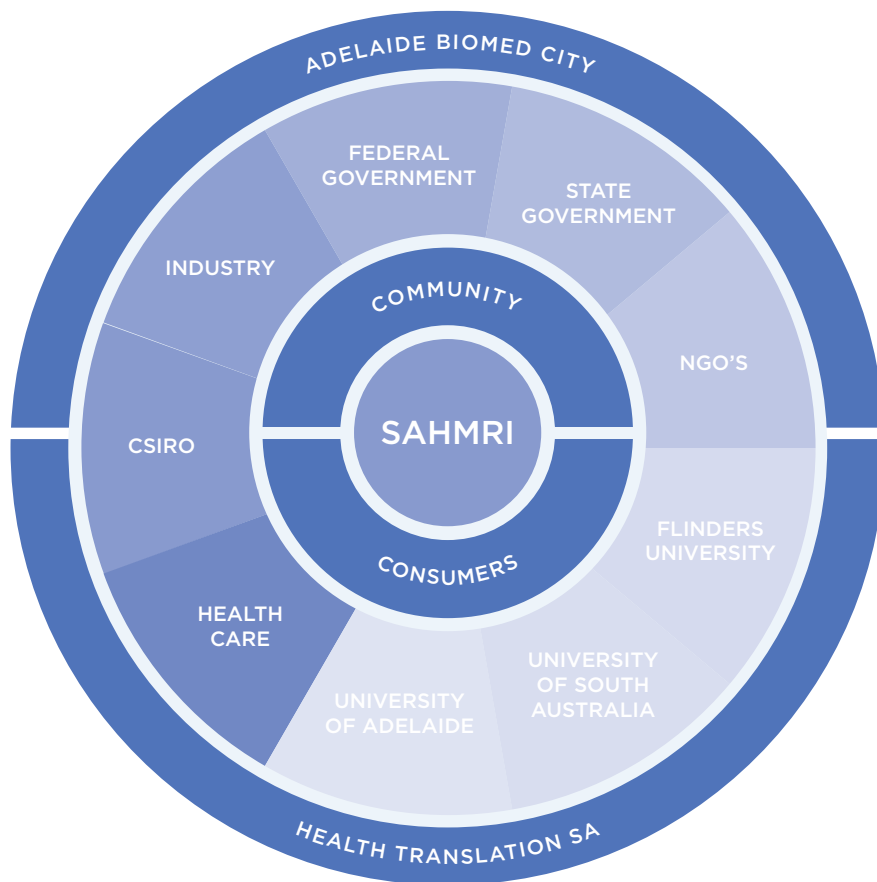
COMMERCIAL INCOME



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.





Research Advisory Committee

SAHMRI's Research Advisory Committee (RAC) conducts a review every two years to provide advice and direction to the Board on the quality of research undertaken at the institute.

The RAC specifically reviews:

- The research conducted within SAHMRI to ensure it is of excellent quality and scientific merit, as well as being aligned with SAHMRI's research strategy
- SAHMRI's strategic plan to provide advice about how the institute can achieve its strategic goals through the research undertaken.



PROFESSOR SIR EDWARD BYRNE

**Research Advisory
Committee Chair**

Sir Edward Byrne is a neuroscientist who served as Principal of King's College London from August 2014 until January 2021. He was previously Vice-Chancellor of Monash University.

PROFESSOR CAROLINE HOMER AO

Burnet Institute

Professor Caroline Homer is a leading midwifery researcher in Australia with an international reputation as a scholar and leader in maternal and newborn health care and service delivery. She obtained her PhD in 2001 and has led research and development projects in Australia and internationally, especially in relation to health services delivery, reproductive, maternal and newborn care, human resources for health workforce development and midwifery education.

PROFESSOR DOUG HILTON AO, FAA

Walter and Eliza Hall Institute

Professor Doug Hilton is an Australian molecular biologist. He is the Director of the Walter and Eliza Hall Institute of Medical Research (WEHI) in Melbourne, Australia and Head of the Department of Medical Biology at the University of Melbourne.

PROFESSOR IAN FRAZER FAA

University of Queensland

Professor Ian Frazer is a clinician scientist who was trained as a clinical immunologist in Scotland. As a professor at the University of Queensland, he leads a research group working on the immunobiology of epithelial cancers. He is recognised as co-inventor of the technology enabling the HPV vaccines which are currently used worldwide to help prevent cervical cancer.

PROFESSOR JUSTIN MCARTHUR

Johns Hopkins

Professor Justin McArthur is nationally and internationally recognised for his work in studying the natural history, development and treatment of HIV infection, multiple sclerosis and other neurological infections and immune-mediated neurological disorders. He has also developed a technique to use cutaneous nerves to study sensory neuropathies, including those associated with chemotherapy, HIV and diabetes. Professor McArthur is the founding director of the Johns Hopkins/National Institute of Mental Health Research Center for Novel Therapeutics of HIV-associated Cognitive Disorders in Baltimore, Maryland.

PROFESSOR PAPAARANGI REID

University of Auckland

Professor Reid is Tumuaki (Deputy Dean) and the Head of Department of Maori Health at the Faculty of Medical and Health Sciences at the University of Auckland in New Zealand. She holds science and medical degrees from the University of Auckland and is a specialist in public health medicine.

Professor Reid is a member of Te Rarawa iwi in North Hokianga and her research interests include analysing disparities between Indigenous and non-Indigenous citizens as a means of monitoring government commitment to Indigenous rights.

PROFESSOR VICKI ANDERSON

Murdoch Children's Research Institute

Professor Vicki Anderson is a paediatric neuropsychologist who works across clinical, research and academic sectors. She is the Director of Psychology at The Royal Children's Hospital in Melbourne, Australia and Director of Clinical Sciences Research with the Murdoch Children's Research Institute (MCRI). Professor Anderson is an Australian National Health and Medical Research Senior Practitioner Fellow and a University of Melbourne Professorial Fellow (Psychology & Paediatrics). Her primary research and clinical interest focusses on improving outcomes from early childhood brain disorders.

PROFESSOR SHARON LEWIN

Doherty Institute

Professor Sharon Lewin is a leading infectious diseases expert and the inaugural Director of the Doherty Institute. She is also a Professor of Medicine at The University of Melbourne and a NHMRC Practitioner Fellow. As an infectious diseases physician and basic scientist, her laboratory focuses on basic, translational and clinical research aimed at finding a cure for HIV and understanding the interaction between HIV and hepatitis B virus.

PROFESSOR VLADO PERKOVIC

UNSW

Professor Vlado Perkovic is Dean of Medicine and Scientia Professor at UNSW, a Professorial Fellow at The George Institute and a Staff Specialist in Nephrology at the Royal North Shore Hospital. His research focus is in clinical trials and epidemiology, in particular in preventing the progression of kidney disease and its complications. Professor Perkovic leads several major international clinical trials and serves on the Steering Committees of several others. He has been involved in developing Australian and global guidelines in kidney disease, cardiovascular risk assessment and blood pressure management.



2022 RAC Report & Recommendations

Following presentations from key leaders and researchers across SAHMRI, the Committee noted the exceptional progress made over the past two years. The Committee congratulated the SAHMRI team on the high-quality of research being undertaken and the clear impact that this research is having locally, nationally and internationally.

While SAHMRI's outputs and impacts are well-documented, the Committee encouraged leadership to consider benchmarking SAHMRI and its Themes/Research Groups against other similar organisations/groups in the Australian context, allowing areas of actual and potential National/ International leadership to be identified, and targets to be set to continue advancing SAHMRI excellence. The Committee provided a range of Theme-specific recommendations, which are detailed in the full report.

The RAC acknowledged SAHMRI's unique position in the South Australian health and medical research sector, as the sole independent health and medical research institute. This presents a unique opportunity to directly advise and influence health care through linkages with the Local Health Networks (LHNs). This requires a level of flexibility to ensure that SAHMRI can meet the ongoing and varying needs of SA Health and other players in the health and medical research ecosystem.

Engagement with the LHNs was discussed by the Committee, specifically in relation to growing the clinician researcher capacity across the sector. SAHMRI is able to play a critical role in attracting clinician researchers (across all medical and allied health fields) and utilising the translational opportunities this 'pool' of researchers presents. SAHMRI also has the opportunity to develop, and perhaps pilot novel models, that may be nationally important. Ongoing and effective communication is required with the LHNs and SA Health more broadly to continue to advance SAHMRI's contribution to health service and patient care improvements. Further recommendations regarding this are included in the full report.

SAHMRI comprises researchers with an array of affiliations, which offers benefits but can present some challenges as SAHMRI cements its role in the health and medical research sector in South Australia. Members agreed that SAHMRI is currently managing these challenges well, but this requires continued vigilance and that offers the opportunity to unlock dramatic benefits.

The breadth of work undertaken by SAHMRI researchers, across all four pillars of research, was noted by the Committee. Members highlighted the importance of maintaining, and indeed growing, the basic medical science component of research activity and felt this was critical moving forward.



The relationship of SAHMRI with Aboriginal and Torres Strait Islander communities is to be commended, recognising the significant role that Prof Alex Brown in particular has played in this development. SAHMRI has set the benchmark for excellence in Aboriginal and Torres Strait Islander health research, which other organizations should aspire to. The Committee acknowledged Prof Brown's contribution to SAHMRI and wishes him well in his future endeavours. The Committee was encouraged by the appointment of two outstanding Aboriginal women as Theme Co-Leaders, confident that they are capable of leading the Theme in the next phase of their research journey. Noting the challenges of Theme Leader appointment, the Committee encouraged the SAHMRI leadership and Board to continue to pursue this appointment and expressed confidence that the excellent work of the Theme will continue, driven by the significant outstanding Indigenous team that has grown at SAHMRI.

The Committee noted the challenges associated within the current funding environment in Australia, with institutions, including SAHMRI, dependent on hyper-competitive funding for research. Strategic funding and discretionary funding becomes important and these funding pools need to be grown. Seed funding should also be continued and maintained.

Each SAHMRI Theme presented comprehensive overviews of their research activities, current focus and plans for the future, that the Committee noted were of high quality and act as an excellent basis for continued growth and success. Members agreed that the leadership team has created a positive culture, and a set of values that have been adopted by the research and broader SAHMRI community. This culture is clear through the engagement of research staff who are clearly committed to working towards research excellence and research impact, and genuinely appear to enjoy working at SAHMRI.

The comments and recommendations provided in the Committee's full report are predicated on the excellence and enthusiasm demonstrated during the RAC Proceedings and are based on the skills in research leadership that are evident across SAHMRI



Our Commitment to Reconciliation

SAHMRI is committed to improving the health and wellbeing of Aboriginal and Torres Strait Islander people. Our Reconciliation Action Plan (RAP) will influence and inform the culture of SAHMRI and embed Reconciliation initiatives into all aspects of research within the institution and ensure our Aboriginal and Torres Strait Islander research is conducted ethically.

SAHMRI focusses on providing opportunities for Aboriginal communities, organisations and individuals, including our Aboriginal and Torres Strait Islander staff. We must ensure staff are supported and empowered to embrace opportunities.

We aim to provide a workplace that is culturally safe, free from discrimination, enables open and honest discussion, educates and empowers individuals to reflect on their journey towards Reconciliation, explores areas of improvement and facilitates opportunities to extend our reach beyond all themes and our organisation.

2022 Reconciliation Action Plan Initiatives

Stretch RAP

In 2022, SAHMRI's reconciliation focus was on progressing to the Stretch phase of our Reconciliation journey, having achieved the majority of objectives laid out in our initial Innovate RAP.

At this next stage of our RAP journey, SAHMRI has the opportunity and responsibility to stand at the forefront of Reconciliation action by driving positive change and setting an example for the many organisations and communities with which we work. We are achieving this by embedding Aboriginal health in the way we work and the way we interact with our key partners both here in SA and across the country.

Aboriginal & Torres Strait Islander Workforce Strategy

After launching in 2021, SAHMRI has spent 2022 embedding this strategy across our institute. The strategy contains 81 actions that enhance current HR frameworks and complement our Reconciliation commitment. The talent register of potential Aboriginal and Torres Strait Islander candidates for upcoming opportunities continues to grow and be a source of appointments for vacant positions.

Education Outreach Program

This program continued to grow in 2022, stirring to meet targets set out under the national agreement for Closing the Gap and demonstrating SAHMRI's Stretch RAP commitment to extend our impact beyond our organisation and into the broader community.

The program sees SAHMRI collaborate and participate in a range of initiatives with schools, South Australian Aboriginal Secondary Training Academy programs, careers expos and Nunga room hot topics.

The program gives us direct reach to our future Aboriginal and Torres Strait Islander graduates and helps promote school based, traineeship and more initiatives many of which align with our workforce strategy targets. It also enhances our partnerships and has us in the forefront of community programs developed around sport and healthy living.

Scholarships

SAHMRI's flagship Neville Fazulla Aboriginal Health Memorial Scholarship for 2022 was awarded to Luke Cantley. Luke has family connections to the Gunditjmara nation of Victoria and is a Research Associate located within the Social Work Innovation Research Living Space (SWIRLS) at Flinders University. Through his research Luke seeks to understand the role Aboriginal culture plays as a protective factor within the child protection system, whilst also exploring the nuances between child safety and cultural safety.

The Fazulla scholarship exists to increase the number of Aboriginal and Torres Strait Islander people studying at university within non-clinical health related fields, acknowledging the importance of non-clinical roles within the health workforce.

SAHMRI directly and indirectly supports a number of other scholarships for Aboriginal and Torres Strait Islander people that aim to build the capacity of the Indigenous researcher community to design and conduct research that is culturally safe and meeting community needs.



Indigenous STEMM Mural Project

SAHMRI has earned a grant from Inspiring SA to create a public facing mural to showcase Aboriginal & Torres Strait Islander heroes and pioneers in STEMM, in the form of an artistic mural along the side of our iconic building. The artwork and design of the mural would be undertaken by an Aboriginal & Torres Strait Islander artist. Consultation for the mural development is underway with work to begin next year.

Cultural Learning

Members of the SAHMRI community are exposed to cultural learning opportunities as part of their induction process, with more formalised programs available online and face-to-face.

SAHMRI continues to explore opportunities to expand its cultural immersion offerings including 'on Country' experiences, language workshops and cultural excursions.

Research, Events & Awards

SAHMRI Research Showcase

The annual SAHMRI Research Showcase is an opportunity to hear about the work being undertaken by our PhD and early and mid-career researchers. The two-day showcase features a range of 3-minute and 10-minute presentations as well as a poster competition which this year had more than 40 entrants.

The 2022 Research Showcase award winners were:

- **Poster prize:** Hayley Parkinson & Julia Scott
- **PhD 3 Minute Thesis:** Joyce Mugabushaka
- **PhD 10 Minute Winner:** Najma Moumin and Jayshen Arudjumar
- **ECR Presentation:** Lavender Otieno
- **MCR Presentation:** Yazad Irani and Jaqueline Gould

SAHMRI Scientific Seminars

After years of COVID-19 interruptions, SAHMRI's Scientific Seminars returned to a regular in-person event in 2022, held on the first Tuesday of each month.

These sessions are designed to bring researchers from across the Themes together to hear about research in a variety of areas. Seminars have focused on the work of Themes and Research Groups and have also explored cross-cutting issues of interest to many researchers. South Australian, national and international researchers have presented at the seminars.

2022 Awards Presentation

- **Bright Accelerator Award:**
Dr Andrew Shoubridge, Lifelong Health
- **High Impact Publication:**
Dr Jacqueline Gould, Women and Kids
- **PhD Student Award:**
Dr Narnie Shanmuganathan,
Precision Cancer Medicine
- **Early Career Researcher Award:**
Dr Fatwa Adikusuma, Lifelong Health
- **Mid Career Researcher Award:**
Dr Janet Sluggett,
Registry of Senior Australians
- **Community Engagement Award:**
Dr Ilaria Pagani, Precision Cancer Medicine
- **Translation and Impact Award:**
Registry of Senior Australians
- **Research Enabler Award:** Bioresources Team
- **Research Facilitator Award:**
Yi Ng, Research Facility Services
- **Diane Ranck Leadership Award:**
Associate Professor Odette Pearson,
Aboriginal Health Equity
- **Diane Ranck Leadership Award:**
Wendy Keech, Health Translation SA
- **Executive Director's Award:**
Sarah Lawson, Research Office

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.



Consumer & Community Engagement

SAHMRI's vision is to conduct inspired research that will lead to better health outcomes. It is also well established in the literature that there are benefits for research quality and impact from consumer and community engagement across the research cycle.

SAHMRI's Strategic Plan 2021-2026 indicates how it will monitor the culture and practice of quality Consumer and Community Engagement (CCE) in its research, and SAHMRI's advocacy for the practice more broadly by:

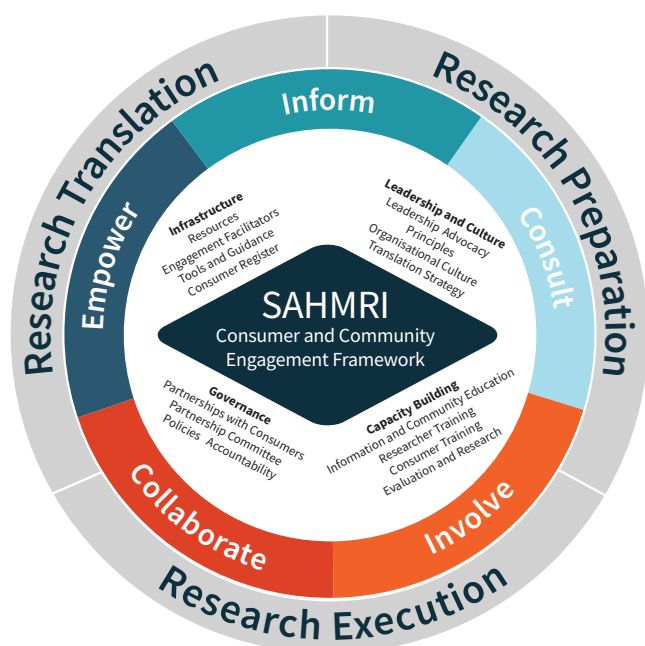
- Making health equity central to all strategic decisions.
- Actively engaging with our community about SAHMRI research.

SAHMRI's key past achievement has been the co-design and collaborative implementation of an evidence-driven Consumer and Community Engagement Framework, which has subsequently been published.

More recently SAHMRI developed Principles for CCE, which is guiding contemporary engagement in health and medical research and reflecting the values underpinning SAHMRI's commitment to evidence-based policy and practice.

Currently, SAHMRI researchers are increasingly collaborating with community and consumers through the SAHMRI Community Interest Register (CIR), their established connections with consumer representatives or through their own tailored recruitment strategies.

SAHMRI's research office is providing related research grant advice and expert community connectivity, while the website hosts local and national resources and guidelines supporting researchers, consumers, and the community.





Clinical Trials Platform

Led by Dr Karen Best, the SAHMRI Clinical Trials Platform (CTP) aims to leverage the latest technologies and best practices in clinical trial management to create a high-quality, efficient, and results-driven environment that facilitates the delivery of real-world impact to the community.

Highlight

In 2022, the first year of operation for the CTP much progress has been made towards establish the CTP as a leading Academic Research Organisation. Our portfolio of clinical studies has grown to include involvement in the national Australian Epilepsy Project and support of several SAHMRI Researcher led clinical trials and contracted services for external clients. Our CTP Digital Marketing Recruitment Campaigns including online pre-screening methods have expanded and we are now successfully recruiting participants for several trials in South Australia and Nationally. This decentralised method of participant recruitment is just one component of our vision to improve equitable access to clinical trials. The CTP is also participating in national efforts to address critical skill gaps in the workforce and our first intern commenced in 2022 as part of the inaugural PRAXIS Australia, Clinical Trial Coordinator (CTC) Internship.

Adelaide Health Innovation Partnership



The Adelaide Health Innovation Partnership (AHIP) facilitates and advocates for change, innovation and improvements in health service delivery, medical research, education and patient care. The partnership brings together the key elements, knowledge and skills from our members organisations to tackle projects that will have a significant impact on improving the health of our community and provide economic growth for South Australia.

In 2022, existing Adelaide Health Innovation Partnership (AHIP) members SAHMRI, the Central Adelaide Local Health Network and the University of Adelaide welcomed the Women's and Children's Health Network to the alliance.

Several significant establishment milestones were also achieved in 2022 including becoming an incorporated entity with a Board appointed under the leadership of Anne Skipper AM, registration with the Australian Charities and Not-for-profits Commission and securing funding for four of its major projects. The most significant funding was \$77m from the Federal Government to establish the Bragg Comprehensive Cancer Centre.

AHIP's seven priority projects are:

- **The Bragg Comprehensive Cancer Centre (BCCC)** – bringing together South Australia's leading cancer researchers, clinicians, patients, carers and technology as well as combining the best education, prevention programs, treatment, and long-term care in one coordinated service.
- **The PhD Pathway** – a career development program for doctors wanting to pursue a career as a clinician researcher. The program will be established during 2023 ahead of its first intake of participants in 2024.
- **Purruna Trruku: a Centre of Excellence for Aboriginal Health** – leveraging Aboriginal knowledge, culture and history to improve healthcare practices at all levels. By utilising the Aboriginal leadership within each members organisation that is supported by strong governance across the AHIP membership, the Centre will focus on delivering projects to improve health outcomes and the way healthcare is currently being delivered to the Aboriginal and Torres Strait Islander Community.
- **The Adelaide EpiCentre** – a centre for clinical epidemiology that will be based within the Royal Adelaide Hospital to provide support and training to clinical researchers to improve patient outcomes by embedding research and education into clinical care.
- **Access to data** – a priority for AHIP's member organisations is to overcome obstacles to data access. This issue is currently being scoped and will likely require additional support from SA Health and Government.
- **Shared Research Service** – a working group has been established to unite member's research offices to make doing research easier, remove administrative barriers and provide an opportunity for collaborative research which will increase the volume and quality of research and clinical trials in SA.
- **Clinical Trials Platform** – will provide a shared hub of skills, resources and new technologies that can be utilised across the member organisations to build clinical trials skills and capacity for our researchers and research workforce. It will also offer South Australians access to more advanced treatments and trials.

Bragg Comprehensive Cancer Centre



The Bragg Comprehensive Cancer Centre (BCCC) is an initiative of the Adelaide Health Innovation Partnership (AHIP). Its membership expanded in 2022 to include NT Health and the University of South Australia.

The BCCC will bring together South Australia's leading cancer researchers, clinicians, patients, carers and technology as well as combining the best education, prevention programs, treatment, and long-term care in one coordinated service. It will also secure SA's position within the growing number of comprehensive cancer centres across Australia, unlocking opportunities for South Australians to participate in national clinical trials and ensuring our state has a seat at the table when the national cancer research and clinical care effort is boosted by the launch of the National Cancer Plan in 2023.

The BCCC will be headquartered in the Australian Bragg Centre building that is currently under construction adjacent to SAHMRI. It is being established thanks to a \$77m investment from the Federal Government and is also benefitting from \$10m support from The Hospital Research Foundation Group.

Six core programs



Prevention

Stopping cancer from occurring, detecting cancer early and minimising cancer's impact.



Data & intelligence

Empowering research-informed clinical care through connected and accessible high-quality data, technology and infrastructure.



Clinical trials & patient pathways

Accelerating consumer access to cutting-edge treatments through clinical trials.



Aboriginal health

Improving outcomes through culturally responsive care programs.



Transformative treatments & innovative technology

Driving research aided translation of transformative treatments and therapies.



Survivorship

Elevating care and support throughout the cancer journey.



Adelaide BioMed City

Adelaide BioMed City

The Adelaide BioMed City (ABMC) Innovation District is a \$3.8b health and medical innovation district in the heart of Adelaide, comprised of leading-edge anchor institutes and companies, that cluster and connect with start-ups, business incubators and accelerators.

It offers mixed-use infrastructure where researchers, clinicians and students work together with entrepreneurs and leading industry players.

ABMC aspires for global significance through high impact translational research, that when commercialised drives positive tangible health care improvements nationally and internationally.

ABMC's principle partners are SAHMRI, the Central Adelaide Local Health Network, Women's and Children's Health Network and Adelaide's three major universities. The alliance also enjoys connections with the Lot Fourteen and Tonsley innovation districts and draws on the expertise, resources and networks of a number of supporting partners across the scientific, medical and commercial sectors.

The 2022 year saw ABMC enter a new phase of its development as a catalyst to improve commercial outcomes from SA's investment in health and medical research and associated infrastructure. A key part of this next step has been the appointment of an independent skills-based

Board with national and international experience to assist in navigating the journey to successful engagement with commercialisation partners. The Board brings critical skills in commercialisation, clinical development, strategic marketing, entrepreneurship and community engagement. ABMC acknowledges the outstanding leadership of the outgoing Board, allowing ABMC to play a key role in promoting Adelaide's infrastructure and expertise, connecting industry with its strong academic, medical and health partners.

To further strengthen its activities, ABMC has partnered with MTPConnect to deliver the Adelaide Intermediary Program (AIP). As part of the EXCITE Strategy, the Government of South Australia has invested in this intermediary function to drive collaboration and knowledge transfer between researchers and industry. As Australia's industry growth centre for medtech, pharmaceuticals, biotech and digital health, MTPConnect has a strong track record of partnering with governments and businesses across Australia to grow innovation, commercialisation and translation outcomes.

Fundraising & Marketing

SAHMRI's fundraising strategy is to raise the profile of SAHMRI's work and develop well-researched programs that secure ongoing donations from a loyal base of supporters in the South Australian community to ensure our financial sustainability in the long term.

Launching as a virtual event in 2020, we decided to stage the first physical iteration of our BRIGHT Walk for a Brighter Future in July.

One thousand six hundred walkers undertook the inaugural 21km challenge in a spectacular public display of support for our institute and the life-saving work undertaken at SAHMRI. Together, the walkers raised more than \$418,000.

Partnering with Illuminate Adelaide, participants were treated to light installations along the half-marathon track across the city, including some exclusive to those undertaking the walk.

BRIGHT Walkers drew the public's attention as they bustled through the CBD and surrounds as a sea of bright pink, orange and yellow lit up the city as the sun set.

The event was an entry-point opportunity for the community to support health and medical research. The advertising campaign was a successful public relations exercise, raising awareness of the institute's work.

Thank you to all those who supported the event through walking, volunteering their time, donating to friends and family who participated and to the broader SAHMRI community for getting behind our researchers at the heart of this event.

SAHMRI relaunched another affordable yet engaging way to support our researchers this year, giving a new-look online presence to the SAHMRI Windows of Hope initiative.

Hundreds of supporters left dedications and messages of hope on the website and pledged to continue donating monthly.

The ANZ Community Ball is a major fundraising event in the South Australian calendar. Held at the Convention Centre in April, SAHMRI research was a beneficiary netting more than \$50,000 from the glamorous and well-attended event.

We are incredibly grateful to the many trusts, foundations and major donors passionate about supporting world-leading, innovative and life-saving health and medical research. These gifts directly support specific research projects and essential equipment that many researchers across the institute can share.

We continue to dedicate our team's resources to recruiting and stewarding each of these very generous philanthropists, ensuring that they are informed about the research they're supporting and assured of our gratitude for their vital donations.

SAHMRI extended the marketing campaign to raise awareness of the passionate people and important projects within the 'cheese grater' building. The radio, outdoor, press and online advertising aims to educate the community about SAHMRI's not-for-profit status and need for philanthropic support. This long-term strategy will boost the community's willingness to donate to health and medical research in the coming years.



Thank You to SAHMRI's Supporters

Philanthropy support SAHMRI's life-saving research. Gifts from philanthropic trusts and foundations, generous benefactors and major donors helps transform medical research in South Australia.

In 2022 we were incredibly grateful to the following supporters for helping our researchers to turn their discoveries into cures, treatments, better health and longer lives. These gifts support our vision of creating a world where everyone can live longer and happier lives.



Platinum Supporters

(more than \$100,000)

- Jamie & Louisa McClurg
- The Robert Connor Dawes Foundation
- Rodney Detmold
- John Hopwood AM
& Barbara Hopwood
- Frank & Kathy Seeley
- Bruno and Bernie Simone
- Thyne Reid Foundation

Diamond Supporters

(more than \$50,000)

- ANZ
- Greaton Development Ptd Ltd
- The Grosset Gaia Fund
- Ian Potter Foundation
- Jimfan Foundation
- Raymond and Tina Spencer
- Pamela Wall OAM and
the Late Ian Wall AM

Emerald Supporters

(more than \$25,000)

- Adelaide Appeals Committee
- Michael and Angelique Boileau /
Boileau Business Solutions
- CMV Foundation
- Dr Graham Fraenkel
- ECH Inc
- Ia Foundation
- Life Care
- Lin Huddleston Charitable Foundation
- LK Lawyers

Sapphire Supporters

(more than \$10,000)

- Astellas Pharma
- Richard Cavill Foundation
- Childhood Cancer Association
- Cops for Kids
- Sangmitha Foundation
- Sandy's Memorial Trust
- Silver Chain
- South Australian Police
- Bill Williams
- Zen Energy

Ruby Supporters

(more than \$5,000)

- Classic Owners Motor Cycle Club Inc
- David & Nicole Crawford
- Foskett Foundation
- Alister & Sue Haigh
- Elizabeth Hallam & Sean Geoghegan
- The Indulkaninna Foundation
- Inspiring SA
- Lions Medical Research Fund
- Maxxia
- Simon Marschall
- Peter & Lisa Weeks

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
- 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
- Leukemia 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



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.

- Theresa Alternetti
- Stephen Baines
- Diana Bartlett
- Robin Baxter
- Mary Lou Byrnes
- Robert Dettman
- Barbara Elliott
- Dawn Forde
- Jim French
- Bev Harvey
- Bill Hickling
- Nigel Holmes
- Frank Imbrogno
- Shirley Knight
- John Mahoney
- Molly McCormack
- Lisa McNeil
- Sandra Morton
- Helen Nankivell
- Colin Oates
- Helen O'Flaherty
- Roger Peake
- Alexander Rae
- Janet Rae
- Anthony Schulz
- Brenton Scott
- John Searles
- Lorenzo Senesi
- Rosanna Senesi
- Lea Thin Seow
- Chris Tsilomanis
- Willie Van de Meulengraaf
- Margaret Watt
- Bill Williams
- John Wright



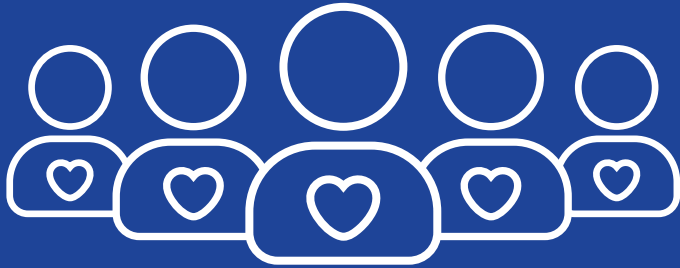


Founding Ambassadors

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.

- Emeritus Professor John Hopwood AM and Barbara Hopwood
- Alister and Susan Haigh
- Dr Lea Thin Seow
- Ian Wall AM and Pamela Wall OAM
- Leeann and David Willson
- Peter Weeks
- Sean Geoghegan and Elizabeth Hallam
- Ahrens Group Pty Ltd
- Alan Young AM and Susan Young
- Bill Williams
- Brandon and Amanda Petty
- Colin and Libby Dunsford
- David and Kathryn Simmons
- David and Nicole Crawford
- Deepankur Bhatia
- Fay Gerard AM and The Adelaide Appeals Committee
- Frank Agostino
- Greg and Lynn Drew
- Gus and Ruth Fraenkel
- Hon Tom Gray
- Hugh and Fiona MacLachlan
- Jill Hammond, Amanda Buttery, Belinda Buttery
- Josh and Cathy Simons
- McMahan Services
- Nick and Kathryn House
- Nick and Nikki Heywood-Smith
- Peter and Lisa Weeks
- Professor Paul Zimmet AO
- Rick Allert AO and Barbara Allert
- Rob and Lisa Chapman
- Robert and Marjory Ahrens
- The late Ron Forster OAM
- Seeley International
- Shaun Rolevink
- Teresa Girke and Professor Steve Wesselingh
- The Burton Family
- The Grosset Gaia Fund
- The Late Robert Kennedy
- Vivien Zimmet

Social Media Highlights



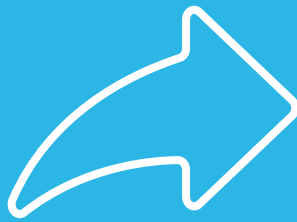
1.4M
IMPRESSIONS

1,140
TOTAL
POSTS

**23,
700**
FOLLOWERS



423K
PEOPLE
REACHED



1,169
POST
SHARES

484
NEW
FOLLOWERS



341
NEW
FOLLOWERS



2,248
NEW
FOLLOWERS









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

Several key project milestones were achieved during 2022 including the establishment of the South Australian Proton Beam Therapy Clinical Governance Committee and Phase 1 work on ASPIRE – The Australian Particle Therapy Clinical Quality Registry.

The Governance Committee is made up of key stakeholders from the ABCPTR and SA Health network and directs and oversees the implementation of systems, policies and procedures that support safe and high-quality care for patients receiving proton therapy at the centre and associated care through the South Australian public health system. A key priority of the committee is overseeing the development of the Australian Proton Therapy Model of Care in conjunction with partner public and private health service providers, including medico-legal governance for paediatric, adolescent and young adult, and adult patients referred to the centre.

The ASPIRE registry describes the patterns of care for patients currently receiving photon radiation treatment, but who are eligible for

proton beam therapy as outlined in the Medical Services Advisory Committee (MSAC) 1638 Public Summary Document. As part of this work there was extensive consultation with the Department of Health, Medicare – Services Australia and data integration services at the Australian Institute of Health and Welfare regarding future anticipated data linkage and national framework design. A study protocol was drafted and a database designed. The protocol was endorsed by the Trans-Tasman Radiation Oncology Group (TROG) Scientific Committee and also registered with the Australian and New Zealand Clinical Trials Registry (ANZCTR). The registry has been formally recognised by the Australian Commission on Safety and Quality Health Care (the Commission) as a Clinical Quality Registry. The registry protocol received ethical approval from the Women's and Children's Health Network, Human Research Ethics Committee under the National Mutual Agreement scheme, followed by a site-specific agreement which was approved for participant recruitment to commence in the Department of Radiation Oncology at the Royal Adelaide Hospital.

Aboriginal Health Equity (Wardliparingga)

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.



Adolescent Health & Wellbeing

Co-Led by Associate Professor Peter Azzopardi, Mr Seth Westhead and Dr Rachel Reilly the Adolescent Health and Wellbeing program works in partnership with Aboriginal and Torres Strait Islander young people and communities to understand their priorities and needs and develop evidence-based actions to address them. This includes informing policy and co-designing accessible and responsive services and supports.

Highlight

During 2022/23 the adolescent health programs flagship 'National Roadmap' project created and published various resources that are now publically available via the Roadmap website and YouTube page.

The National Roadmap Governance Group, consisting of 18 Aboriginal and Torres Strait Islander young people from each state and territory including the Torres Strait, met on Kurna Country (Adelaide) for the first in-person gathering for the project. This four-day event signified a major milestone in the project and (re)connection post-COVID lockdowns. During the gathering the group spent time building relationships with one another, progressing project aims and planning, met with senior leaders in Wardliparingga and sat with Cultural mentors.

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

SAHMRI was awarded \$9m to continue the “Aboriginal and Torres Strait Islander Diabetes-related Foot Complications Program” in five regions across Australia. They include the Kimberley region of northern Western Australia, the Top End region of the NT, Central Australia, South Australia and Far North Queensland. The program objectives are to improve service systems and increase access to multi-disciplinary care as well as strengthen the workforce and empower communities, who are disproportionately affected by diabetes, with the aim to improve health and wellbeing outcomes for Aboriginal and Torres Strait Islander people with or at risk of diabetes-related foot complications, including amputations.

Between 2021 and 2022, the program in SA delivered seven interconnected projects, aligned to the SA Aboriginal Diabetes-related Foot Disease Strategy 2020-2025 and delivered by partner organisations from the SA Aboriginal Chronic Disease Consortium (Consortium), including the

Aboriginal Health Council of SA (AHCSA), Northern Adelaide Local Health Network (NALHN), Southern Adelaide Local Health Network (SALHN), Central Adelaide Local Health Network (CALHN), Eyre Far North Local Health Network (EFNLHN), University of South Australia (UniSA) and University of Adelaide. Health Systems Research established and maintained an Aboriginal-led governance structure, designed to provide strategic and operational oversight, underpinned by Aboriginal cultural principles and perspectives to ensure that services would be culturally safe and acceptable to the community.

Phase 1 delivered some important achievements, including increasing access to culturally-sensitive multidisciplinary telehealth care, formation of a local cross-sector alliance to better integrate services and achieve continuity of care, enhanced knowledge of patients’ amputation journeys and experiences, delivery of Aboriginal focused workforce foot health training, numerous community education events, and yarning circles to inform decolonised foot health service development.





The program underwent a detailed review and planning process, led by Health Systems Research, to design Phase 2, building on the outcomes, insights and collaborative networks established in Phase 1 and pivoting from individual projects to a state-wide approach that will focus on system improvements, and a targeted effort to improve the prevention and management of diabetes-related foot disease and amputation for Aboriginal people in rural and remote South Australia.

Key deliverables of this phase, which commenced in late 2022, is a collaboration between Health Systems Research and CALHN to develop and implement an education package, that will leverage Virtual Reality (VR) technology to train Aboriginal Health Workers and Practitioners (AHW/Ps) in Aboriginal Community Controlled Health Services to deliver better screening, risk assessment and management and foot health care to Aboriginal people affected by diabetes-related foot complications. The Augmented Reality (AR) technology allows clinicians to “see through the eyes”

of the AHW/Ps as they conduct evidence-based foot assessment and treatment in order to remotely assess the AHW/Ps’ acquired competency and build capacity in rural and remote SA to provide local services and enhance accessibility of services for Aboriginal people in and near their community.



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

Taingiwilta Pirku Kawantila (Strong Community in the North) aims to examine whether codesigned strategies to optimise and coordinate the health and social service system will meet the needs of Aboriginal and Torres Strait Islander peoples and strengthen social and emotional wellbeing. In 2022, analysis was undertaken of the co-design phase, which included yarning with 55 local Aboriginal and Torres Strait Islander community members and service providers and 28 non-Indigenous service providers to discuss community needs, service gaps, success stories, and solutions to strengthen the service system within Northern metropolitan Adelaide (Kurna Yerta).

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, the study will provide insights into the burden of disease and service needs into the future. In 2022, in conjunction with continuing five year follow up assessments across South Australia 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

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.



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

2022 provided a handful of notable program highlights, one standout was the program's work on veteran suicide. 19 interviews were conducted with male veterans who have attempted suicide and with bereaved families. The material from these interviews is being used for a report being written for the Royal Commission into Defence and Veteran Suicide.

This project also provided research evidence used for a successful ARC Discovery application on veteran suicide.



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. We also develop genetic technologies to control feral rodents such as mice which spread disease, cause environmental damage and destroy crops. 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

After several years of testing and development, 2022 marked a breakthrough in our feral mouse control research program. We published the first 'gene drive' strategy for mice, which could one day be used to humanely control invasive mouse populations that impact health, the environment and agriculture. This study was published in Proceedings of the National Academy of Sciences USA and was covered by over 25 media outlets. We are now focussed on testing this new genetic biocontrol strategy in field trials and developing versions that target specific populations of feral rodents in Australian off-shore islands.

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 highly 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, Professor Prash Sanders was awarded an NHMRC Investigator Grant, A/Prof Peter Psaltis a Level 3 National Heart Foundation Future Leader Fellowship and A/Prof Christina Bursill, an MRFF Cardiovascular Mission Grant and National Heart Foundation Vanguard Grant. Dr Anna Williamson (Vascular Research Centre) was among several PhD candidates awarded their doctoral degree, also receiving both a Dean's Commendation from the University of Adelaide for her thesis and a Research Excellence Medal.

With support from the National Heart Foundation of Australia, the SAHMRI Heart and Vascular Executive also led the organisation of the South Australian Cardiovascular Showcase. This successful all-day symposium was held in the SAHMRI auditorium in November 2022 and brought together whole-of-pipeline cardiovascular researchers from across the state, as well as key stakeholders from government and the community.





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

Dr Andrew Shoubridge from the Healthy Microbiome and Chronic Disease group earned the inaugural SAHMRI BRIGHT Accelerator Award.

The honour comes with the prize of \$100,000 in project funding, all made possible by the remarkable efforts of the 1300+ walkers and their funders who contributed to the BRIGHT Walk fundraiser.

Dr Shoubridge will direct the funding towards a project that collaborates with the Registry of Senior Australians (ROSA). The project will establish a template for research with the potential to be used globally for the monitoring of dementia and healthy ageing. The team also aims to discover more about the mechanisms that connect the gut microbiome and the brain, which could prove to play a significant role in preventing the onset of dementia.



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

A/Prof 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% of patients.

Corticosteroid-binding globulin (CBG) is a conserved glycoprotein that is highly adapted to deliver glucocorticoid to tissues in an injury-defined manner, however prolonged sepsis depletes CBG,

and we have discovered that blood concentrations of CBG below 200 nmol/L invoke clinical deterioration and triple the risk of death from septic shock, likely due to deterioration in glucocorticoid delivery and loss of its anti-inflammatory actions.

Research will be conducted in our murine model of septic shock to confirm the safety, efficacy, and optimal timing of exogenous 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 -1 clinical trials, and has a high potential to inform other fields of medicine with a high unmet demand to manage inflammation.

Hopwood Centre for Neurobiology

Led by Professor Stuart Brierley, the Hopwood Centre for Neurobiology 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 2022, members of the HCN received \$4,779,137 in competitive research funding, from sources including the NHMRC, ARC, MRFF, National Institutes of Health (USA), BrightFocus Foundation, Michael J Fox Foundation, and the Mark Hughes Foundation. The HCN hosted a fortnightly seminar series showcasing internal research, external researchers, clinicians and students.

Prof Mark Jenkinson, who leads the Neuroimaging Methodology Group in the Centre, was recognised as a 2022 Clarivate Highly Cited Researcher. The list recognises scientists and social scientists who have demonstrated significant and broad influence in their field of research, reflected in the publication of multiple highly cited articles over a span of several years. Of the world's scientists, Highly Cited Researchers genuinely are one in 1,000.





Mental Health & Wellbeing

Led by Joseph Van Agteren, the Mental Health and Wellbeing research program conducts research across the whole mental health spectrum including depression, anxiety, resilience and mental wellbeing. There is a particular focus on the overlap between mental health and mental illness, with research used to develop techniques for measuring and building mental health and wellbeing within individuals and communities.

Highlight

A core aim of the team has been to establish ourselves as national thought leaders on mental wellbeing and mental health promotion. In past years, considerable effort has been put into establishing our scientific credibility, including publishing in leading journals. Off the back of this, 2022 saw a sharp increase in requests for advice and consultation, both by interstate government departments, such as the Victorian Department of Health and Western Australian Mental Health Commission and peak bodies including Beyond Blue and the Mental Health Council of Tasmania. The latter two particularly have resulted in ongoing research and evaluation services that will further increase national brand awareness of SAHMRI and Be Well Co as leaders in mental health promotion.

Precision Cancer Medicine

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.



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

Dr Zeyad Nassar, an early career researcher from the Solid Tumour Program, has been awarded a major international grant in 2022 to investigate how prostate cancer cells survive and reappear after drug treatment, leading to incurable metastatic disease. One in six men will be diagnosed with prostate cancer by the age of 85, and around 20,000 men are diagnosed with prostate cancer in Australia each year. Due to the dependence of prostate cancer cells on androgens for growth and survival, androgen deprivation therapy has remained the frontline strategy for management of advanced prostate cancer since the 1940s. Although androgen deprivation therapy is initially effective in most patients, it fails to achieve an enduring remission, with the disease reoccurring an average of 18 to 20 months after treatment. There is an urgent need to identify and introduce new drugs that are effective in the advanced stages of the disease.

Dr Nassar, from the Prostate Cancer Research Group, is the principal investigator on a new three-year project, which received USD\$1,005,845 (AUD\$1,594,491) in funding from the US Department of Defence. Drug treatment of cancer cells usually kills most cells, but the remaining cells activate survival pathways to resist therapy. Discovering and understanding the biology of these activated pathways, and then trying to design new ways to target them, will lead to the eradication of more cancer cells and avoid disease relapse. Dr Nassar's work has shown that prostate cancer cells resist therapy by activating fat metabolism. In this project, he will study why the cells activate this process and how this allows the disease to progress. He will also study the effect of blocking this process on cancer growth and progression. While it can take up to 15 years for a new drug to be approved for use, two aspects of Dr Nassar's team's research could be applied quicker. Fatty acid oxidation inhibitors already developed for diabetes or other conditions of the heart and the liver could be readily tested clinically for prostate cancer. At the same time, he will develop predictive tools to determine which patients may respond optimally to these agents. This prestigious grant funding will not only accelerate the progress of this work, but together with an academic promotion also provides the opportunity for Dr Nassar to develop his own independent team within the Prostate Cancer Research Group.

Paediatric Neuro-Oncology

The Paediatric Neuro-Oncology Program is a relatively recent entity within SAHMRI's Precision Cancer Medicine theme. Established one year ago at SAHMRI and headed by Professor Jordan Hansford, program lead at SAHMRI and clinical lead in Neuro-Oncology at the Women's and Children's Hospital. This program explores the integration of proton radiotherapy into Australian paediatric neuro-oncology practice. It also investigates ways to improve the quality of life of patients with childhood 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.

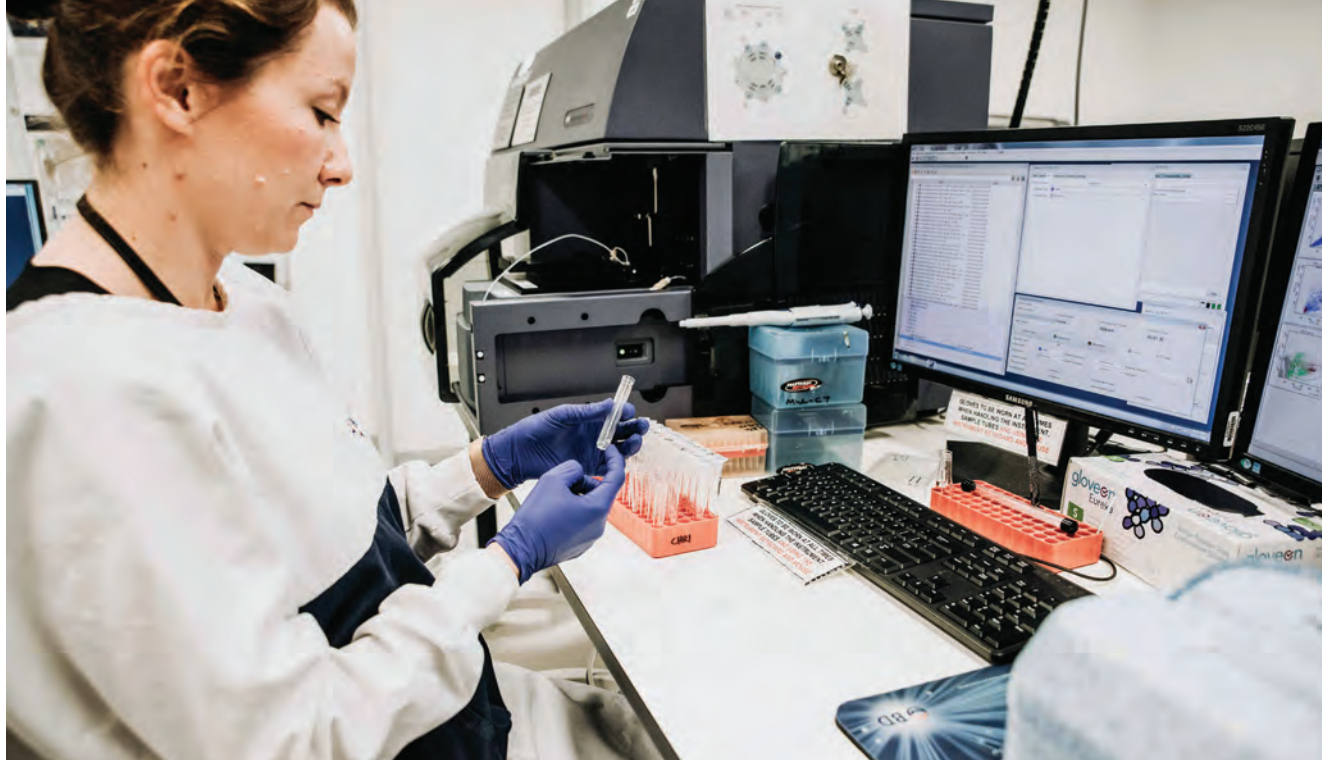
Highlight

Paediatric biobanking is well underway in South Australia with the establishment of the state's first paediatric brain tumour biobank, 'Brain Turbo SA'. In 2022, Brain Turbo SA has started to bring paediatric brain tumour research in line with our national and international collaborator standards, allowing us to establish research into better outcomes for our paediatric patients here in South Australia. Over 1000 samples have been entered into the biobank, including fresh solid tumour, formalin-fixed paraffin embedded tumour, cerebral spinal fluid, blood and clinical data. Processing and molecular analysis has begun on the samples along with analysis of matched clinical data.

The program was extremely grateful to be awarded three grants in 2022 from My Room Children's Cancer Charity, Robert Connor Dawes Foundation and the Neurosurgical Research Foundation, to support the program.

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 (including germ-free mice). Discovery research conducted in the program has been quickly translated into several major clinical studies led by Prof Lynn and his clinical collaborators. COVID-19 has been a particular focus in recent years and the program has made a significant contribution to long COVID research, as well as the effects of different COVID-19 vaccines on the immune system. The program also investigated whether the BCG vaccine can provide non-specific protection against COVID-19. Prof Lynn is also the Scientific Director of the SA Genomics Centre, which provides access to a range of cutting-edge genomics and single-cell technology facilitating this research.

Highlight

A highlight in 2022 was the award of a \$1.58 million Ideas Grant from the NHMRC to undertake a highly innovative clinical study to investigate whether depletion of the gut microbiota alters antigen-specific or non-specific immune responses to the BCG vaccine, the world's only licenced vaccine against tuberculosis (TB) and a vaccine which also appears to have off-target effects against a range of other infections. Previous work from the CSB program has shown that administering antibiotics to mice leads to significantly dysregulated B and T cell responses to a range of vaccines including BCG. A subsequent clinical study in infants suggests that antibiotic exposure is also linked to impaired responses to vaccination. The new study will assess the impact of depleting the microbiota before vaccination in a highly controlled study called a randomised controlled trial. Recruitment for the new study, which is called the Antibiotics and Vaccine Immune Responses Study (AVIRS) is expected to begin later in 2023.

Blood Cancer Program

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, multiple myeloma, chronic lymphocytic leukaemia, myelodysplastic syndrome and therapy-related myeloid neoplasm. While their research is largely driven by clinical gaps and valued patient advocacy groups, their focus is fundamental scientific discovery using sophisticated experimental approaches to enable a greater understanding of disease and designing of new therapies. This underpins their commitment to clinical translation and the delivery of personalised medicine approaches.

Highlight

One of the most exciting breakthroughs for the Blood Cancer Program in 2022 was the development of a mutation-specific antibody for myelofibrosis. Published in the European Molecular Biology Organisation's online journal EMBO Reports in March, the discovery was featured on ABC News and attracted attention from many patients and families worldwide.

Myelofibrosis, a type of bone marrow cancer, affects about one in 100,000 people in Australia and can often lead to complete marrow failure or even acute leukaemia. A/Prof. Dan Thomas, leader of the Myeloid Metabolism Lab, has been searching for better therapies for primary myelofibrosis for three years. Myelofibrosis can progress over a period of three to five years, resulting in severe fibrosis of the marrow and it can sometimes change into acute leukaemia where patients get sick extremely quickly. Our team, working closely with collaborators across the Adelaide Biomedical precinct, developed a specific monoclonal antibody that blocked the proliferation of CALR mutant myelofibrosis stem cells but not normal healthy bone marrow cells. The team has successfully humanised the antibody for Phase I clinical trials and is currently developing a CAR T cell therapy, resulting in a successful Leukemia & Lymphoma Society Translational Research Program grant valued at \$1 million. The results are exciting and show new ways that cancer can be targeted specifically using recurrent neopeptides without causing damage to normal tissues.



Women & Kids

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.



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 10 children. This is helping enable earlier diagnosis, better management, treatment and prevention of these disabilities.

Highlight

The Childhood Disability Prevention research program's major achievement in 2022 was a proof of principle on a dish treatment of a childhood onset, progressive and inevitably fatal neurodegenerative disorder, due to mutation in the TIMMDC1 gene.

These children present with failure to thrive in the early postnatal period, poor feeding, hypotonia, peripheral neuropathy and drug-resistant epilepsy. The causative mutation is deep intronic and present in diverse world populations, affecting one in five thousand. We have designed and applied two different splice-switching antisense oligonucleotides (SSO) to restore normal TIMMDC1 mRNA processing and protein levels in patients' cells. Quantitative proteomics and real-time metabolic analysis of mitochondrial function on patient fibroblasts treated with SSOs showed full restoration of complex I subunit abundance and function. Currently we are working with our national and international collaborators to bring the treatment to patients diagnosed with this devastating disorder.



Pregnancy & Perinatal Care

Led by Associate Professor Philippa Middleton and Associate Professor Alice Rumbold, the Pregnancy and Perinatal Care Team is developing and implementing strategies to improve outcomes for pregnant women and young families with babies, focusing on 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.

Aboriginal Communities & Families Health Research Alliance



Aboriginal Communities
and Families Health
Research Alliance (ACRA)

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 improving the health and wellbeing of women, children and families, particularly those most at risk of poor health outcomes. The Alliance also prioritises knowledge exchange and translation to contribute Aboriginal excellence to research focused on health, wellbeing and service improvement, relating to mothers, children and families.

Highlight

Our 2022 highlight is collaborative implementation of an innovative feasibility and acceptability research grant called 'Corka bubs, Deadly mums and Strong families: connecting pregnant women with support for stress, yarndi and alcohol' (Corka bubs) in two metropolitan Adelaide-based Aboriginal birthing programs. The study works with Aboriginal families during pregnancy to provide a support package to improve health outcomes for mothers and babies and their partner/key support person. Our collaborators include researchers from University of South Australia, University of Adelaide, University of Sydney, Murdoch Children's Research Institute, Service providers from Women's and Children's Health Network and Northern Adelaide Local Health Network, Aboriginal Drug and Alcohol Council, Drug and Alcohol Services of SA, Aboriginal counsellors and Aboriginal Legal Rights Movement. This project was funded through a two-year MRFF grant and learnings supported the successful application of a five year NHMRC targeted call grant.



Child Nutrition 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 2022, the Child Nutrition Research Centre enrolled 342 women in the PoppiE Study, a national, decentralised clinical trial investigating the ideal amount of iodine needed in pregnancy for optimal baby development. This was spearheaded by transitioning to in-house, online recruitment across social media. It doubled the 173 women recruited in 2021.

The study also expanded to Tasmania, enrolling its first Tasmanian participant in October 2022. The PoppiE Study needs to recruit 754 women in total and is on track to complete this by September 2023.



Impact

Health Policy Centre

SAHMRI's Health Policy Centre conducts behavioural research, policy research, population monitoring and evaluation to inform public policy and population health interventions. The Centre undertakes independent, as well as commissioned research and provides expert consultancies. It actively engages with policy makers in government and non-government organisations, for improved public health outcomes. The Centre applies a public health approach with an aim to prevent chronic diseases including cancer, heart disease and diabetes. Major ongoing research programs relate to tobacco control, sugary drinks, food policy and COVID-19.

Highlight

Australia is a world leader in tobacco control. Smoking rates in adults and children have reduced enormously, through a series of evidence-driven policy measures such as taxation, plain packaging of cigarettes, large graphic health warnings and smoke-free public places. Health policy has been complemented by campaigns to encourage smokers to quit and supports such as Quitline and advice from health professionals.

A consequence of the success of tobacco control and declining smoking rates is product innovation. In recent years, vaping or e-cigarettes have been introduced to the market. Australia has taken a pre-cautionary policy approach to these novel products. However, the online marketing of these products and ready availability has seen an expansion in use, most concerningly among young people. There is a threat of a new generation of young people becoming addicted to nicotine.

The Health Policy Centre monitors vaping in adults and adolescents and reports on important changes in trends. In 2022, and in response to a sharp increasing vaping, the Centre also initiated a new program of research about sources of supply of vapes for young people, and promotion of vaping and vape products, to assist government policy makers in targeting their efforts effectively. Professor Miller provides health policy advice to state and national governments on vaping and tobacco control, with specialist expertise on the highly effective graphic health warnings intervention.





Registry Centre

The SAHMRI Registry Centre was established in 2018 to bring together the registry science and operational expertise available among our research community, to ultimately strengthen the Institute's existing role in the registry space and expand our research capacity and training in this area.

The Centre brings together a collaboration of registries, including those based within SAHMRI and member registries based externally. The collaboration includes some of Australia's most significant national registries, bringing together a wealth of experience and knowledge. In doing so the Centre provides for increased quality, efficiency, and cost effectiveness, maximising the value of the contributions and advancements made by the 20 member Registries.

SAHMRI's Registry Centre provides an important and rich source of translational and observational research data. Well-designed registries, particularly at the population level, form the 'third pillar' of scientific research in conjunction with clinical trials and laboratory work. The SAHMRI research community believes population-based studies founded by leveraging the information available in registries can represent the most reliable option for identifying the actual 'real-world' effects of interventions, treatments and outcomes in the general population.

The SAHMRI Registry Centre will provide a platform to enhance the enormous value of registry data, supporting the utilisation of other important data sources such as trials, surveys, biobank data, administrative data sets, and information systems, through data linkage and research collaborations.



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, mortality, and other important outcomes of people receiving aged care services in Australia.

The ROSA team's most significant achievements in 2022 included securing two new MRFF-funded projects: the Australian Consortium for Aged Care - Quality Measurement Toolbox (ACAC-QMET), led by Professor Maria Inacio, which will improve the quality of care provided to older Australians by defining what constitutes high quality care and the tools needed to monitor this across care settings and the PHARMA-Care quality monitoring program, led by Dr Janet Sluggett, which will implement a national framework to support pharmacists to improve medicines use in residential aged care.

The team also released the inaugural ROSA Outcome Monitoring System (OMS) reports to residential aged care providers operating in South Australia. These individualised reports summarise aged care provider and individual facility-level performance based on twelve risk-adjusted indicators of care, to support providers to measure their performance and facilitate state and national benchmarking.

Highlight

The ROSA OMS reports are the first of their kind within Australia and represent a significant reporting advancement for the aged care sector. The first release of these reports describes the prevalence and variation in quality and safety of care received by 4,127 residents of 243 facilities who were enrolled in ROSA in 2019. Of the indicators examined, antibiotic use (51%) had the highest prevalence, followed by exposure to a high sedative load (38%), incidence of emergency department presentations (23%), exposure to chronic opioid use (17%) and antipsychotic use (16%). The ROSA OMS Reports for South Australian home care package service providers, which report on fifteen risk-adjusted indicators, are planned to be released in mid-2023. The residential and home care reports will be made available every 12-18 months.



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 a commercial operation and is home to South Australia's only cyclotron used to produce several isotopes (radioactive starting materials) used to manufacture radiopharmaceuticals. MITRU also developed and optimised procedures to manufacturing therapeutic radiopharmaceuticals with isotopes sourced from external suppliers.

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

Highlight

As an Accredited Training Facility under the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM), MITRU secured a grant for the second year in a row, to fund a Radiopharmaceutical Science registrar for a three-year period starting 2022.

The research and development team at MITRU received new leadership with the hiring of a new Head of Research and Development, senior research NIF fellow and research radiochemist, Dr Ed Robins. This expansion was necessary to keep up with the strong demand for products already in clinical trials and for new collaboration projects.

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, (Preclinical, Imaging and Research Laboratories) located at Gilles Plains, existed to support animal research since 1971. PIRL became part of SAHMRI in September 2012. PIRL has an excellent track record for facilitating the translation of preclinical research into clinically applicable outcomes. PIRL 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 and biotechnology and pharmaceutical companies. Located within PIRL is SAHMRI's Germ-free research facility and the health monitoring and disease surveillance laboratory, ComPath.

Highlight

In 2022, PIRL managed to complete two GLP studies and currently has two others in progress. The most exciting of these is a novel synthetic BMP-2 of which the in-life phase of the project has just been concluded. The aim of this safety study is for the US based company to take their product to the FDA for registration which will allow its use in human clinical trials (which are expected to be conducted in Adelaide). The early results look promising and will have far reaching implications in relation to how spinal fusions for disc disease and trauma are treated.

Clinical & Research Imaging Centre

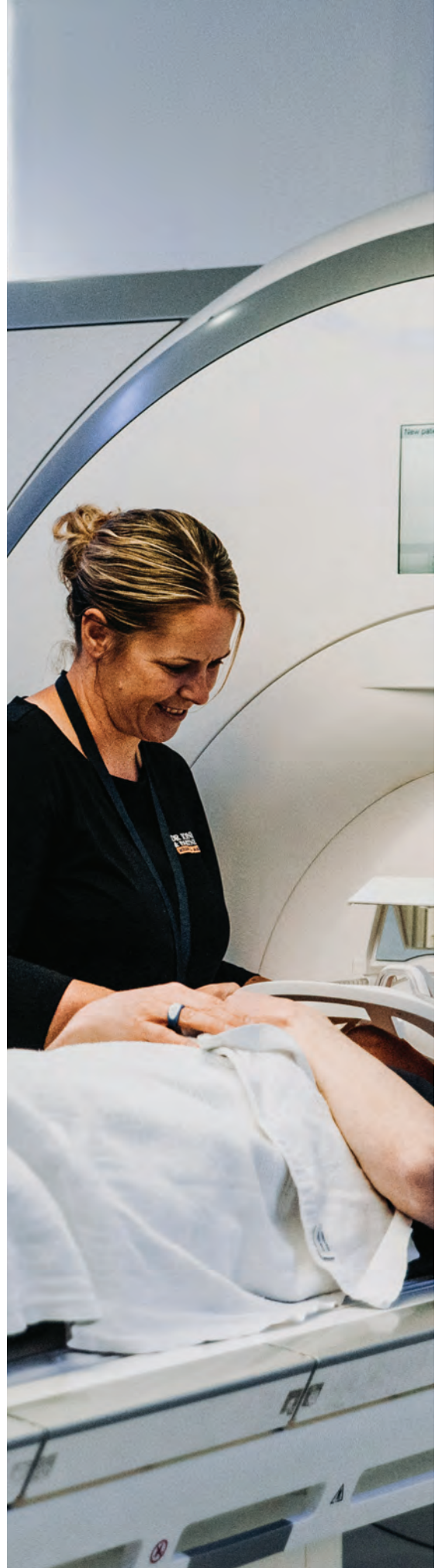


The Clinical and Research Imaging Centre (CRIC) at SAHMRI is South Australia's leading centre for advanced clinical and translational research imaging. With state-of-the-art facilities and expertise in delivering innovative research solutions, our staff collaborate with researchers through all stages 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

2022 saw the installation of Australia's first NAEOTOM Alpha PCCT scanner at the CRIC. This exciting development consolidated the centre's standing as the most advanced of its kind in the nation. The PCCT's unmatched high definition resolution promises to help diagnose and guide treatment for leading causes of disease burden like never before.

The collective \$9.8m investment partnership between Dr Jones & Partners, SAHMRI and Siemens Healthineers has been supported by \$1 million in funding from the South Australian Department for Industry, Innovation and Science. The development enjoyed strong local publicity across TV, digital and radio when it was unveiled.





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

After being successfully reaccredited as an NHMRC RTC early in 2022, HTSA has continued to advance the implementation of its 2021-2024 Strategic Plan. This year its activities have generated more than \$4.15million, which has been used to advance research translation projects across the state.

Financial Summary

	31 DEC 2022 \$'000	31 DEC 2021 \$'000
Operating revenue and other income		
Category one research grants	14,450	10,290
Other research grants	17,454	11,552
Sale of products	5,347	4,652
Contract research & clinical trial income	12,101	17,061
Income for indirect costs of research	3,317	4,865
Rent and outgoings	4,144	4,132
Other income	5,114	5,268
Total operating income	61,927	57,820
State Government operating grant	5,506	5,769
Total operating contributions	5,506	5,769
State Government capital grant	216	537
Commonwealth Government PTU grant	8,876	6,474
Total non-operating grants	9,092	7,011
TOTAL REVENUE	76,524	70,600

	31 DEC 2022 \$'000	31 DEC 2021 \$'000
Operating expenses		
Employee expenses	(43,884)	(39,988)
Research support	(11,719)	(8,610)
Building management costs	(6,225)	(5,634)
Consumables	(6,436)	(6,993)
Project development costs	(165)	(295)
IT services & maintenance	(2,790)	(2,269)
Share of loss of joint ventures	(33)	-
Other expenses	(6,734)	(4,049)
Total operating expenses	(77,985)	(67,838)
Finance income	1,006	1,585
Finance cost	(1,319)	(238)
Net finance income/(costs)	(313)	1,347
Results from operating activities before depreciation and amortisation expense	(1,775)	4,108
Depreciation and amortisation expense	(9,486)	(9,477)
Total depreciation and amortisation expense	(9,486)	(9,477)
(Deficit) for the year	(11,261)	(5,368)
Other comprehensive income/(loss) for the year	-	-
TOTAL COMPREHENSIVE INCOME/(LOSS) FOR THE YEAR	(11,261)	(5,368)



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