



ANNUAL REPORT 2016



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EVERYTHING WE DO IS GEARED
TOWARDS ONE VISION:
TO TRANSFORM
RESEARCH INTO HEALTH

Our Story

South Australia has a long history of excellence in health and medical research. The South Australian Health and Medical Research Institute (SAHMRI) was incorporated in December 2009 as the state's first flagship health and medical research institute after a review was conducted by Professor John Shine and Mr Alan Young AM, which recommended the establishment of a flagship research institute to increase South Australia's (SA) health and medical research capacity.

Following support of this recommendation from the State Government, the Federal Government's Health and Hospital Fund provided a \$200 million grant to build our research facility.

SAHMRI's purpose is to translate research into health outcomes. Our research focuses on improving the prevention, treatment and diagnosis of some of the worst health issues that face our community.

We currently have over 400 researchers in the building who are committed to transforming innovative health and medical research into practical benefits for patients and the community. We have recruited some of the most talented researchers from across Australia and overseas who are collaborating across our seven research themes:

- Aboriginal Health
- Cancer
- Heart Health
- Healthy Mothers, Babies and Children
- Infection and Immunity
- Mind and Brain
- Nutrition and Metabolism

SAHMRI is a significant investment in the health and quality of life of all South Australians. Through collaboration and innovation, SAHMRI will lead the way in new discoveries, treatments and better health for the entire community. In response to the growing need for improved, affordable and more accessible health care, SAHMRI will focus on delivering real health reform back to the community.

Who We Are

1. Our Vision

Everything we do is geared towards one vision:
to transform research into health.

2. Our Values

- Excellence
- Imagination
- Courage
- Integrity
- Teamwork
- Equity and diversity

3. Our Mission

- Be a vibrant, globally-recognised institute that fosters discovery and harnesses dynamic collaborations to deliver health outcomes and community impact
- Fundamentally improve the quality of life for all people, through innovative, world-class and ground-breaking health and medical research
- Provide a clear focal point for health and medical research in South Australia

4. Our Culture

- Bold and driven
- Persistent and focused
- Collaborative and enabling
- Respectful, inclusive and compassionate
- Friendly, fast, flexible and fun





5. Our Brand

Our identity is inspired by a microscope image of a stylised cell. A cell is an appropriate symbol because of our links to biology and as cells require linkages to other cells to provide structural support and carry nutrients and communications to neighbouring cells. While our research themes operate independently, they have important links to each other. They share common objectives, facilities and knowledge. They are also linked to other health and medical research institutes in South Australia, interstate and overseas; sharing findings and working collaboratively.



A Letter From the Executive Director

When reflecting on the year 2016 at SAHMRI, I can't help but feel incredibly proud. So much has been achieved, but there is still so much work to be done – it's a very exciting time to be involved with SAHMRI. We have now been in our magnificent building for three years, which at the end of 2016 reached capacity. Work is still underway in planning a second SAHMRI facility, which will have a focus on Proton Therapy.

I'd like to congratulate our researchers on their incredible research success stories. 2016 marked many research achievements, and the publication of more than 800 papers, which is a terrific outcome.

During 2016, we furthered our emphasis on gender equity. We continue to work on our Athena SWAN Charter Bronze application, and are implementing many initiatives to assist with this application. Our Gender Equity Committee was established and is functioning very well.

We launched our 'Public Lecture Series – presented by Health Partners' – all three lectures booked out, with members of the community eager to learn more about nutrition, children's food allergies and heart health. We look forward to recommencing these lectures next year,

a very important part of our commitment to community engagement.

In October, we launched a brand new website, as well as our community awareness campaign, 'Fighting For Our Lives'. I'm sure many of you saw the advertisements, either on social media, in the Advertiser or on television. This was the first above the line campaign that SAHMRI has run and early feedback we received was that it was impactful. It's very important to us that the community understands what we do, and that we have their support.

In an important partnership, we joined forces with Dr Jones & Partners to provide exciting opportunities in research and diagnostics for South Australians. The "pod" space on the ground level of the SAHMRI building will

become a Dr Jones & Partners clinic, offering the highest level of medical imaging currently available in South Australia, and work is well underway in the construction of this centre. Through this \$13 million dollar total investment, we are establishing a state of the art clinical and research imaging centre collaborating on advanced cardiovascular CT, MRI and PET/CT platforms, as well as providing a full range of clinical imaging services for the community.

We continue to work together with South Australia's three universities and the local health system, in a successful, collaborative model. As the focal point for the State's health and medical research, we can, and have begun to translate groundbreaking discoveries into real world outcomes.

SAHMRI has already, and continues to attract some of the world's brightest and best researchers to answer the biggest questions in health. It's all about improving peoples' quality of life, not only here in South Australia, but around the country and the whole world.

Our organisation exists to achieve our vision of transforming research into better health outcomes for our community, and I believe we have only scratched the surface in 2016. I am looking forward to seeing what 2017 holds for SAHMRI.



Professor Steve Wesselingh



A Letter From the Chair of the Board

It is my pleasure to introduce to you the 2016 South Australian Health and Medical Research Institute (SAHMRI) annual report. Under the leadership of our Executive Director, Professor Steve Wesselingh, SAHMRI is thriving. It is hard to believe we have already outgrown our state of the art building, which continues to gain attention from all over the world, and are planning a second facility so that we can continue to recruit and house leading researchers.

As our researchers are working tirelessly to find cures and treatments for the biggest health problems of our time, the buildings within the South Australian Health and Biomedical Precinct are coming up rapidly around us, and there is a real buzz in the air. It won't be long until the new Royal Adelaide Hospital is finished and ready to open, which is very important to SAHMRI in terms of collaboration.

We continue to attract support from many philanthropists who are true believers in SAHMRI and have a common vision for the future health and wellbeing of our state. During 2016, we

received over \$2 million in donations from South Australia's leading philanthropists, which has been used to purchase state of the art equipment, recruit and train research stars and fund research projects, which have the potential to save lives. In addition to this, we now have six Leaders in Philanthropy and 26 Founding Ambassadors – a true success story! More than 700 people have now purchased virtual windows in our Vision 5000 campaign and are sharing their vision with the world.

2016 also marked a very successful year of National Health and Medical Research Council



(NHMRC) grants awarded to SAHMRI staff and our partner organisations, the University of Adelaide, Flinders University and the University of South Australia. This result further proves the success of the SAHMRI model. By working together with our partners, we are able to strengthen our capacity for health and medical research in South Australia and support research collaborations to deliver improved health outcomes and community impact to benefit our state.

SAHMRI's collaborations extend beyond South Australia and Australia. In 2016, we signed an agreement with the Affiliated Hospital of Qingdao University (AHQU) to promote cooperation in scientific research, academic exchange and skills development.

The agreement focuses on building a working relationship with AHQU across a wide range of areas, such as endocrinology; appetite and metabolism, oncology; gastric cancer

and neuroblastoma and atherosclerosis and ischaemic stroke. This partnership marks another step in SAHMRI's mission to build strong collaborative networks across Australia and around the world, to achieve better health outcomes for patients everywhere. We're excited to be establishing new partnerships and fostering collaboration in health and medical research around the world.

I am incredibly proud of what SAHMRI has achieved so far, and it's very exciting knowing this is still the beginning – we are a very young organisation that has such a bright future ahead. My involvement with SAHMRI has been a highlight in my career, and I can't wait to see what lies ahead.



Raymond Spencer

Board of Directors



**Mr Raymond
Spencer**

Chairman

Mr Spencer is also Chairman of South Australia's Economic Development Board. He is Chairman or a board member of a number of private and public companies in Australia and the USA. Mr Spencer was appointed to the Board as Chairman on 21 December 2009.



Mr Alan Young AM

Deputy Chairman

Mr Young was co-author of the Shine Young Report, a review of health and medical research in South Australia commissioned by the South Australian Government. Mr Young is Co-Founder and Joint Managing Director of Baker Young Stockbrokers Limited. He is also the current Founder/Chair of Belvidere Winery, Chair of the Australian Central School of Art, Vice Chair of Solstice Media Ltd, Co-Founder/Chair of Flinders Medical Centre Foundation and Founder/Chair of Flinders Bio Medical Enterprises Pty Ltd. Mr Young was appointed to the Board on 21 December 2009.



**Professor Steve
Wesselingh**

Professor Wesselingh is the Executive Director of SAHMRI and Leader of SAHMRI's Infection and Immunity Theme. 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.



**Professor Michael
Brooks**

Professor Brooks is the Deputy Vice-Chancellor (Research) and Vice-President (Research) at The University of Adelaide. He is a member of the NHMRC National Review Committee for the Australian Code for the Responsible Conduct of Research, and the Women's and Children's Health Research Institute Council. Professor Brooks was appointed to the Board on 4 August 2015.



**Emeritus Professor
John Hopwood**

John Hopwood is an Emeritus Professor in 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.



Ms Loretta Reynolds

Ms Reynolds is a corporate partner and Chairman of national law firm, Thomson Geer, Chairman of the Royal Flying Doctor Service, Central Operations and a non-executive director of ASC. She has completed the FINSIA Graduate Diploma in Applied Finance and Investment. She has a Bachelor of Laws and a Bachelor of Economics from The University of Adelaide and is a Fellow of the Australian Institute of Company Directors and a Senior Fellow of FINSIA. Ms Reynolds was appointed to the Board on 6 May 2014.



Ms June Roache

Ms Roache has extensive business experience having held several senior executive roles including Chief Executive of SA Lotteries, and a number of governance roles including Vice President of the World Lottery Association and Chair of the Asia Pacific Lottery Association. She currently also holds non-executive positions with ForestrySA, the Essential Services Commission of SA, the SA Football Commission and the History Trust of SA. Ms Roache was appointed to the Board on 6 May 2014.



Professor Colin Stirling

Professor Stirling is the Vice-Chancellor of Flinders University. He is a Member of Universities Australia as well as a Chairman or a board member of a number of companies and associations in Australia. Prior to taking up his role at Flinders University he was the Provost and Senior Deputy Vice-Chancellor at Curtin University, Western Australia Professor Stirling was appointed to the Board on 4 March 2015.



Professor Marie Wilson

Professor Wilson is Pro Vice Chancellor (Business and Law) of the University of South Australia Business School. Her specialities include the management of performance (with a focus on professionals and knowledge work), decision-making and the human side of entrepreneurship and economic development Professor Wilson was appointed to the Board on 29 June 2016.



Aboriginal Health

Overview of Theme

The Wardliparingga Aboriginal Research Unit within SAHMRI conducts research that is of direct relevance to the health and wellbeing of Aboriginal people in South Australia with a primary focus on reducing the significant contribution of chronic disease and social inequalities to life expectancy differentials.

The team has established wide ranging partnerships with key Aboriginal stakeholders, community groups and health services; leading national and international researchers; has built

a network of people interested and involved in Aboriginal health research in South Australia; and has invested in the development of existing and new Aboriginal and Torres Strait Islander and non-Aboriginal researchers to develop capacity in working within Aboriginal health.

The theme's structure remains based on four key research domains, under-pinned by three key pillars of capacity building, research translation and community engagement.

PSYCHOSOCIAL
DETERMINANTS
OF HEALTH &
ILLNESS

IMPROVING
HEALTH CARE
SYSTEM

OVERCOMING
THE BURDEN OF
CHRONIC DISEASE

REDUCING
INEQUALITIES
IN HEALTH
OUTCOMES

CAPACITY BUILDING IN
ABORIGINAL RESEARCH

INTEGRATE KNOWLEDGE
TRANSLATION & EXCHANGE

COMMUNITY ENGAGEMENT

KEY PILLARS



What the Theme Does

As a public health research group, Wardliparingga's work spans clinical research, health services research and population health monitoring.

Clinical Research

Targets understanding and overcoming cardiometabolic risk in disadvantaged populations. Current projects include randomised trials, population cohort studies and community based cross-sectional screening programs.

- *Aboriginal Cardiovascular Omega 3 Randomised Controlled Trial* – seeks to examine the pleiotropic effects of high-dose omega 3 supplementation on cardiovascular risk markers and atherogenic pathways in Aboriginal people with established cardiovascular disease.
- *Aboriginal Diabetes Study* – commencing in 2015, this landmark study seeks to identify the social, psychological, clinical and genomic

predictors of diabetes and diabetes related complications in 4,000 community dwelling Aboriginal South Australians. Extensive community engagement has established wide ranging support for the study, and the team will be travelling the state working with community and health service partners in metropolitan, regional and remote locations. Participants undergo comprehensive assessments of diabetes, renal, cardiovascular, retinal and psychological health. Results of each site visit are fed back to participating services and community groups, and educational, health system and clinical support provided.

- *SA Childhood RHD Screening Project* – 1,800 children were screened for signs of rheumatic and congenital heart disease using portable echocardiography. Real-time reading of scans is done via cloud technology by an off-site paediatric cardiologist, and care provided as needed. Information will be used to determine the utility and value of widespread or targeted screening and evidence to guide population health and health policy.



Health Services Research

Focuses on the development, deployment and evaluation of novel models and systems of care alongside translational research and policy development to aid Aboriginal health development.

- *CanDAD* – the Cancer Data and Aboriginal Disparities Project is undertaking both qualitative and quantitative research - via the collection of narratives of the experience of cancer services by Aboriginal people and by strengthening the quality of data in the SA Cancer Registry for Aboriginal people. Analysis of that data, is aiding the identification of priority targets for service improvements across prevention, treatment and survivorship.
- *SA Aboriginal Heart and Stroke Plan* – this plan was developed after interrogation of hospitalisation and other data sources to understand disparities and develop strategies to improve outcomes for Aboriginal people experiencing heart events or stroke. Significant engagement with hospital and health services staff has occurred to understand systems and practices that require change.
- *SA Aboriginal Diabetes Strategy* – this strategy was developed through engagement with Aboriginal Community Controlled Health Services and government Aboriginal Health Services, and health care providers across the spectrum of care. In addition, audits of current practice and service accessibility have identified policy targets for the immediate future.
- *Centre for Research Excellence in Aboriginal Chronic Disease Knowledge Translation and Exchange (CREATE)* – this national projects works with many Aboriginal Community Controlled Health Services across Australia, with the view to identify, collate and translate evidence to guide better management and prevention of chronic disease and support the sustainability of Aboriginal primary care.

- *Communicate* – this project funded by the Heart Foundation studied in-hospital communication with for Aboriginal people experiencing heart events.
- *SA NT Stroke Study (SAiNTSS)* – This study includes a retrospective and prospective audit of stroke care and outcomes among Indigenous patients and a qualitative examination of the experience of stroke care from the perspective of patients and their carers. Funded by the Heart Foundation, Monash University and the University of Adelaide, the project seeks for the first time to comprehensively assess the quality and outcomes of stroke care, and guide the development of better systems of care to reduce inequalities in stroke outcomes in SA and the NT.

Population Health

Wardliparingga's major population health program revolves around the *Landscape Project*, which seeks to collate, analyse and disseminate all relevant health, demographic and social data related to 19 locations (or 'landscapes') across the State with a specific focus on inequalities experienced by Aboriginal people. This will be the first time that a 'local' community population health data profile is created for communities where greater than 1,000 Aboriginal people live. The goal is to provide policy makers and local communities with reliable information about specific local needs and issues for planning and advocacy and further, to provide a longitudinal data system that can provide analyses of health and social trends over time.

Research Highlights

CREATE – Ongoing partnership with 19 Aboriginal Community Controlled Health Services across the country with a focus on collating and developing evidence to support the identification, management and prevention of chronic disease in Aboriginal communities.

SACRHD – 1,800 Aboriginal children have been screened for Rheumatic Heart Disease and congenital heart conditions through Department of Education and Child Development Schools and Centres. Forty children referred to specialist paediatric cardiologists for follow-up who would not otherwise have had their condition detected.

The SA Aboriginal Research Network – The second Aboriginal Research Showcase was conducted in December 2016, attracting over 150 participants. The Showcase enabled Aboriginal early career researchers to gain important practice in presenting their work before a critical audience, but in a safer space than a mainstream conference. The Showcase demonstrates the strength of Aboriginal health research being conducted in South Australia.

Aboriginal Families and Child Health Partnership – Established a research partnership between MCRI, Wardliparingga and the Healthy Mothers Babies and Children Theme at SAHMRI to progress projects and capacity development specifically designed to meet the needs of Aboriginal mothers, their children and families.

2016 MARKED THE COMPLETED THE FIRST RCT OF HOME-BASED, FAMILY CENTRED CARDIAC REHABILITATION FOR PATIENTS EXPERIENCING ACUTE CARDIAC EVENTS IN ALICE SPRINGS. IN TOTAL, 200 PARTICIPANTS FROM COMMUNITIES SCATTERED RIGHT ACROSS CENTRAL AUSTRALIA (1,000,000 SQ KMS) WERE RECRUITED, AND FOLLOWED FOR A MINIMUM OF TWO YEARS. RESULTS WILL BE ANALYSED AND DISSEMINATED IN 2017.



Cancer

Overview of Theme

The overarching goal of the Cancer Theme is to foster excellence to the full spectrum of cancer-related research, from fundamental genomic discovery, developmental biology, translational research and the development of innovative clinical trials. SAHMRI's Cancer theme performs translational research with a clear focus on applying research findings to the development of better cancer diagnostics and therapeutics. SAHMRI's Cancer theme researchers are highly dedicated and motivated to improve cancer related morbidity and mortality in a wide variety of socially significant cancers. SAHMRI's cancer research focuses on:

- acute lymphoblastic leukaemia (ALL)
- chronic myeloid leukaemia (CML)
- myeloma (blood cancer)
- prostate cancer
- colorectal cancer (gastrointestinal cancers, including bowel cancer)

With a strong focus on translating scientific discoveries into better outcomes for patients, a number of SAHMRI's cancer researchers are also clinicians. Lead by Professor Timothy Hughes, SAHMRI's cancer team works across the entire research spectrum, from fundamental genomic discovery, to developmental biology, translational research and the development of innovative clinical trials.

What the Theme Does

Leukaemia Research Group

The Leukaemia Research Group is a translational and basic research group primarily involved in research into haematological malignancy: CML and acute ALL.

Prostate Research Group

The prostate cancer team is lead by Associate Professor Lisa Butler. The research is focused on improving the clinical management of prostate cancer, through development of new treatment strategies and more accurate and non-invasive markers of disease.

Mesenchymal Stem Cell Research Group

The focus of the Mesenchymal Stem Cell Laboratory is to investigate the origin and biological properties of different post-natal mesenchymal stem cell (MSC) populations, that give rise to supportive connective tissue such as myelosupportive stroma, adipose tissue, smooth muscle, bone, cartilage, ligament, cementum and dentin.

Myeloma Research Group

This group studies the molecular and cellular basis for the development of the bone marrow cancer, multiple myeloma.

Gastrointestinal (GI) Cancer Biology Group

The GI cancer biology group aims to apply basic biological principles to clinically relevant problems in gastrointestinal and colorectal cancer.

Leukaemia Immunotherapy and Graft-versus-Leukaemia Group

The Leukaemia Immunotherapy and Graft-versus-Leukaemia (GVL) Research Group is lead by Dr Agnes Yong. The group investigates the mechanisms of inherent immunogenicity of haematological malignancies, and immune responses against leukaemia.

Research Highlights

The Australian Genomics Health Alliance (AGHA) brings together more than 50 partner organisations committed to the integration of genomic medicine into Australian healthcare. In 2015 the AGHA was awarded a \$25 million grant from the NHMRC with the aim to make Australia a global leader in genomic medicine.

Professor Deb White (Director of Cancer Research and Deputy Cancer Theme Leader) who heads the ALL research group within the Cancer Theme, was invited to head the ALL Flagship of the AGHA.

This prestigious collaboration will develop a diagnostic pipeline in a clinical setting and evaluate therapeutic intervention, to improve diagnosis and management of ALL. Genomic medicine has the potential to transform how we deliver healthcare. It promises better patient outcomes and a more efficient health system through rapid diagnosis, early intervention, prevention and targeted therapy.



Healthy Mothers, Babies and Children



Overview of Theme

The theme's mission is to assess and implement effective interventions that improve the health of mothers and their children.

What the Theme Does

The theme has four main areas of endeavour:

- The Child Nutrition Research Centre (CNRC)
- Research partnership for Aboriginal Children and Families
- Evaluation of effective maternal interventions
- Prevention of Childhood Disabilities

The Healthy Mothers, Babies and Children theme is proud to be embedded in hospitals. The team passionately holds the view that the best way to



evaluate health practices is to engage with the clinicians and consumers directly involved, and for young families this mostly means engaging with maternity and paediatric services.

Research Highlights

2016 was a very successful year for the number of papers published by the theme – 93 in total. Three papers are particularly noteworthy:

- ‘Randomized controlled trial of early regular egg intake to prevent egg allergy’ Debra J. Palmer, Thomas R. Sullivan, Michael S. Gold, Susan L. Prescott, Maria Makrides - Journal of Allergy and Clinical Immunology. This is the paper from our STEP Trial (Starting Time for Egg Protein) to determine whether the incidence of egg allergy is reduced by early regular exposure to egg compared with the common practice of delaying egg introduction in infancy. The findings have

resulted in The Australasian Society of Clinical Immunology and Allergy (ASCIA) and the National Allergy Prevention Strategy issuing updated feeding guidelines, which were launched at the ASCIA Conference in the Gold Coast (14-16 September). An associated article in The Conversation resulted in over 100,000 views.

- ‘Stillbirths: recall to action in high-income countries’ Flenady V, Wojcieszek AM, Middleton P et al – The Lancet. This Lancet paper highlights large equity gaps in rates of stillbirth in high income countries and outlines how 20,000 stillbirths a year could be avoided in these countries.



Highlights from theme staff include:

- Philippa Middleton is a CI on the successful Centre for Research Excellence in Stillbirth, administered through the University of Queensland, to implement evidenced based interventions to prevent stillbirths and improve quality of care after a stillbirth through effective conduct of large-scale high-quality studies addressing priorities, and the development of clinical practice guidelines to optimise care. SAHMRI will lead the Aboriginal component.
- Karen Glover is also a CI on the successful Centre for Research Excellence to promote Safer Families: Tailoring early identification and novel interventions for intimate partner violence in Family Violence, administered through the University of Melbourne. The CRE will focus on children, young people and parents to decrease the intergenerational transmission and impact of abuse on the whole family.
- Carmel Collins was an invited external expert for the World Health Organisation guideline development group meeting – nutrition actions 2016 – 2018 held in Florence, Italy. The objective of the meeting was to review the global guidelines for protecting, promoting and supporting breastfeeding in maternity facilities.
- A new initiative in partnership between SAHMRI, the Channel 7 Children's Research Foundation and the University of Adelaide's Robinson Research Institute has resulted in the very recent establishment of a Chair in the Prevention of Childhood Disabilities to ultimately combine genomic and basic science techniques and clinical medicine to minimise the impacts of childhood disabilities.

THE PUBLICATION OF THE STARTING TIME FOR EGG PROTEIN (STEP) PAPER RESULTING IN UPDATED FEEDING GUIDELINES AND PRESENTATIONS AT THE PERINATAL SOCIETY OF AUSTRALIA AND NEW ZEALAND (PSANZ) AND THE EUROPEAN ACADEMY OF PAEDIATRIC SOCIETIES. A SUBSEQUENT ARTICLE IN THE CONVERSATION RESULTED IN OVER 100,000 VIEWS AND HAS BEEN INFLUENTIAL IN CHANGING PRACTICE.

Heart Health



Overview of Theme

The theme consists of the following research groups and leaders:

- Vascular Research Centre – Professor Stephen Nicholls and Dr Peter Psaltis
- Centre for Heart Rhythm Disorders – Professor Prash Sanders
- Stroke Research Group – Professor Simon Koblar
- Cardiac Imaging Research Group – Professor Joseph Selvanayagam
- SAHMRI Clinical Research – Professor Stephen Nicholls
- Health Systems Research – Professor Derek Chew
- Adelaide Institute of Sleep Health – Professor Doug McEvoy and Assoc. Professor Nick Antic
- EMBL Group (network biology and systems thinking) – Dr Ville Makinen
- SAHMRI Population Health – Dr Caroline Miller
- Cardiac Innovation Centre – Medical Education – Professor Philip Aylward

What the Theme Does

The mission of the group is to develop new strategies to reduce the risk of heart disease involving a translational program spanning preclinical human and clinical trial research. The Heart Health theme interests span basic research (predominantly focusing on targeting mediating pathways implicated in the genesis of vascular disease and brain injury in stroke), clinical research (with internationally regarded excellence in cardiovascular imaging and invasive studies of the coronary arteries and electrophysiology), clinical trials (spanning from evaluation of novel therapies through to health services research), clinical registries, network biology, population/public health (aiming to influence public policy influencing CVD prevention) and medical education (dissemination of information).

Research Highlights

Vascular Research Centre (VRC)

Dr Christina Bursill was awarded the Lin Huddleston National Heart Foundation fellowship at the University of Adelaide and joined the theme as the group leader for Plaque Biology and New Blood Vessels.

Senior Post Doctoral Researcher, Dr Joanne Tan, previously based at the Heart Research Institute in Sydney, has followed Dr Bursill to SAHMRI and will be a part of the Plaque Biology and New

Blood Vessel group. She will examine whether high density lipoproteins (HDL) can promote new blood vessel formation in people with diabetes.

Research Output

Professor Stephen Nicholls received an NHMRC Research Excellence Award, as the top ranked NHMRC fellow.

Dr Peter Psaltis was awarded a NHMRC Project grant of \$1,268,460 titled 'A study of the plaque-modifying actions of colchicine in stable and unstable atherosclerosis: from mouse models to clinical imaging'.

The theme completed recruitment of an international multicentre study titled: *A Phase II Multi-Centre, Double-blind, Placebo-controlled, dose focussing trial of CER-001 in subjects with Acute Coronary Syndromes. CER-001 Atherosclerosis Regression ACS Trial (CARAT Study)*. The study result will be available for presentation in 2017.

The theme gained approval to begin opening sites for an Investigator led PCSK9 inhibitor study – *Evaluating the efficacy and adherence of administration of a PCSK9 inhibitor Alirocumab in Aboriginal Participants with hyperCholesTerolaemia. IMPACT-LDL*. The study is a randomised, multi-centre, placebo-controlled study to determine the effect and adherence of Proprotein Convertase Subtilisin Kexin type 9 (PCSK9) inhibitor administration in participants of Aboriginal background with hypercholesterolaemia that fulfill existing evidence based guidelines for lipid lowering therapies.



Centre for Heart Rhythm Disorders (CHRD)

Research Output

The University of Adelaide awarded Dr Rajeev Pathak the Doctoral Research Medal for 2016. The Medal signifies the highest quality PhD of all theses examined each year. Dr Pathak's thesis is titled - 'Aggressive Risk Factor Reduction Study for Atrial Fibrillation'..

Cardiac Resynchronisation Therapy (CRT) And AV Node ablation trial in AF - CAAN-AF is a phase IV investigator initiated multicentre, randomised controlled trial funded by the NHMRC. To date 98 of 590 subjects have been enrolled and randomised to either an ablation or medical management. Twenty two sites across Australia and New Zealand are currently open and one site in Germany.

Stroke Research Group

Research Output

Professor Simon Koblar was inaugurated as the first Professor of Neurology and Neuroscience at the University of Adelaide.

Professor Simon Koblar and Associate Professor Anne Hamilton-Bruce were awarded \$137,000 from the Hospital Research Foundation for 'Preclinical Investigations into Stem Cell Therapy in Stroke'.

Cardiac Imaging Research Group (CIRG)

Research Output

Dr Rebecca Perry, Flinders University was awarded the 2016 Post-Doctoral Heart Foundation Fellowship, for her project "*Echocardiography prediction of sudden cardiac death*".

Professor Joseph Selvanayagam (PI). "*Fabry Screening Study in a Cardiac population*". Tenure 2016 -2017. Amount: \$100,000. Sponsor: Sanofi Pharmaceuticals.

The Cardiovascular Magnetic Resonance GUIDEd management of mild-moderate left ventricular systolic Heart Failure (CMR GUIDE HF) study which is testing the hypothesis that among patients with mild-moderate heart failure, a routine CMR guided management strategy of implantable defibrillator (ICD) insertion is superior to a conservative strategy of standard care continued to enroll patients. The study has randomised 45 patients from 12 sites located in Australia (11) and Germany (1).

SAHMRI Clinical Research

Research Output

The TREAT trial – *Administration of Ticagrelor in patients with ST elevation myocardial infarction treated with pharmacological Thrombolysis* is recruiting patients across sites in Australia. This study is examining Ticagrelor compared with Clopidogrel administered in the first 24 hours for ACS patients and may result in a change in guidelines. This investigator initiated global study is coordinated by the Research Institute of HCor in Sao Paulo Brazil and involves 209 sites in 11 countries, including Australia and New Zealand. The study will recruit patients who suffer a myocardial infarction in a regional/rural setting who are treated with pharmacological thrombolysis and then transferred to a city hospital with Percutaneous Coronary Intervention (PCI) capabilities. The study is looking to develop research networks and collaboration between country and city hospitals. In Australia, there are 11 sites who have enrolled 34 patients.

Adelaide Institute of Sleep Health (AISH)

The SAVE trial, the seminal clinical trial evaluating the impact of CPAP therapy on cardiovascular outcomes in patients with obstructive sleep apnoea was presented at the European Society of Cardiology (ESC) in Rome. The manuscript was published in the prestigious New England Journal of Medicine (NEJM).

EMBL Group

A prospective study of metabolic subtypes in type 1 diabetes and their association with mortality and incidence of vascular complications, in collaboration with the Finnish Diabetic Nephropathy Study, was undertaken.

The results confirmed the groups earlier results from 2008 with new data, but also found that half of women with high HDL-cholesterol were at a disproportionately high risk of cardiovascular death. Current investigations continue to look at the medication profiles over the past 15 years of these individuals, to determine if the discrepancies can be explained by gaps in treatment guidelines.

In a collaboration with a population-based cohort in Northern Europe, the group identified changes in serum metabolites that occur during and after pregnancy. The group focused on network analyses of how the metabolite concentrations respond collectively; they found that pregnancy increases the divergence between women with adverse metabolic profiles compared to those with more favourable characteristics. This study was the first large-scale longitudinal study of metabolomics in pregnancy.

An epidemiological report on adult anemia in China was completed. The group discovered that the popular public health intervention of iron fortified soy sauce is not likely to work on specific subgroups of the local (Chinese) population. To the theme's knowledge, this is the largest longitudinal study of adult anemia in recent history, and the manuscript is currently under review for publication.

Cardiac Innovation Centre – Medical Education Output:

- Series (10) of GP meetings about post ACS lipid management across Australia
- Two local meetings for GPs titled 'Acute and Chronic management of Acute

Coronary Syndromes'

- PCSK9 Stakeholder Meeting held after the European Society of Cardiology meeting in Rome, Italy.



Infection and Immunity

Overview of Theme

The theme vision is to address key health issues at the intersection of infection, immunity, chronic disease and community. This inevitably involves a collaborative approach across the theme, institute, and externally.

This vision is underpinned by a strategy to develop immunology, bioinformatics, microbiome and clinical platforms. We have utilised these platforms to develop programs of work examining areas such the impact of microbiota on vaccine responses, chronic lung infections, the gut brain axis, networks in cancer and STI's and BBV's in aboriginal communities.

The Theme has three key groups:

EMBL Bioinformatics

Led by Associate Professor David Lynn, this group Since March 2014, David is an EMBL Australia group leader in the Infection and Immunity Theme of SAHMRI, South Australia's state-of-the-art health and medical research institute. He also has a faculty position as Associate Professor at Flinders University School of Medicine. David heads a multi-disciplinary group that is equally divided between bioinformatics and experimental systems biology. David's primary research interest is investigating the regulation of the

innate immune system from a genome-wide or systems level perspective. To do this, on the wet-lab side, the group employs in vitro and in vivo (mouse) experimental models coupled with systems biology approaches to investigate the regulation of innate &, more recently, adaptive immunity. Recently, the group has become particularly interested in the interplay between the microbiome and the immune system and this is now a major focus for the lab. David is currently investigating how dysregulation of the (mouse and human) neonatal gut microbiome impacts subsequent immune responses (e.g. to childhood immunisations). David is also developing a strong interest in vaccine non-specific effects (effects vaccines have on mortality and morbidity not explained by explained by the prevention of the targeted diseases) and how certain vaccines can epigenetically train innate immune cells to be more responsive to subsequent unrelated antigens.

On the bioinformatics side, the group leads the development of InnateDB.com, an internationally recognised systems biology platform for the computational analysis of innate immunity networks/pathways. David has also expanded his interest in network biology into the cancer signalling area, and leads the computational biology aspects of €12 million European Commission funded project, investigating how to model and subsequently therapeutically target networks in cancer. To facilitate this work the group has developed several novel pieces of (freely available) software for network and pathway visualisation and analysis.

Infectious Diseases Research, Aboriginal and Torres Strait Islander Health

Led by Associate Professor James Ward, the Infectious Diseases Research: Aboriginal Health research group conducts a program of research that is broad in scope, but unified around the goal of improving health outcomes in the areas of STIs and BBVs among Aboriginal and Torres Strait Islander people. Our research will investigate the ability of strategies, both novel and current best practice, to control STIs and BBVs in Aboriginal primary health care services, while addressing policy and clinically-relevant questions, translating these into policy and practice as well as building the next generation of researchers in this area of Aboriginal health.

Microbiome Research

Led by Associate Professor Geraint Rogers, the Microbiome Research Group has established an extensive and unique research program focused





on polymicrobial infection, with a particular focus on chronic bacterial infections of the lower respiratory tract. The team has active projects focusing on various gastrointestinal conditions, upper respiratory infections, and liver dysfunction. The projects span from the basic science of microbe-microbe and microbe-host interaction, to randomised controlled trials of pharmacological and non-pharmacological disease interventions. The ultimate aim of the research program is to improve our ability to understand and treat bacterial infection and dysbiosis.

Research Highlights

The Microbiome Research group has led a programme of interrelated projects looking at the relationship between airway microbiology and chronic respiratory disease, resulting in a number of high impact publications. These have been developed as part of collaborations with the University of Queensland and Newcastle University and have set in place a strong platform for ongoing respiratory health research led by SAHMRI.

IN COLLABORATION WITH SAHMRI BIORESOURCES AND THE PRECLINICAL, IMAGING AND RESEARCH LABORATORIES (PIRL), THE THEME ESTABLISHED SOUTH AUSTRALIA'S FIRST GNOTOBIOTIC FACILITY. THE CAPACITY TO HOUSE GERM-FREE MICE WILL BE INVALUABLE IN ALLOWING THE CAUSALITY OF OBSERVED ASSOCIATIONS BETWEEN THE MICROBIOME AND ANIMAL PHYSIOLOGY TO BE INVESTIGATED.

Mind and Brain

Overview of Theme

The Mind and Brain theme focuses on the continuum of mental health from major depression to wellbeing and resilience. The theme is interested in depression; mechanisms of antidepressant response; outcomes of antidepressant treatments, including the interface with metabolic syndrome and obesity; and wellbeing and resilience. As a new direction, addressing a consumer-driven initiative, Mind and Brain have developed an exciting and conceptually novel program on molecular imaging of the spinal cord that not only advances diagnosis and prognosis of spinal cord injuries - Project Discovery. This theme's translational research program can be conceptualised as having four major topics. These topics support a strong program in depression (including stem cells), wellbeing, and spinal cord injury, see figure.

South Australian Mind-Brain Translational Research Program

	Topic 1 Depression	Topic 2 iPSC-derived serotonergic neurons	Topic 3 Promoting resilience and wellbeing	Topic 4 Spine Cord Imaging
Projects	1. Functional variants in MDD 2. Pharmacogenetics of antidepressants 3. Long-term Antidepressant outcomes 4. Depression subtyping	5. Molecular mechanisms of iPSC-derived neurons from MDD subjects 6. Pharmacotranscriptomics of iPSC neurons: MDD subjects	7. Wellbeing in disadvantaged youth 8. Wellbeing in ageing 9. Resilience after manufacturing closure.	10. Imaging of spinal cord inflammation 11. Metabolic activity following spinal cord injury
Team	M Wong (SPRF) P Xie (Prof, Chongqing, China) N Bidargaddi (Head, PH Informatics Gr) M Musker (RF) C Yu (RF) M Lewis (RF) A Inserra (PhD stud) S Liu (PhD stud) R Forgaty (RA) E Sampson (Hons stud) F Lees (Hons stud) M Winsall (RF) P Musiat (RF) Y Yang (Bioinform) T Lopes (Psychologist) E Dutcher (MBBS stud) S Rositano (MBBS stud) S Bacchi (MBBS stud) C Elekwachi (pre-PhD volun) A Trevisol (Int stud placem, Brazil)	C Bardy (SRF) M van den Hurk (Postdoc) TBA (RA) C Yu (RF)	G Kelly (Topic Lead) Academic lead (TBA) K Burke (Res Lead) D Kelly (Proj Lead) J McConchie (Proj Lead) T Hansen (Proj Lead) A Bulling (Proj Lead) K Grieve (Proj Coord) M Iasiello (Proj Coord) J Storey (Proj Coord) T Marin (RA) B Hall (Adm Assist) B Reilly (Proj Manager) L Hebhart (Train & Ed Coord) F Komp (Conf Prod Coord) E Robinson (Conf T&R Coord) K Goh (E & Mark Coord) A Hawley (Conf Coord) L Theodoros (Conf Mark Coord) S Wright (Conf Prog Coord) T Jupe (Comm Coord) S Harvey (Strat Dev Adv) E Keech (Conf volun)	P Takhar (Topic Manager) TAB (SRF) M Kelly (R Manager) B Reilly (Proj Manager) B Freeman (MD, Prof Spinal Surgery) TBA, RA E London (Prof Cons, UCLA)

Consumer and Carer Research Consultation Process			
Tools	DNA repository/dataset, Exome BeadChip, Methylation Beadchip, Next generation sequencing, Ontogenic Pathway, Online tools, Predictive models, Subtyping models.	iPSC technology Neuronal cultures Transcriptomics Electrophysiology Pharmacology	Wellbeing and resilience structured assessment Wellbeing and resilience training PET ligands development PET scan technology and analyses Structural imaging technology and analyses

Developing of a competitive and sustainable Mind-Brain Translational Research Program in South Australia

What the theme does

Active research projects

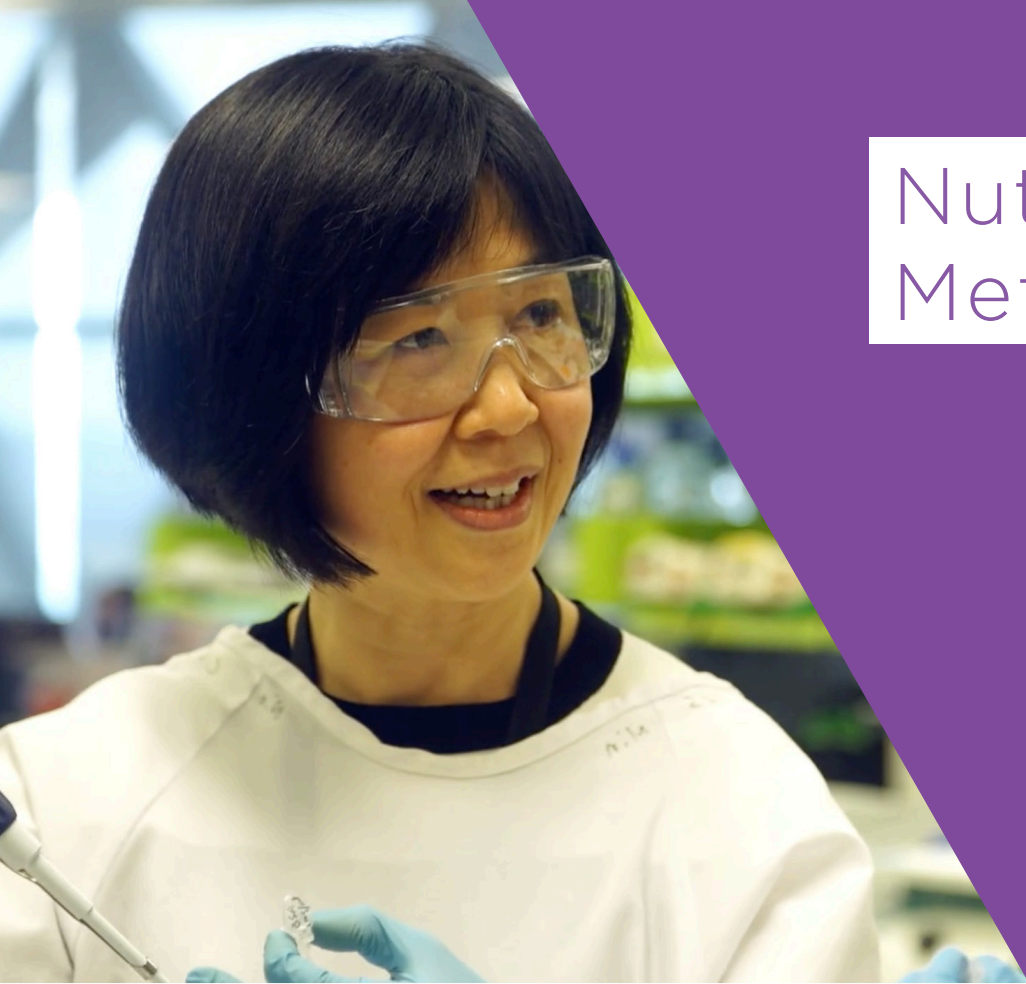
- An Australian genetic database study of functional genetic variants and environmental factors in major depression.
- Microbiome: A novel pathway in the brain response to stress
- Subtype classification study of major depression based on clinical and genetic data
- Chronic fatigue syndrome: leptin, interleukin 6 and clinical symptoms
- Stress, depression and obesity
- Stress induced hippocampal atrophy
- Can reducing inflammation ameliorate progression of Alzheimer's disease?
- The role of stress in cancer initiation and progression
- Evaluation of novel genetic and pharmacogenetic targets in depression
- Links between the immune system and psychiatric disorders: therapeutic approaches that target key mediators of the immune system
- Project Discovery – spinal cord injury studies

Research Highlights

- The Premier of South Australia announced a grant of \$400,000 to the Wellbeing and Resilience Centre to support the commercialisation of resilience training
- A grant was awarded by the NHMRC, 'Improving cardiovascular health and quality of life in people with severe mental illness: a randomised trial of a 'partners in health' intervention. Professor Julio Licinio is an investigator on this grant of \$1,500,000.
- A grant was awarded by the NHMRC 'The Aftershock' – Understanding the impact of traumatic brain injury on depression and emotional regulation. Professor Ma-Li Wong an investigator of this grant of \$509,779.19.
- Dr Cedric Bardy joined the Theme as a Senior Research Fellow. Dr Bardy was formerly at the Salk Institute for Biological Research.



**THE WELLBEING AND
RESILIENCE CENTRE HAS
COMPLETED THE FIRST
STAGE OF THE \$1 MILLION
RESILIENT FUTURES
PROGRAM WITH SERVICE TO
YOUTH COUNCIL (SYC) AND
THE NORTHERN ADELAIDE
SENIOR COLLEGE.**



Nutrition and Metabolism



Overview of Theme

The overarching goal of the Nutrition and Metabolism theme is to understand the links between nutrition, genes and health.

What the Theme does

Cell Signalling and Gene Regulation Group: led by Professor Chris Proud, the group's major focus concerns intracellular signalling pathways and their roles in metabolic and cardiovascular disease, and in cancer. Recent work revealed that proteins called MNKs promote weight gain and glucose intolerance, which lead to type-2 diabetes. MNKs may be therefore novel targets for preventing diabetes.

Lysosomal Diseases Research Unit (LDRU) CNS Therapeutics Section

Dr Kim Hemsley's team studies the neuropathogenic basis of symptom generation in the childhood-onset neurodegenerative disorder, MPS IIIA and devises novel treatments.

Neurobiology Section

This group, headed by Dr Tim Sargeant, focuses on the role of the lysosomal network in common neurodegenerative diseases such as Alzheimer's disease. It investigates how genetic heterogeneity within the lysosomal network contributes to late-onset neurodegenerative disease. The aim is to develop prognostics and therapeutics for dementia.

Organelle Biology and Disease

Dr Pirjo Apaja's, EMBL Australia Group Leader, joined LDRU in April 2016. This group's current work focuses on factors involved in neurological disorders such as neuroblastomas, attention deficit-hyperactivity disorder and brain oedema.

Centre for Nutrition & Gastrointestinal (GI) Disease Research (the University of Adelaide)

Led by Professor Gary Wittert, consists of eight research groups.



Obesity and Molecular Metabolism Group

Associate Professor Leonie Heilbronn studies type-2 diabetes mellitus, particularly the molecular and physiological basis of obesity and its co-morbidities. This group recently showed that time-restricted feeding of men at risk of type-2 diabetes improved glucose tolerance after just 1 week, suggesting that eating over a shorter period each day could reduce the risk of type-2 diabetes.

Vagal Afferent Research Group

This group is led by Professor Amanda Page. Obesity is resistant to behavioural intervention and pharmacological approaches. The satiety ('fullness') signal from the gut involves integration of gastric and intestinal feedback signalling. This group aims to improve understanding of this process, thereby providing new targets for the treatment of obesity.

Intestinal Nutrient Sensing Group

Associate Professor Richard Young's group investigates the sweet taste system that detects glucose in the gut and regulates how the body handles glucose. They found that dietary supplementation with artificial sweeteners impaired blood glucose control in healthy people, a major discovery with wide implications.

Visceral Pain Group

Led by Associate Professor Stuart Brierley, this group focuses on pain arising from the gut especially IBS. They work with industry to develop new treatments. The group recently discovered a novel way to identify and target specific receptors located on the nerve endings in the colon that initiate pain sensation.

GI Neuro-immune Interactions Group

Dr Patrick Hughes and his group investigate how alterations in the neuro-immune axis contribute to symptoms in diseases of the lower gastrointestinal tract.

Liver Metabolism Group

Led by Associate Professor Grigori Rychkov, this group studies the molecular mechanisms that control receptor channels in the liver, their role in hormonal regulation of metabolism, and their importance in non-alcoholic fatty liver disease.

Nutritional Epidemiology Group

Dr Zumin Shi's group studies the relationship between nutrient patterns, specific nutrients and sleep; sleep disorders in men; exposure to phthalates (from carbonated drink containers) and the links between nutrients and risk of chronic disease or cancer.



Clinical Trials & Chronic Disease Epidemiology Group

Led by Professor Wittert and is part of the Centre for Research Excellence in Translating Nutritional Science to Good Health. Their research projects for 2016 included:

- Testosterone prevention of T2DM in high risk men: a randomized placebo controlled trial;
- Exploiting alterations in lipid metabolism to improve diagnosis, treatment and molecular imaging of prostate cancer;
- Lower urinary tract symptoms as a marker and modifiable risk factor for cardio-metabolic disease; the male, Adelaide, inflammations, lifestyle and stress (MAILES) Study.

The *Diet, Lifestyle and Health Substantiation Group* (CSIRO) led by Dr Nathan O'Callaghan worked on the development, commercialisation and launch of the Impromy health and weight loss program, which attracted 25,000 people. Following its launch the CSIRO Health Diet Score questionnaire was completed by more than 70,000 people and the Total Wellbeing Diet online program has more than 10,000 subscribers.

Research Highlights

The theme organised a successful Scientific Symposium in conjunction with A-STAR, Duke-NUS, the Shanghai Institutes of Nutritional Sciences in April 2016 in Singapore and, in May, presented the inaugural SAHMRI Public Lecture Series. The title was 'What, when and how to eat', the event was supported by Health Partners. The event was very successful and sold out on the night.

The theme was successful in gaining funding from various sources including Government, industry and private donations.



Population Health Research Group

Overview of Group

The SAHMRI Population Health Research Group specialises in research, evaluation and population monitoring to inform population-level interventions to reduce the impact of non-communicable disease (NCDs), including cancer, heart disease and diabetes. With expertise in behavioural science, public health and economics, the Group's major research focus areas are: (1) tobacco control; (2) obesity prevention; and (3) collaborative projects in cancer registries.

The Group delivers evidence to inform public health policy and population-based public health and health promotion interventions. They have a strong record of research translation into evidence-based policy and programs, which they achieved by working closely with end-users – policy makers in government and non-government agencies.

The vision of the Group is to maintain its strength and relevance in tobacco control and

to become recognised in the emergent field of application of a public health approach to food policy and obesity prevention. The Group specialise in policy responses to sugar-sweetened beverage consumption – an area of local and global significance. The Group is also building its capacity in the measurement of the psychosocial impact of cancer.

What the group does

Tobacco control

The Group incorporates the Tobacco Control Research and Evaluation Program. The Group specialises in evidence for tobacco control policy interventions (e.g. smoke-free laws, e-cigarette regulation, plain packaging and warning labels); community interventions (Aboriginal and Torres Strait Islander tobacco control, Quit Campaigns, mental health settings); population level and sub-group monitoring of smoking rates knowledge and antecedents of behavioural change.



Obesity prevention and public health

The Group has expanded from tobacco control into obesity prevention; applying the science and strategies from tobacco control, where Australia is a world leader, to the field of obesity, where Australia is lagging. The Group has collaborative projects in food labelling and social marketing, and is leading projects targeting reduced sugar-sweetened beverage consumption.

Psychosocial Patient Reported Outcome Measures (PROMs) and Cancer Registries

The Group collaborates on a range of initiatives in cancer registries with local and interstate partners. The Group is a node of the Movember-funded Prostate Cancer Health Outcomes Research Unit (with Monash and UniSA), which is the research arm of the Movember ANZ Prostate Cancer Outcomes Registry. The Group are leading research to PROMs to assess Quality of Life and psychosocial outcomes for men with prostate cancer. The Group also administers the Central Coordination unit of the South Australian Clinical Cancer Registry and provides support to the Northern Territory Population Cancer Registry.

Research Highlights

The Group was awarded \$1.5 million from the NHMRC to undertake research into the important area of sugar-sweetened beverages (SSB) consumption. This funding enables the investigation of initiatives to reduce consumption in young people and the community more broadly. It has a focus on the potential of warning labels.

The Group's Director Associate Professor Caroline Miller was appointed to the Australian Government's Intergovernmental Committee on Drugs National Expert Reference Group on Tobacco. Sought internationally for her expertise in tobacco control she has also been appointed to an international Expert Advisory Panel on Tobacco Control.

At a local level Associate Professor Miller advises the South Australian Government on obesity prevention initiatives and is a member the South Australian Premier's Healthy Children's Menus Executive Taskforce.



Molecular Imaging and Therapy Research Unit (MITRU)

Overview of Group

The Molecular Imaging and Therapy Research Unit (MITRU) is a pharmaceutical production and research unit focused on developing tracers for molecular imaging centred on incorporating radiation.

The unit has expanded its work to include PET-generator based products to ensure expansion further into the radiopharmaceutical field and recently using the particle accelerator, the Cyclotron, into generating further isotopes that could be provided regularly across Australia forging new research grounds. The unit is currently developing radioactive tracers that have shown promise in neurology in early diagnosis detection of Alzheimer's, various dementia models and spinal cord injuries as and when funding is secured. It is further involved in commercial process for labelling safely radio-therapeutic drugs for several cancers to allow access across Australia using ANSTO developed materials.

What the group does

MITRU is a commercial facility, able to conduct research when required, that has obtained the highest manufacturing standards to allowing their current and future developments to be moved into clinical practice sooner. The timeframes for projects are often smaller as they have a unique funding model where costs are recuperated through sales once initial funding is obtained to ensure that there is a further demand. Overall this reduces the costs and adds a demand focus to the units' endeavours.

MITRU has attracted around \$500,000 in funding to support research activities and has combined with the Bellberry group to develop a program to create research agents over the next 7 years which will be funded a further \$300,000.

Research Highlights

Manufacturing of radioactive metals is a difficult and time consuming process, which is only seen to succeed in a handful of sites across the world. The unit recently advised the global radiopharmacy group that they had successfully made Gallium68 on the cyclotron with a commercial vendor and were developing this to move from research to full commercial.

The first phase 1 trial with a new commercial pharma company has just begun with a compressed time frame to have patient trials commencing in less than 3 months of being proposed.

THIS UNIT MADE A PROSTATE IMAGING AGENT AND IS DEVELOPING A NEW TREATMENT FOR THIS CANCER. THE TEAM HAS BEGUN AN INTERSTATE PHASE 1 TRIAL AND DEVELOPING A HIGH STANDARD AND TIMELY RESEARCH MODEL WITHIN AUSTRALIA.

Fundraising Update

SAHMRI acknowledges and is grateful to our growing family of financial supporters. Overall, there has been an increase in donations received and guests attending our events. Incredibly, over \$2 million has been donated in 2016. These funds have been directed across all our themes of research. Most of these gifts have been the result of developing relationships with private trusts and foundations, as well as individuals who believe in supporting effective medical research.

Leaders in Philanthropy

This wonderful group consists of people and private foundations donating in excess of \$1 million to SAHMRI. We currently have six members of this unique group of supporters.

Founding Ambassadors

Commencing support of SAHMRI with gifts of \$25,000, we now have a total of 26 Founding Ambassadors who hold the distinction of donating significantly to SAHMRI from the beginning.

Virtual Windows

To date, 695 virtual SAHMRI windows have been purchased online. The dedications and sentiments expressed on the website are truly moving and reflect the interest of the public, as well as a broad desire to effectively reduce the impact of chronic illness.





The Walker Society

Named after Helen Walker OAM, who left the first bequest to SAHMRI, the Society now has 15 members who have indicated their intention to leave a legacy to medical research. These decisions follow much confidential discussion and are generally directed toward a particular theme or avenue of research.

Thank You

Without the support we received throughout 2016, our researchers could not have made the progress they have. Our work and the desire to genuinely make a difference is powerfully assisted by the generous gifts of our supporters.

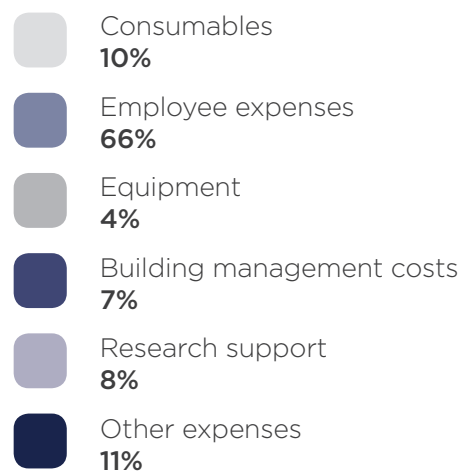
**OVER \$2 MILLION
WAS DONATED
IN 2016**

Financial Highlights

Income



Expenses



Consolidated Statement of Profit or Loss and Other Comprehensive Income

For the year ended 31 December 2016

	12 months to 31 Dec 2016 (\$'000)	6 months to 31 Dec 2015 \$'000
Operating revenue and other income		
State Government grants	7,663	3,833
Research grants	24,349	9,993
Fundraising	2,023	1,182
Interest	198	150
Rental income	3,434	2,197
Royalties	2,899	1,389
Service and clinical income	17,068	8,152
Other income	962	488
Total operating income	58,596	27,384
Operating expenses		
Consumables	(5,729)	(2,371)
Employee expenses	(34,533)	(14,050)
Equipment	(2,488)	(463)
IT expenses	(1,232)	(634)
Building management costs	(3,879)	(2,166)
Research support	(4,689)	(4,402)
Professional fees	(1,415)	(777)
Travel and accommodation	(1,417)	(533)
Other expenses	(2,807)	(1,720)
Total operating expenses	(58,189)	(27,116)
Finance income	318	434
Finance cost	(703)	(602)
Net finance costs	(385)	(168)
Results from operating activities before depreciation, amortisation and derecognition expense	22	100
Depreciation, amortisation and derecognition expense	(10,036)	(4,439)
Total depreciation, amortisation and derecognition expense	(10,036)	(4,439)
Surplus/(deficit) for the period	(10,014)	(4,339)
Other comprehensive income/(loss) for the period		
<i>Items that are or may be reclassified to profit or loss:</i>		
Net change in fair value of available for sale financial assets	476	(146)
Other comprehensive income/(loss) for the period	476	(146)
Total comprehensive income/(loss) for the period	(9,538)	(4,485)



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