



2012
annual
report



school of health research

www.menzies.edu.au

The Menzies School of Health Research was established in 1985 as a body corporate of the Northern Territory (NT) Government under the Menzies School of Health Research Act 1985. This Act was amended in 2004 to formalise the relationship as a Controlled Entity of Charles Darwin University (CDU). Menzies is now a major partner of CDU, but remains controlled by its own Board, has its own financial and administrative structures, and can enter into contracts in its own right.

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For the purposes of this document, 'Indigenous' refers to Australia's Aboriginal and Torres Strait Islander peoples.

In the spirit of respect, Menzies School of Health Research acknowledges the people and elders of the Aboriginal and Torres Strait Islander Nations who are the Traditional Owners of the land and seas of Australia.

Front Cover Photo:
Aleisha and Joyce from Milikapiti in the NT, a Menzies research site.



Cherie Mackley looks over a Menzies health promotion flipchart with Annalisa Warlapinni from Milikapiti, Tiwi Islands, NT

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chairman's introduction



Professor Simon Maddocks, Chair of Menzies

Health, joined Menzies in November. Prof Cass moved from his native Sydney to relocate to Darwin where he begins a second chapter with Menzies – he completed his PhD examining end-stage renal disease in Aboriginal populations through Menzies a decade ago.

A kidney disease and public health specialist, Prof Cass brings to the organisation a deep understanding of Indigenous health and Indigenous communities, as developed through his extensive career as a kidney health researcher. He takes an especially collaborative approach to health research; a philosophy Menzies as a whole shares.

We were honoured to have Prof Cass deliver his inaugural speech as Director of Menzies at our annual Oration. Hosted by the Northern Territory Minister for Health, the Hon. David Tollner, the Oration was themed 'Research that matters: making a difference in the Territory and beyond'.

Our thanks go to current Deputy Director, Associate Professor Ross Andrews, for his excellent stewardship in the role of Acting Director following the departure of Professor Jonathan Carapetis in June. We thank Prof Carapetis for his remarkable leadership and for the many achievements made in the course of his seven-year directorship.

As Australia's foremost tropical and Indigenous health research institute, the Menzies School of Health Research continued its excellent record of successfully addressing issues of importance to the nation in 2012.

Over the course of this year, our growth was fuelled by more than a dozen new grants.

This year we also welcomed a new Director Professor Alan Cass, formerly of the George Institute for Global

director's message

Now is an exciting time to rejoin Menzies. Our collaborations have broadened, and we have established so many innovative projects committed to improving health both in Australia and abroad.

In 2012, the high quality of our research output was recognised in the Australian Government's Excellence in Research for Australia (ERA) initiative.

This comprehensive review of Australian university research awarded Menzies' performance in clinical science the highest possible ranking for expertise in medical and health sciences, based on our work through Charles Darwin University.

Menzies received a 'five out of five', ranking our performance as 'outstanding', and 'well above world standard'.

In an associated trial, the Excellence in Innovation Australia project, our malaria team was ranked as one of the 20 best (of 162 case studies) nationally.



Professor Alan Cass, Director of Menzies

Beyond that, there were many research achievements and highlights during 2012. By way of a preview:

- We completed a 20-year collaborative analysis of the malaria specie *P. knowlesi*, the largest prospective study on knowlesi malaria to date. This specie, we found, presents an increasing threat to health in the Asia-Pacific, yet, more optimistically, responds successfully to intravenous drug treatment.
- We conducted nationwide public consultations on Indigenous suicide prevention with over 500 people. We produced the National Indigenous Suicide Prevention Strategy report which we delivered to the Australian Government.
- We researched smoking habits among Indigenous Australians, revealing a significant decline in heavy smoking, as well as a spike in successful quitting rates.
- In line with evidence that cancer is now the second leading cause of death among our Indigenous population, we stepped up our research efforts in this area of urgent need. Our studies identified key barriers to accessing care and pin-pointed some of the highest priority support needs for Indigenous cancer patients.

The 2012 Menzies Scientific Colloquium *Research that works: how health research becomes large-scale change* was held on 26 October at Charles Darwin University. The event showcased ways in which Menzies projects have achieved real success in translating research into significant change in healthcare and health outcomes.

Encouragingly, the Australian Government continued its commitment to our research in Indigenous health and 2012 was a highly successful year in obtaining National Health and Medical Research Council (NHMRC) grants.

This year we obtained funding for 12 competitive grants (\$7.4 million), including four fellowships (\$1.5 million), to help improve outcomes for disadvantaged populations in Australia and the Asia-Pacific region. Importantly, one in two of our grant applications were successful, a result that is well above the national success rate.

Menzies was also awarded two out of only three available 'Indigenous Health Research Centres' funded nationally by the NHMRC. Menzies gained \$5 million over five years in order to establish Centres for Research Excellence in lung health and cancer research.

Professor Anne Chang will head the Menzies' Centre of Research Excellence (CRE) in Respiratory Health of Aboriginal and Torres Straits Islander Children from Darwin, focusing on improving the lung health of Aboriginal and Torres Strait Islander children. Associate Professor Gail Garvey will lead Menzies' cancer research centre from Brisbane, aiming to improve the quality

of life and survival rates among Aboriginal and Torres Strait Islander people with cancer.

Menzies' strong showing at NHMRC's 2012 national funding round was further bolstered by an honour bestowed on one of only three projects in Australia.

A Menzies project, led by Professor Bart Currie, uses DNA technology to look at why the potentially deadly bacterial disease melioidosis is increasing in urban areas in the Northern Territory. His research was awarded a perfect score, seven out of seven, by the NHMRC grant review committee. The result placed the project in the top 0.1 per cent of all projects ranked nationally.

Menzies recognises that one of the best ways to build a workforce of the future is to build the capacity and skills of our own Indigenous workforce. In 2012 a number of Indigenous staff successfully completed vocational, educational and professional development courses with us.

While recognising the contributions of many Indigenous communities to Menzies' work, I'd like to extend my congratulations to this year's Menzies Medallion winner, the highest award offered by the Board of Menzies. This was presented to the Yalu' Marnngithinyaraw Indigenous Corporation for its significant contribution to improving the health of Yolgnu people of Arnhem Land for over a decade.

Despite our success in securing grants and acknowledgements of the quality of our work, a tight external financial environment has set in. To meet this challenge we have increased our focus on strategic fundraising. In 2012, we created a new fundraising team based in Melbourne – a move that will enable Menzies to tap into the country's largest philanthropic community.

Menzies has made great progress on the new iconic \$47 million building project, which will enable us to continue our vital medical research in world class facilities.

The project includes two new buildings, one on Charles Darwin University's (CDU) Casuarina campus, and an upgrade to our existing facility at Royal Darwin Hospital (RDH). The buildings are expected to be finished by October 2013, and to be fully occupied by February 2014.

In finishing, I want to thank our key supporters. Many people quietly donate funds to Menzies each year and it is not often that I am able to clearly say how much this ongoing support matters.

I must also mention the remarkable staff and students who make up Menzies. On rejoining the Menzies family in November, I was struck by the warmth of my welcome and the passionate commitment shown by all staff. This is a place where people come to make a difference. We are well positioned to improve the health of Australians and of people across our region.

who we are and our vision

The Menzies School of Health Research is Australia's only medical research institute dedicated to improving Indigenous health and wellbeing.

We have a 27-year history of scientific discovery and public health achievement.

Our work addresses critical issues such as mental health, nutrition, substance abuse, child health and development, as well as chronic diseases such as cancer, kidney disease and heart disease.

We also lead global research into life-threatening illnesses in the Asia-Pacific, such as malaria and tuberculosis.

We endeavour to break the cycle of disease and to reduce health inequities in Australia and the Asia-Pacific region, particularly for disadvantaged populations.

Our mandate is to seek enduring solutions to problems that matter; the kind that when tackled, have the potential to make an immense difference to the quality of lives both here and abroad.

What we do

We set our sights on fostering excellence and leadership in scientific research and education.

Menzies works at the frontline, partnering with over 60 Indigenous communities across Northern Australia and countries in our region to create resources and grow local skills.

Our talent pool comprises over 400 staff, including many award-winning researchers from around Australia and the region.

We gain strength through partnership, and we collaborate broadly with communities, policy makers, governments, health service providers and organisations, and other researchers.

We strive to increase the capacity of health service providers, clinicians and researchers – to help them deliver better services based on evidence about what works, and what doesn't.

We're committed to educating future researchers. We deliver research and professional training, and we engage a growing number of Masters and PhD students.

How we're funded

Menzies is major partner of Charles Darwin University and we are largely funded through competitive research grants provided by the National Health and Medical Research Council.

Increasingly, however, philanthropic and corporate funding is becoming crucial to help drive our research and sustain our ability to develop innovative, evidence-based solutions.

Nurse and PhD student Gabrielle McCallum examining a baby with acute bronchiolitis, inflammation of the smallest passages of the lungs

where we work

Menzies' headquarters are in Darwin, with offices in Alice Springs, Brisbane and Timika (Indonesia). Our work spans Central and Northern Australia, and developing countries within our global neighbourhood.



When it comes to health, first impressions count – none more so than those made on a young life. It's a sobering fact that when compared with their mainstream counterparts, Indigenous children are more likely to suffer from conditions that disadvantage not only their formative years, but their subsequent adult lives, too.

Menzies is committed to research and solutions that aim to reverse this trend. Our work is focused on helping the Indigenous children of today become the healthy adults of tomorrow.

Child lung health gains a Centre of Research Excellence

Lung conditions are the most common reason why Aboriginal and Torres Strait Islanders see a doctor and the second most common reason for hospitalisation. Many cases of adult lung disease can be prevented or treated if they are recognised and managed before irreversible damages sets in.

In 2012, Menzies' Child Health division leader Professor Anne Chang secured a grant to establish a Centre of Research Excellence (CRE) in Respiratory Health of Aboriginal and Torres Straits Islander Children.

The Centre will run a multifaceted research program focused upon children's respiratory disease research and management in Australia. It brings together more than 20 leading national and international researchers and local Aboriginal medical health boards. The Centre's research output and collaborative partnerships will provide the science and knowledge governments, communities, health professionals and families require to address and treat this urgent health condition.

Historic study into the wellbeing and disease risk for Indigenous youth

For over a quarter of a century the Aboriginal Birth Cohort Study has tracked the health of Indigenous participants across the Top End of the Northern Territory. The study, the oldest and largest cohort study of Indigenous people in the world, examines the affects of early life events' upon health and disease later in life.

Ultimately, the study will assist in early identification of those most at risk of developing the chronic illnesses of diabetes, kidney disease, heart disease, respiratory disease and mental health disorders.

In 2012, the project which had previously successfully followed participants at 11 and 18 years of age, developed international and national collaborations and received \$2.2 million to conduct a followup in 2013.

Understanding the microbiology of chronic infections in children

Otitis media and chronic lung infections disproportionately affect Indigenous children and have serious consequences during childhood and in later life. Australian Indigenous children living in remote areas have the highest recorded rates of severe ear infections in the world. Menzies' Child Health Laboratory focuses on investigating these diseases.

Several new research projects examining the microbiology underlying respiratory disease commenced in 2012 – including the investigation of bacteria and viruses in acute respiratory infections, as well as the characterisation of the complex bacterial communities observed in chronic lung disease.

Data from these new studies will further knowledge about how different bacteria contribute to chronic respiratory infections. The results will provide evidence to guide the development of prevention and treatment strategies for these diseases.

Fighting middle-ear infections to improve learning and development

Twenty per cent of children living in remote areas of Australia have runny ears or chronic suppurative otitis media (CSOM). The latter condition ruptures eardrums, in turn impairing hearing and speech. Associated hearing loss is one of the most significant development barriers that Indigenous students face.

The Menzies Ear team continue to conduct a number of trials that influence policy and practice on the efficacy of therapies for Indigenous children. In 2012 the 'intensive swimming program' was completed, an examination into the benefits of an intensive swimming program for Indigenous children with severe middle ear disease. Over 300 children were involved.

Researchers found that the swimming program was neither harmful nor beneficial for Aboriginal children with severe ear disease. This research will be incorporated into clinical guidelines and public health policy on swimming pools in remote Indigenous communities.



Menzies has helped Ben's family cope with his lung disease

CASE STUDY: BOOSTING QUALITY OF LIFE FOR KIDS WITH LUNG DISEASE

"Being involved in Menzies' studies has improved our family's understanding of bronchiectasis. The support helps us manage our son Ben's condition better," says Tina, Ben's mother.

Ben has bronchiectasis, a disease affecting the lungs whereby the breathing tubes are damaged and don't work as well as healthy breathing tubes do.

Children with this lung sickness have a wet-sounding cough that comes and goes or stays for a long time. They have weaker lungs and can regularly get sick with bad chest infections.

Bronchiectasis is a relatively rare condition in developed countries; however many Aboriginal

and Torres Strait Islander children in the Northern Territory have bronchiectasis.

Ben receives regular visits from paediatric respiratory physician, Menzies' Professor Anne Chang, as well as monthly follow-ups from nurses engaged with Professor Chang's research that trials medications for the disease.

"Staff are always available when needed," Tina says. They monitor Ben's progress and give Tina treatment and management support.

"These studies are so important. They help work out what treatment is best for children with bronchiectasis," says Tina.

research highlights:

RHDAustralia

Even though Rheumatic Heart Disease (RHD) is preventable, Australia has the highest recorded rates of the disease in the world. Indigenous people are up to eight times more likely than non-Indigenous Australians are to be hospitalised for Acute Rheumatic Fever (ARF) and RHD; and they are 20 times more likely to die from their condition.

RHDAustralia was founded to address this inequity. Led by Menzies, the organisation is the National Coordination Unit for the Australian Government's Rheumatic Fever Strategy.

Now in its fourth year of operation, RHDAustralia coordinates a strategy and support system for Rheumatic Heart Disease, control programs across the country in order to improve prevention, diagnosis and treatment of ARF and RHD.

Shining a light on genetics' role in RHD

Understanding of why ARF converts to RHD, and in whom, remains poor. Many Indigenous people will get group A streptococcus infections but only some will develop RHD. Launched in 2012, RHD Genetics is a collaborative study into the role genetics plays in the disease's presence and progression. Researchers aim to collect saliva DNA samples from 500 RHD patients and 1000 matched controls – participants of a similar age – for genotyping.

It is hoped illumination regarding the pathogenesis [development patterns] of RHD, could lead to better treatments. The study is also expected to prompt further investigations into genetic determinants of disease among Indigenous Australians.



New learning modules encourage best practice for RHD management

RHDAustralia created a series of five online interactive modules designed to provide the health workforce with an introductory-level understanding of best practice approaches to the prevention, diagnosis and management of ARF and RHD.

To engage users, the modules use interactive elements such as avatars (animated characters), case studies and online tests. The objective is completion of the modules by all Australian healthcare workers and clinicians involved in the diagnosis and management of ARF/RHD.

In addition, an app was developed for use with iPhone, iPad and Android based on the national ARF and RHD guidelines – *The Australian guideline for the prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (2nd edition)*. This tool provides easy access to key information from the guideline.

New interactive e-modules equips the health workforce with best practice approaches for the prevention, diagnosis and management of ARF and RHD



research highlights:

Centre for Child Development and Education

Launched in September 2011, this pioneering Centre is focussed on Closing The Gap in Indigenous disadvantage by conducting research in child and youth development to improve young lives.

The Centre's broader aim is to strengthen community wellbeing. It delivers services to at-risk families in a number of remote Indigenous communities and provides workshops to explain to families the importance of nurturing early brain development in their children.

A partnership between Menzies, Charles Darwin University (CDU) and the Northern Territory Government (NTG), the Ian Potter Foundation and Sidney Myer Fund, the Centre seeks to identify effective policies and to inform the scientific community, policy makers and the general public of the strategies that will result in happier, healthier lives for Australian children.

Shaping a national Indigenous suicide prevention strategy

Indigenous suicide rates are significantly above national rates, with suicide rates for Indigenous children and youth in the Northern Territory (NT) doubling since 2001.

In 2012, the Centre was commissioned by the Australian Government to conduct nationwide consultations on Indigenous suicide prevention in partnership with the National Aboriginal Community Controlled Health Organisation (NACCHO). Public consultations were held across Australia with over 500 people attending and over 50 written submissions received.

A report and a draft document outlining a National Indigenous Suicide Prevention Strategy has been finalised and delivered.

International child health expert and Dr Mandawuy Yunupingu with CCDE

The Centre for Child Development and Education was pleased to welcome Professor Sir Michael Marmot to Darwin in May 2012 for his appointment as co-patron of the Centre, together with Indigenous musician and educator Dr Mandawuy Yunupingu.

Highlights of Professor Marmot's stellar career include his residency of the British Medical Association and his chairing of the World Health Organisation's Commission of Social Determinants of Health. The Professor has a deep interest in Indigenous health and wellbeing.

"It was a privilege to welcome a leading scientist like Professor Marmot, who helped the Centre link with some of the world's best minds to develop solutions for the challenges the Northern Territory faces in health and education," said Centre for Child Development and Education Director, Professor Sven Silburn.



Professor Sven Silburn with co-patrons Professor Sir Michael Marmot and Dr Mandawuy Yunupingu

Making adolescent health and wellbeing a priority

The NT has the worst health outcomes in Australia for youth suicide, substance abuse, and teenage pregnancy. Over 20 per cent of NT residents are aged between 12 and 24, a significant proportion of whom are Indigenous. This group is a vital focus of the Centre.

The awarding of a Future Fellowship to researcher Dr Kate Senior in 2012 will enable CCDE to build a sustainable research program to address issues critical in a youth's healthy transition to adulthood. It will bring together government and non-government agencies to consider youth health in the context of the conditions in which they are born, grow, live, work and age. It will also develop the skills of other researchers – particularly younger Indigenous people – to conduct research into youth wellbeing.

Evaluating a new approach for remote schools

The Centre was contracted by the NTG to undertake an evaluation of the Strong Start – Bright Futures remote schools reform program.

The program is designed to improve governance and leadership in schools through the implementation of a college structure in remote communities. Its objective is to enable stronger community links; better service delivery to large and small schools; and to make vocational training and education a high priority.

The evaluation assesses progress and examines data to explore how factors such as housing and family life affect school operations and academic achievement. The review is expected to be complete by May 2013.

CASE STUDY: BOLSTERING BRAIN HEALTH IN REMOTE COMMUNITIES

A grassroots project is enabling researchers to talk directly to parents in remote Indigenous communities about the importance of early brain development.

The 'brain story' engages parents and explains that giving their children a good start in life is important for the wellbeing of the whole community.

"Most of the brain's connections are laid down very early in life and these are crucial for effective learning. Support and stimulation from adults builds babies brain's – this is as important as good nutrition," says Child Development Health Researcher, Bonnie Moss.

Critical information is presented to parents using balloons to represent the size and weight of the brain at various stages of development.

"These props help transform abstract theory into important practical advice for families with young children and provide knowledge sharing opportunities for communities," Ms Moss said.

"The brain story tells parents that the growing brain is vulnerable to infections, accidents, stress, and the toxins found in alcohol and tobacco."

Activities, and an accompanying DVD, contain messages for the whole community about the importance of a healthy start and nurturing relationships for building babies brains.



Rosie enjoying time at preschool in the Tiwi Islands, NT

research highlights: Epidemiology and Health Systems

The disease burden borne by Indigenous Australians is two and a half times greater than that carried by the mainstream Australian population.

Menzies' Epidemiology and Health Systems division seeks to reduce the burden of chronic disease by investigating what our community and society is doing well in our bid to improve health, and which areas urgently need attention.

The team's research focuses on the effectiveness of Australia's health care system and the influence of our social and physical environment – such as housing, social justice, racism, employment, women's and environmental health.



Associate Professor Gail Garvey with Indigenous cancer survivor, Adelaide Sailor from Queensland

Study uncovers urgent support needs for cancer patients

Aboriginal and Torres Strait Islander people in Queensland are less likely to receive chemotherapy, radiotherapy and surgery treatments for cancer than their non-Indigenous counterparts.

Our study of 254 Indigenous cancer patients in Queensland revealed that these patients are less likely to access cancer support services. Our results also revealed that Indigenous adult cancer patients have substantial unmet supportive care needs in comparison to other Australians. Indigenous cancer patients often have multiple health issues, making their cases more complex.

And as this group are up to ten times more likely to live remotely than are non-Indigenous Australians, once a diagnosis is made, access to cancer care is often difficult – a fact compounded by lack of basic infrastructure, transport and suitable accommodation for patients and their carers.

The results indicate the most urgent areas for additional support are assistance with psychological and practical matters. This knowledge will help better tailor services and policies that improve health system support afforded to Indigenous cancer patients.

New Centre for Research Excellence to tackle Indigenous cancer

Cancer is the second leading cause of death among Indigenous Australians, yet the impact cancer has on this population has been afforded little attention on the national health agenda.

In a move that helps reverse this trend, Menzies received a \$2.5 million grant to establish a Centre for Research Excellence in Indigenous cancer control, named DISCOVER-TT. The Centre seeks to reduce the striking disparities in early diagnosis, treatment and survival rates for Indigenous Australians with cancer.

DISCOVER-TT will foster collaborations with key researchers, practitioners and consumer advocacy groups across Australia, and will actively promote the translation of evidence-based research into Australian public health policy and practice. Its Indigenous-led research program comprises two key areas: the first focused on pathways and outcomes of care, and the second on improving models of care and service delivery.

The Centre maintains a strong commitment to training early-career researchers, including Indigenous researchers, in Indigenous cancer control.

Illuminating inequalities in cervical cancer

Indigenous women are almost three times more likely to develop cervical cancer than non-Indigenous women, and five times more likely to die as a result. Diagnosis often comes late – a fact likely linked to Indigenous women’s lower participation rates in screening for cervical cancer. Presently, pathology results and therefore state and territory cervical screening registers do not record Indigenous status or ethnicity. Consequently, no data on cervical screening for Indigenous women is available to inform or motivate interventions to reduce the inequality, and so the excess burden of cervical cancer among Indigenous women is likely to continue.

To address this large knowledge deficit, in late 2012 Menzies began a national data linkage project to compare screening participation and cervical cancer outcomes for Indigenous women. The findings will shed light upon the geographical factors associated with the disease, such as locations in which the greatest need exists; and the results will provide grounding for interventions designed to reduce the disparity in cervical cancer outcomes.



Roslyn Gundjirryirr taking blood from Shanelle Gondarra in Galiwinku, NT

Primary Health Care Systems

Now in its third year of operation, the Centre for Primary Health Care Systems conducts research and translates this into action, helping create healthy communities through locally supported and effective primary health care systems.

In 2012, the Centre had the following achievements:

New tools to strengthen Indigenous health promotion across Australia

Health promotion is an important strategy for providing individuals with the knowledge and resources to improve their health and prevent illness. Implementing a continuous quality improvement process in health promotion can strengthen health promotion practice by providing a framework for evaluation, bench marking and action planning in a range of settings.

One21Seventy is a not-for-profit organisation that provides evidence-based practical tools and processes that help primary healthcare providers to do Continuous Quality Improvement (CQI). It has now introduced the first CQI tools designed specifically to support health promotion in Aboriginal and Torres Strait Islander communities. Developed during a three-year research project, the tools enable health services and clinicians to systematically assess the quality and delivery of their health promotion strategies.

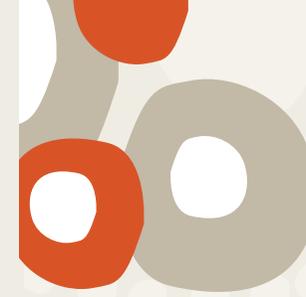
This is a ground-breaking resource for services looking to improve Aboriginal and Torres Strait Islander wellbeing through health promotion.

ABCD National Research Partnership: a national partnership approach to improving frontline healthcare

Strengthening primary healthcare is critical to reducing health inequality between Indigenous and non-Indigenous Australians. The ABCD National Research Partnership brings together researchers, policy makers and service providers to work collaboratively to understand variations in quality and strategies to improve care.

In 2012, two national meetings were held with partners and stakeholders from all regions. These meetings provide a mechanism for sharing of knowledge, identification and clarification of research priorities, improvement of the partnership and the systems that support it, and progress reporting of health system strengthening, clinical outcomes and research.

To engage partners and other stakeholders, meetings were held for regional steering committees in the five participating states/territories. These sessions focused on local research priorities and project implementation. Their aim was to link research directly with service providers and policy makers thereby facilitating effective translation of research evidence into policy and practice.



research highlights: Global and Tropical Health

The Asia-Pacific region is home to over 50 per cent of the world’s population. Many people live in absolute poverty. Each year, millions die from malnutrition and infectious diseases such as malaria, tuberculosis and other bacterial infections.

In exploring ways to prevent these deaths, Menzies’ Global and Tropical Health division partners with regional health services and institutes in the Asia-Pacific. A major focus is the epidemiology, treatment and elimination of malaria, including the regionally-important species *P. vivax* and *P. knowlesi*. Other regional programs include tuberculosis, child nutrition and prevention of pneumococcal disease and rheumatic fever.

In Australia, the group examines and develops solutions for hazards posed by Northern Australia’s tropical environment. Work includes research on the agents of skin disease, such as the bacteria *Staphylococcus aureus* and *Streptococcus pyogenes* (Group A strep or ‘GAS’) and the parasitic mite which causes scabies. It also investigates the soil and waterborne disease melioidosis, sexually transmitted diseases, hepatitis B, influenza and other infections resulting in community-acquired pneumonia and sepsis.



Umi Rubiah Satsu from the Institute for Medical Research in Kuala Lumpur puts a malaria drug plate into the incubator to assess the parasite’s response to an anti-malarial drug

GLOBAL AND TROPICAL HEALTH RESEARCH AREAS AND PARTNERS



Reducing the impact of malaria in our region

Past Menzies research has contributed to the reduction in human malaria from *P. falciparum* and *P. vivax* in Asia. However, the monkey parasite *P. knowlesi*, a common cause of malaria in Malaysia, presents an increasing threat to the disease's elimination in South East Asia. An estimated 500 million people in the region live close to monkey reservoirs and habitats affected by carrier mosquitoes.

Menzies joined with the Malaysian Ministry of Health to analyse malaria notification data over the past 20 years to show that as the other human malaria species have been brought under control in Sabah, *P. knowlesi* malaria incidence has increased.

In the largest prospective study on knowlesi malaria to date, Menzies joined with the Queen Elizabeth Hospital in Sabah to reveal that this species of malaria is three times more likely than the *P. falciparum* species is to cause severe disease.

Researchers discovered that deaths can be averted with early tertiary-hospital referral and treatment with the intravenous drug, artesunate.

Finding better solutions for severe infections

Golden staph (*Staphylococcus aureus*) is a major cause of skin and invasive bloodstream infections. Menzies researchers revealed that a common strain of the infection found in remote

Indigenous communities is genetically quite different from – and less dangerous than – other forms of Golden Staph. Importantly, our findings suggest that not all staph infections should be considered or treated the same.

Infection with Hepatitis B virus (HBV) can lead to liver failure and liver cancer with high rates of infection in the Indigenous population, reaching between 10 and 20 per cent. Menzies' scientists discovered and reported upon a new genotype of HBV, declaring it the predominant, and perhaps only, strain of HBV circulating in the Top End. Work will now progress to better understand if this new genotype is more aggressive than other strains of HBV and whether the vaccine given to all Indigenous infants is as effective as first thought.

Study paves way for tuberculosis-fighting research

Tuberculosis (TB) is one of the world's leading infectious causes of death, second only to HIV. Ninety-five per cent of TB sufferers live in low or middle-income countries such as China, India, Brazil or Indonesia. In 2009, TB deaths among parents orphaned 10 million children worldwide.

In 2012, Menzies began tuberculosis research in Sabah, Malaysia. Following Menzies' finding that low nitric oxide is linked with worse outcomes in TB patients, future studies will investigate whether improving the lung's nitric oxide production can help fight TB. Should this be the case, subsequent treatments could be developed to improve health outcomes and survival rates among TB patients.



Mirjam Kaestli collects samples of tully grass for Melioidosis testing

New discoveries about the spread of melioidosis

Melioidosis (melioid) is a potentially life-threatening disease caused by the environmental bacterium *Burkholderia pseudomallei*. It is a common cause of serious pneumonia and blood poisoning in the Top End of Australia. The bacteria live below the soil's surface during the dry season, but after heavy rainfall they can move to surface water and mud. The bacteria may then become airborne.

Recent wet seasons have seen a dramatic increase in infections. As Darwin's urban areas spread and irrigation schemes and agriculture encroach into the desert, there is an even greater risk of spread of melioid.

Menzies investigations in 2012 revealed bacteria are growing in Northern Territory grasses, especially introduced grasses. Considering introduced grasses are heavily relied upon by grazing animals, this discovery may well impact ongoing agricultural development in Northern Australia.

Finally, the team's recent work has shown that melioid can potentially be carried and spread by birds. These two key findings further our understanding regarding the way which this dangerous disease spreads.

CASE STUDY: IMPROVING NUTRITION ACROSS BORDERS



Dietitian Margo Bell helps Timorese nutritionist Ana Paula Araujo unpack vegetables at NT Nutrition Program

"People in the community listen to her a lot more. The fact she's done the course, well it's increased her profile," says Marianne, a local from a Northern Territory township, speaking about community health worker Jana's recent nutrition training [not their real names].

"I feel much more confident. I can explain the importance of breastfeeding babies until they're six months old, as well as explain when to introduce solids to help babies' teeth cut through." Jana says.

She's part of a group who travelled to Central Australia in 2012 to join a series of Menzies' short courses designed for Indigenous Australian health workers and East Timorese nutritionists.

The short courses build confidence and knowledge about nutrition for women, children and babies in remote areas.

Australian participants hailed from Ngukurr, Tennant Creek, Darwin, Katherine, Galiwinku, Gunbalanya and Hopevale, while international participants came from Dili, Bacau District and Ermera District.

CASE STUDY: SHARING MALARIA ELIMINATION KNOWLEDGE WITH ASIA

Youn-Kyoung Goo is studying *Plasmodium vivax*, a strain of malaria that's ability to lie dormant in the liver for long periods of time makes it less vulnerable to eradication.

Understanding the genetic structure will help Youn-Kyoung Goo and the Government of South Korea to address vivax malaria, the devastating parasitic disease affecting millions of people across Asia.

"The genotyping results from this visit will be useful to us to figure out genetic structure of [the malaria species] *P. vivax* in South Korea," says researcher Youn-Kyoung Goo.

"It will be the first step to comparing genetic characteristics between South Korea and other countries." This learning, she says, increases understanding of parasite movements across borders and remaining areas of malaria transmission.

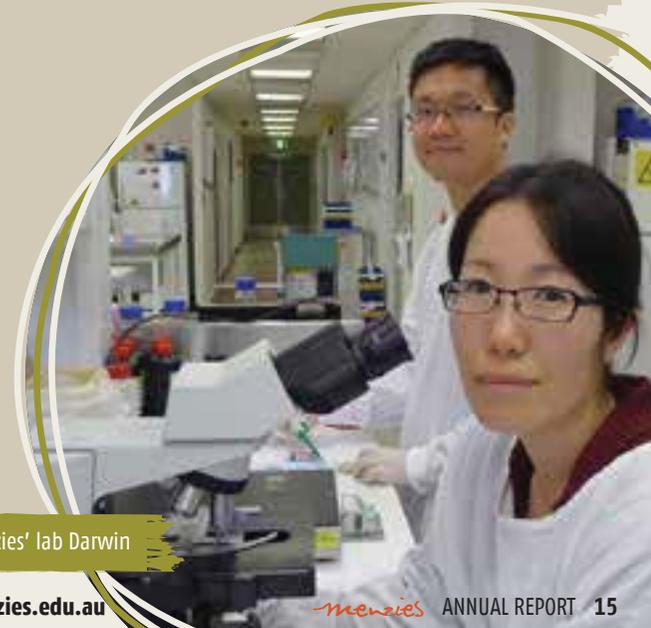
In 2012, Goo completed a work placement at Menzies' laboratories in Darwin, facilitated through the Menzies-led Asia-Pacific Malaria Elimination Network (APMEN).

"I came to Menzies because, with its high expertise in molecular biology, it is leading collaboration for worldwide genotyping study of vivax malaria."

Researchers Youn-Kyoung Goo and Grennady Wirjanata in Menzies' lab Darwin

Menzies has been able to assist people like Youn-Kyoung Goo through training, grants, and capacity building workshops funded by APMEN.

These projects are part of a regional collaboration to improve the treatment of vivax malaria in 14 countries across the Asia-Pacific region including Indonesia, Cambodia, Bhutan, China, Malaysia, Sri Lanka and the Republic of Korea.



research highlights:

Wellbeing and Preventable Chronic Diseases

Day-to-day living can be a struggle for many residents of remote communities as they battle complex social factors such as substance misuse, violence and chronic disease.

Mental illness and wellbeing concerns are among the fastest growing health problems nationwide, and Indigenous Australians are at particularly high risk of succumbing.

Menzies tackles these challenges by empowering Indigenous people through strengths-based research approaches. Menzies' projects focus on identifying

problems early, and then developing tools to help communities and individuals to stay strong – socially, spiritually, emotionally and mentally.

Far too many Indigenous Australians die from chronic diseases. Illnesses such as heart disease, stroke, diabetes, chronic respiratory disease and kidney disease account for over half of the health 'gap' between the Indigenous and non-Indigenous populations.

Menzies looks to advance the health of Indigenous Australians by researching both the causes, prevention and treatment of chronic disease, and translating the results into practical solutions.

Study finds reduction in rates of Indigenous smoking

Smoking is more than twice as common among Aboriginal and Torres Strait Islander people as it is among Australia's mainstream population – yet Menzies has revealed reasons for optimism.

Our research found that smoking prevalence declined by approximately 0.5 per cent every year among Indigenous men in both remote and non-remote Australia, as well as among Indigenous women in non-remote Australia, from 1994 to 2008. Among Indigenous women in remote Australia, smoking prevalence spiked during that period, but fortunately, has since plateaued.

We also showed an increase in rates of successful quitting; and promising signs that fewer Indigenous boys and girls are now starting to smoke. Our study *Changes in smoking intensity among Aboriginal and Torres Strait Islander people, 1994-2008*, showed a massive decline in heavy smoking (more than 20 cigarettes/day) in Indigenous Australia.



Associate Professor David Thomas heads Menzies' tobacco control research program

CASE STUDY: SCHOOLS PLANT GARDENS AND GROW NUTRITION KNOWLEDGE

At Nganmariyanga School in remote Northern Territory, teenage boys walk among rows of thriving fruit.

"The middle years boys' class has planted and taken care of the garden," explains teacher Joe Hewett. "They've even been involved in hand pollinating plants."

The students form part of a large network of people embracing Menzies' School Pilot Garden Program.

Launched in 2012, the program brings young people together to grow and cook a range of fresh produce. Schools are sent kits and resources then supported remotely by Darwin-based horticulturalists and nutritionists.

Program director Dr Andy Hume says the nutritional knowledge gained is designed to set kids on a path of good health, "Good nutrition throughout life is fundamental to the

maintenance of wellbeing and the prevention of disease."

Following the program's success in 2012, all remote schools in the NT will have access to the same resources from 2013, a move welcomed by teachers like Joe Hewett.

He says: "The program has really helped teach our students about growing plants and cooking healthy food and we are planning on it becoming a regular part of our teaching program."



Paul Cook samples the fruits of his labour, Nganmariyanga School, NT

CASE STUDY: EASING DIABETES STRESS FOR PREGNANT MOTHERS



Menzies helped Natasha manage her diabetes whilst pregnant with her son Samuel

Natasha Paul has diabetes. While pregnant with her son Samuel, she wanted to ensure she made the best choices to avoid harm to her baby.

"Despite having a family history of diabetes, I was relatively ignorant about managing the disease."

Awaiting Samuel's birth, Natasha was able to regularly monitor her food intake and its impact upon her baby by taking part in Menzies NT Diabetes in Pregnancy Partnership.

Natasha learnt that she had to pick the right foods to keep blood sugar levels even.

"Simple lifestyle changes make a substantial difference to my health and the health of my baby, Samuel. I started a low-GI diet and doing regular exercise to keep my blood sugar levels under control. These changes weren't difficult, but they had a profound impact on me. They provided the tools to maintain a healthy lifestyle into the future."

Natasha says, "It was a pleasure to be involved in the project, knowing that the research outcomes will support women in the NT to access the right advice, care and follow-up support so they can manage this disease in pregnancy and beyond."

'Shelf talkers' help communities make healthier food choices

Good nutrition throughout life is fundamental to the maintenance of wellbeing and the prevention of disease. It plays a vital role in pregnancy and early childhood, helps prevent obesity and type 2 diabetes and can lower the risk of recurring heart disease by up to 70 per cent.

To help highlight healthy food choices in remote communities across Australia, Menzies' nutrition team developed a package of resources in 2012 for release in March 2013.

The resource program supports communities to develop and use eye-catching 'shelf talker' icons on healthy food options in stores. The project operated across four communities and encouraged a high degree of community ownership of individual shelf talker systems. In some instances, local groups chose and commissioned their own artwork, encouraging strong identification with the 'healthy food' message.

The shelf talker project was designed to drive sales of healthy foods in outback stores, and to decrease the high rates of heart disease, diabetes and lifestyle-related illnesses in remote Aboriginal communities.

Kidney function test validated for use among Indigenous Australians

The incidence of end-stage kidney disease is 10 times higher among Indigenous Australians than it is in non-Indigenous Australians. End stage kidney disease is the complete or almost complete failure of the kidneys to work. More than 1,400 Indigenous Australians received treatment for this in 2012. Developing an accurate measure of kidney function to focus treatment on people at high risk of progressing to end-stage kidney disease is critical to improving the lifespan and health outcomes of those susceptible to kidney disease.

The Accurate Assessment of Kidney Function in Indigenous Australians: The Estimated GFR Study, undertaken by the Clinical Research Team within the Wellbeing and Preventable Chronic Disease team, validated the appropriateness of using a standard kidney function test (known as eGFR) for Indigenous Australians.

The study was required due to concerns that the difference in body builds between Indigenous and non-Indigenous Australians may make eGFR an inappropriate measure for Indigenous patients.

Researchers tested 600 Indigenous and 100 non-Indigenous Australians in five regions across Australia. The positive results mean that health professionals can use the kidney function test nationwide with confidence, as it offers accurate tests for both Indigenous and non-Indigenous patients.



A shelf talker label used in Central Australia, 'mai palya' means good food

New audit tool to improve health services for Indigenous youth

Indigenous youth are an important but largely overlooked target group for chronic disease prevention and early intervention. This group also experience a considerable burden of mental illness, yet overall, tend to under-utilise healthcare services.

In 2012 a new tool to enable health centre staff to undertake clinical audits of Indigenous youth healthcare services was developed. The tool provides data on the quality of care provided to Indigenous people aged 12-25.

It focuses on routine checks and screening for social and emotional wellbeing status. On completion, the tool will facilitate comprehensive assessments of health care services for youth, as well as providing data critical to improving their overall quality and effectiveness.

publications - featured

At Menzies School of Health Research, our researchers are committed to conveying their research findings to a wider audience. In 2012 Menzies researchers published over 255 publications (including 221 as peer-reviewed articles). This ensures our research is effectively translated to ensure better outcomes for Indigenous, non-Indigenous people and disadvantaged populations. Below is a selection of our most important publications.

Barber B E, William T, et al. "A prospective comparative study of knowlesi, falciparum, and vivax malaria in Sabah, Malaysia: High proportion with severe disease from plasmodium knowlesi and plasmodium vivax but no mortality with early referral and artesunate therapy." *Clinical Infectious Diseases* 56(3): 383-397. In the largest prospective study of malaria from the monkey malaria parasite, *Plasmodium knowlesi* is three times more likely to cause severe malaria than *Plasmodium falciparum*. The high risk of death from knowlesi malaria can be prevented by early referral and early use of intravenous artesunate.

Bailie R S, Stevens M, et al. "The impact of housing improvement and socio-environmental factors on common childhood illnesses: A cohort study in Indigenous Australian communities." *Journal of Epidemiology and Community Health* 66(9): 821-831. This paper demonstrates the failure of Indigenous community housing programs that focus on housing infrastructure alone (without attention to the broader community environment) to impact on child health.

Davies J, Gordon C I, et al. "Impact of results of a rapid *Staphylococcus aureus* diagnostic test on prescribing of antibiotics for patients with clustered gram-positive cocci in blood cultures." *Journal of Clinical Microbiology* 50(6): 2056-2058. Using a novel molecular technique to screen all blood cultures showing possible Golden Staph, we have identified the organism 24-48 hours earlier than traditional techniques and lead to earlier appropriate antibiotic treatment and net cost savings.

Garvey G, Beesley V I, et al. "The development of a supportive care needs assessment tool for Indigenous people with cancer." *BMC cancer* 12. Indigenous people with cancer have language, customs and specific needs that are not accommodated within the standard cancer supportive care needs tools. Our new supportive care needs tool for Indigenous people will now allow screening for supportive care needs that are specific to Indigenous cancer patients.

Maple-Brown I J, Lawton P D, et al. "Study protocol - Accurate assessment of kidney function in indigenous Australians: Aims and methods of the eGFR study." *American Journal of Kidney Disease* 60(4): 680-682. The study found the kidney test known as CKD-EPI eGFR to be an accurate and reliable test for kidney function in Indigenous Australians, similar to reports that it is accurate and reliable in non-Indigenous Australians.

Marchant J, Masters I B, et al. "Randomised controlled trial of amoxicillin clavulanate in children with chronic wet cough." *Thorax* 67(8): 689-693. This paper describes the world's first randomised controlled study on protracted bacterial bronchitis, the most common cause of chronic wet cough in children. Study confirms that which has been described in cohort studies.

Meumann E M, Cheng A C, et al. "Clinical features and epidemiology of melioidosis pneumonia: Results from a 21-year study and review of the literature." *Clinical Infectious Diseases* 54(3): 362-369. This study provides a definitive summary of melioidosis pneumonia (the most common presentation of melioidosis) based on data from the 21-year Darwin Prospective Melioidosis Study.

Robinson G W, Tyler W B, et al. "Gender, Culture and Intervention: Exploring Differences between Aboriginal and Non-Aboriginal Children's Responses to an Early Intervention Programme." *Children and Society*. In press. This paper outlines findings from a group parenting intervention for parents of preschool children delivered to both Aboriginal and non-Aboriginal children and families in the Northern Territory. It identifies striking differences between outcomes of the program for Aboriginal and non-Aboriginal boys and girls.

Thomas D P. "Changes in smoking intensity among Aboriginal and Torres Strait Islander people, 1994-2008." *Med J Aust* 197(9) 503-506. This report found a significant reduction in heavy smoking by Indigenous smokers from 1994 to 2008. Reducing smoking intensity and prevalence will lead to fewer deaths and less illness due to smoking.

Woodberry T, Minigo G, et al. "Low-level plasmodium falciparum blood-stage infection causes dendritic cell apoptosis and dysfunction in healthy volunteers." *Journal of Infectious Diseases* 206(3): 333-340. We found that very early after infection, malaria parasites paralyse and kill immune cells that are essential for effective and long-lasting immune responses. This may explain why a malaria infection does not protect against future attacks.

A full listing of our publications is available on our website at www.menzies.edu.au

research impact in the community

Beyond its commitment to research excellence, Menzies sets its sights on solutions – using our research findings to kick-start and sustain positive change.

Formally, this is known as 'knowledge translation': the exchange, synthesis and ethically-sound application of knowledge derived from research to advance services and products, strengthen the health care system, and ultimately, improve health.

This snapshot captures just a few of the many areas in which Menzies' knowledge has been transformed into practical, tangible outcomes.



Aleisha and Annalisa do activities together on the Tiwi Islands, NT

New data shows Menzies tools helping to Close The Gap

The Northern Territory is on track to Close The Gap between Indigenous and non-Indigenous mortality rates, and at least part of the credit is due to a concerted effort by Menzies and its partners to invest in evidence-based systems to improve the capacity and quality of primary healthcare.

Dr Christine Connors from the Northern Territory Department of Health (NT DOH), presented data in late 2012 from a 2012 Council of Australian Government's Reform Council report showing a steady reduction in the age-standardised death rate of the Indigenous population. Projections showed the death rate would reduce to the same level as that of non-Indigenous Northern Territorians by 2031.

Dr Connors, who chairs the NT Primary Health Care Quality Improvement (CQI) Committee, also presented data from Menzies' CQI support service, One21seventy. This revealed that over the past seven years there have been ongoing improvements in the quality of care provided for diabetes management, such as blood pressure checks and foot checks, and improved outcomes such as blood pressure results for health service clients.

She described how the NT Aboriginal Health Forum, with representatives from Aboriginal Medical Services Alliance Northern Territory, the Australian Government Department of Health and NT Department of Health, had invested in a system to support quality improvement across the NT.

This system includes reporting against NT Aboriginal Health Key Performance Indicators. Sixteen CQI facilitators work across all the NT's Aboriginal primary health care services, a large number of which use One21seventy's web-based reporting system and CQI tools to audit against best practice guidelines from the Central Australian Rural Practitioners Association manual. This system was complemented by research conducted by Menzies' ABCD National Research Partnership.



Menzies fieldworkers pictured in Sonsogon Suyad, Sabah, Malaysia

Improving international policy for malaria treatments

More than 500 million cases of malaria occur each year, with an estimated one million deaths worldwide, mostly in infants and pregnant women.

Plasmodium falciparum causes most malaria deaths and has been the primary target for malaria elimination. Yet work at Menzies with regional partners has demonstrated that other species, such as *Plasmodium vivax* and *Plasmodium knowlesi* also cause a significant proportion of severe disease in the Asia-Pacific region.

In collaboration with the Ministry of Health, the Menzies malaria team established research and training units in Indonesian Papua and in Sabah, Malaysia.

Over the last five years this team and its collaborators have informed policy change in Indonesia, Malaysia and Australia.

Specifically, in-country National Malarial Control Programs have changed the treatment for severe malaria from quinine to artesunate, and, in Indonesia, implemented dihydroartemisinin-piperazine (DHP) as a highly effective treatment for multidrug-resistant malaria. To date these actions have contributed to a 30 per cent reduction in malaria in Papua, with the number of perinatal deaths associated with malaria falling by half.

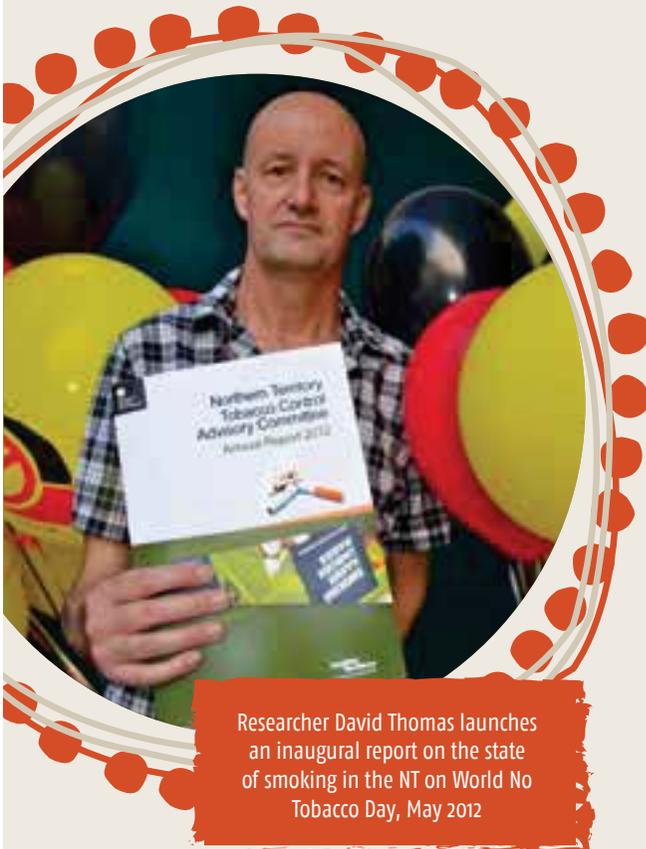
WHO adopts Menzies malaria treatment plan

New evaluation and treatment plans for an emerging species of malaria, developed by the Menzies malaria research team, has led to new World Health Organisation (WHO) recommendations.

Studies with colleagues at Queen Elizabeth Hospital in Sabah, Malaysia showed high rates of death from knowlesi malaria when the drugs oral chloroquine and/or intravenous quinine were used as opposed to artemisinin combination therapy and / or intravenous artesunate.

The malaria research team evaluated a draft local policy recommending early initiation of this artemisinin-based therapy for severe knowlesi malaria, as well as routine early referrals for patients with warning signs or high numbers of parasites in the blood.

Over a one-year period no deaths occurred, and this approach was adopted as routine policy in Sabah.



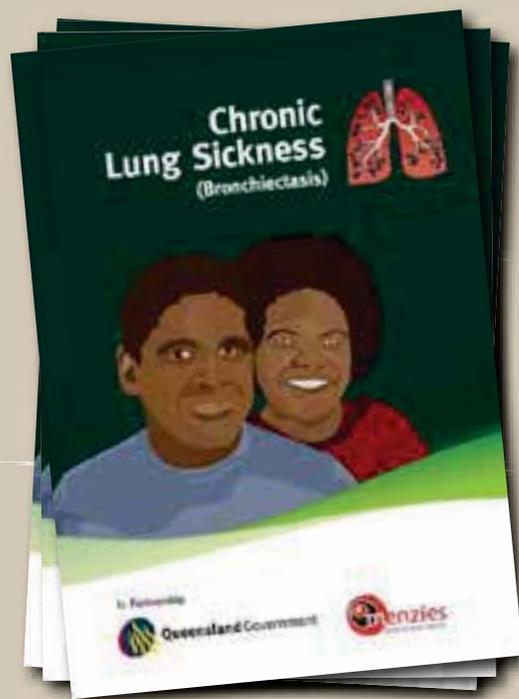
Researcher David Thomas launches an inaugural report on the state of smoking in the NT on World No Tobacco Day, May 2012

Informing policy in the NT to protect kids from second-hand smoke

Upholding Menzies' commitment to informing public health policy, Associate Professor David Thomas, Chairman of the Northern Territory Tobacco Advisory Committee, presented his committee's inaugural report into the state of smoking in the NT to the NT Government in May 2012.

The report includes key insights gained by Menzies research alongside changes in tobacco control policy and activity in the NT. The 2012 report recognised the significant improvements in legislative and service reforms introduced in the Territory since 2009. These initiatives were designed to address the harm caused by smoking, and included a ban of open tobacco product displays in stores, and the introduction of smoke-free legislation protecting people in pubs and outdoor eating venues from second-hand smoke.

The report highlighted that despite these significant steps, there was more to do as the Territory has the highest smoking rates in the nation. The committee called for new legislation to ban smoking in cars that carry children. It is hoped this move will better protect Territory children from the dangers of second-hand smoke, which has been shown to be an entirely preventable contributor to respiratory diseases and symptoms among young children.

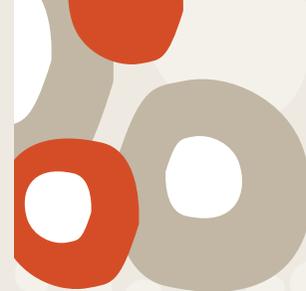


Taking the lung health message to communities

The Menzies Child Health Respiratory group is providing tools to tackle one of the most common reasons for hospitalisation among young Indigenous children.

Working with a reference group, the group developed culturally-appropriate respiratory resources as an educational tool for families and health professionals to help explain respiratory conditions, thus increasing knowledge and awareness of respiratory disease. These included three educational flipcharts covering bronchiolitis, pneumonia and bronchiectasis that were used in remote communities across Northern Australia.

This awareness-raising and education campaign involved extensive data collection by the respiratory health group and has been designed to address the complex and chronic respiratory issues seen in adults that stem from issues in early life.



capacity building

Menzies recognises that often the best way to build a workforce of the future is to start in our own backyard.

Menzies' initiatives to engage youth with a passion for the health sciences is grooming today's locally-produced talent to become tomorrow's research leaders.

Similarly, our commitment to building the capacity and skills of our Indigenous workforce has enabled a number of Aboriginal and Torres Strait Islander staff to successfully complete vocational education qualifications and professional development courses in 2012.

Menzies' gap year kick-starts school leaver's science career

Following on from her year 12 studies, high achieving Darwin High School student, Nerida Liddle, had a raft of university offers to choose from.

Her decision to spend a year with Menzies as a gap year student was one that paid tremendous dividends for both Nerida and for Menzies.

Nerida performed exciting laboratory research, learnt valuable research skills and engaged youth in science. She played an integral role in microbiology, molecular biology, and immunology studies to better understand ear and lung disease in children.

"My Menzies experience greatly increased my professional confidence, motivation and a greater sense and appreciation of the research process," she said.

2013 will see Nerida head to Flinders University in South Australia to study a Bachelor of Science (Honours) enhanced program for high achievers.

Menzies has expanded its 2013 gap year program to include three students.



Gap year student Nerida Liddle at work in Menzies' lab



Helen Kassman-Reid receives her Certificate IV in Indigenous Research

Indigenous researchers blossom

An opportunity to contribute to the national discussion on Indigenous anxiety and depression was just one of the highlights for a group of Menzies 2012 graduates.

Menzies' Helen Kassman-Reid, Sian Graham and Joe Fitz successfully completed a Certificate IV in Indigenous Research and Capacity Building, a vocational qualification specifically designed to bolster the future generation of Indigenous researchers.

The course, a pilot investigation into Aboriginal people's understandings of anxiety and depression, required the budding researchers to collect information, analyse data sets, conform to ethics requirements and make recommendations that will contribute to BeyondBlue's upcoming campaign to address anxiety and depression in Indigenous populations.

"The qualification attracts people who are really passionate about working to improve the health and wellbeing of their communities and it unlocks the secrets of research and how it can facilitate those improvements," Sian said.

Beyond the professional advantages, the course also yielded personal benefits for graduates by developing increased confidence, motivation and a greater sense of research competency.

"This course and the qualification makes me feel empowered and is a great foundation to build upon by putting the theory into practice in the workplace," Helen said.

CASE STUDY: CAPACITY BUILDING IN REMOTE COMMUNITIES

As well as fostering skills internally, Menzies forges relationships with local communities to deliver courses, qualifications and training – determined according to the needs and wishes of local residents and elders. Our aim is to go beyond the role of the traditional researcher: collecting data and focussing solely on analysis.

“The way we do research projects has changed. People in communities want accredited training that they can use elsewhere. They want skills; they want to be employed.”

– Therese Kearns, Menzies research nurse and epidemiologist

To combat scabies in East Arnhem Land region of the Northern Territory, Menzies scabies and strongyloides project team has learnt the effectiveness of medically training locally-based, Indigenous workers.

In 2012, Menzies trained 15 community members in a Certificate 2 course in Child Health Research, six through a phlebotomy (blood-taking) course and three through a medication skills-assist qualification. We also organised first aid training with the help of Red Cross. Sixty community members received first aid certificates as a result.

“Our projects are designed to build capacity in communities by providing real qualifications that give people real jobs across a number of different health projects,” Therese Kearns, Menzies research nurse and epidemiologist, says.

In the community of Galiwin'ku, a total of 1,300 men, women and children participated in the project between March 2010 and August 2012. Following training, community researchers were able to describe to participants the project in Yolngu language, and to successfully perform skin screening, phlebotomy and medication administration activities.

Sisters Jane and Meghan with their certificates at Galiwinku Recognising and Respecting Yolngu Contribution to Research Day May 2012



Dili-based Project Co-ordinator Ana Isabel Soares and Timor Leste Program Manager Vijaya Joshi

GLOBAL AND LOCAL PROJECTS EMPOWERING LOCAL WORKERS

Communities unite to improve nutrition

The ‘Good Food Systems: Good Food for All’ nutrition project empowers four remote communities to bolster the capacity of their community groups, store committees and other stakeholders to improve people’s access to healthy food.

Through offering support strategies for planning and monitoring the sale of healthy foods, the project assists local community coordinators to drive an annual planning and quarterly review meeting for ‘good food’ groups. It also develops and distributes tools to enable better decision making, monitoring, planning, reflection and feedback regarding the supply of good nutrition to these isolated regions of Australia.

Tackling RHD in the Pacific region

Rheumatic Heart Disease (RHD) and Acute Rheumatic Fever (ARF) are responsible for high levels of morbidity and death among Pacific Islanders. To increase awareness of the disease and to help the population understand the disease burden,

a three-year collaborative project called ‘RHD Pacific’ was established with AusAID and Ministries of Health in Nauru, Kiribati, Tuvalu and the Solomon Islands.

The program equips local health workers with clinical skills and support. Its aim is to expand capacity and improve care and management of RHD patients.

Building research capacity in Timor Leste

Menzies is working with Timor Leste’s Ministry of Health to develop an international-standard health research sector. In our mentoring role, we develop a skills research training program for staff in the Ministry’s Cabinet for Health Research Development, as well as for health faculty staff at the National University and for doctors practising at the National Hospital.

In addition, in 2012 we helped develop governance arrangements for the Ministry’s ethics committee, and completed a data review of major health trends in Timor Leste, spanning the last 30 years.

Research Divisions Awards

Global and Tropical Health

- The Menzies Malaria program was ranked as one of the best 20 case studies (of 162) in the nation as part of the 2012 Excellence in Innovation Australia rankings from 12 universities
- Professor Bart Currie's National Health and Medical Research Council (NHMRC) grant application for his project investigating why melioidosis is increasing in urban areas of the Northern Territory was awarded a perfect seven out of seven. Only three projects in Australia received this score

Mental Health, Wellbeing and Chronic Disease

- Dr Jaqui Hughes was named the Northern Territory's Young Tall Poppy as part of the recent 2012 NT Research and Innovation Awards, for her forward-thinking approach to Indigenous health research
- Dr Vanessa Johnston won the 2012 New Researcher Award – part of Charles Darwin University's Vice-Chancellor's Awards for Exceptional Performance in Research
- Dr Louise Maple-Brown was named a finalist in the Southern Cross Television Tropical Knowledge Research Award for her research program into diabetes and chronic kidney disease

Child Health

- The Centre for Child Development and Education (CCDE) was awarded the Chief Minister's Award for Excellence in the Public Sector, Education Category, with the Department of Education and Children's Services (DECS), for its work in developing, evaluating and monitoring the Strong Start – Bright Futures program for remote Indigenous school education
- Kim Hare won the 2012 National Health and Medical Research Council Gustav Nossal Postgraduate Scholarship award, allocated to the top ranked applicant in the Biomedical category and the combined Medical/Dental category
- Anne Hanning, Bonnie Moss and Professor Sven Silburn received the McArthur River Mining Indigenous Innovation Award as part of the NT Research and Innovation Awards for the cultural adaptation of the Australian Early Development Index (AEDI) for use with Indigenous children
- Associate Professor Amanda Leach and the Ear Health Research Program Team won the CDU Vice Chancellor's Award for Exceptional Performance in Research for more than 20 years of research addressing complex health issues including microbiology, disease prevention and treatment options
- Gabrielle McCallum won the Education, Research and Innovation Award at the 2012 NT Nursing and Midwifery Excellence Awards

NEW RESEARCHER AWARD: DR VANESSA JOHNSTON

"Our research at Menzies helps answer questions that will significantly reduce health inequalities between Indigenous and non-Indigenous Australians, and between Australia and our neighbours in the Pacific and South East Asia," says Dr Vanessa Johnston, winner of the 2012 New Researcher Award – part of Charles Darwin University's Vice-Chancellor's Awards for Exceptional Performance in Research.

"That is the sort of research I am driven to do and the kind of research environment that I want to be a part of." A senior research fellow with interests including Aboriginal health, tobacco control, and refugee health, the award recognised the quality of Vanessa's

peer-reviewed literature, her capacity to attract research income, her postgraduate supervision and the end-user impact of her research.

"Winning the Young Researcher Award gave me encouragement that our tobacco control team are on the right track in doing research that is answering the most important and policy-relevant questions about how we can reduce the harms from smoking among Indigenous Australians."



Whole-of-organisation awards

A comprehensive review of Australian research has found that the Menzies School of Health Research has received the highest possible ranking for its expertise through CDU in Medical and Health Sciences. Menzies' research efforts in Clinical Science received the highest possible score of five out of five, ranking the discipline's performance as outstanding, and well above world standard. The review formed part of the Australian Government's Excellence in Research for Australia (ERA) initiative.

Fellowships

Professor Nicholas Anstey – NHMRC Practitioner Fellowship: Pathophysiology and treatment of malaria and other tropical infectious diseases prevalent in our region

Dr Elif Ekinci – NHMRC Early Career Fellowship: Detection and assessment of kidney disease in Indigenous Australians

Dr Josh Hanson – NHMRC Early Career Fellowship: Optimisation of the supportive care of adults with severe falciparum malaria

Dr Kate Senior – ARC Future Fellowship: Youth Futures: a study to examine health and wellbeing among Indigenous adolescents

Therese Kearns – NHMRC Early Career Fellowship: Childhood anaemia

Internal Awards

- The 2012 Menzies Medallion was presented to Joanne Garngulkpuy, Dorothy Bepuka and Elaine 'Lawurrpa' Maypilama on behalf of the Yalu' Marnngithinyaraw Indigenous Corporation for its significant contribution to improving the health of Yolngu people over two decades
- The 2012 Ryan Family Prize, which recognises excellence from a staff member, was awarded to Yomei Jones for her outstanding contributions to several high profile Menzies research projects including Let's Start
- The 2012 Val Asche Prize for Academic Excellence was awarded to Donna Lorenze (Graduate Diploma in Public Health) and Dr Andre Martyres (Master of Public Health)

AUSTRALIA'S FIRST INDIGENOUS KIDNEY SPECIALIST WINS YOUNG TALL POPPY AWARD: DR JAQUI HUGHES

"The death rates from kidney disease are 8 to 10 times higher among Indigenous Australians, who are also 14 times more likely to need in-hospital care for kidney dialysis," says Dr Jaqui Hughes, winner of the Northern Territory's Young Tall Poppy Award at the 2012 NT Research and Innovation Awards.

As Australia's first Indigenous nephrologist, Jaqui is working towards reducing the risk and impact of kidney disease in Australia's Aboriginal and Torres Strait Islander population.

Her Tall Poppy Award recognises Jaqui's forward-thinking approach to Indigenous health research, which focuses on body composition and its impact on obesity, diabetes and subsequently kidney disease among Indigenous Australians.

"My research with Menzies showed that young, healthy adult Aborigines develop a very high risk pattern of intra-abdominal fat while only modestly overweight, which is not seen in people with a European background," Dr Hughes says.

"Controlling weight gain in this age group should be a priority because it may save people from developing diabetes and kidney disease, or prevent a heart attack before they reach the age of 40."

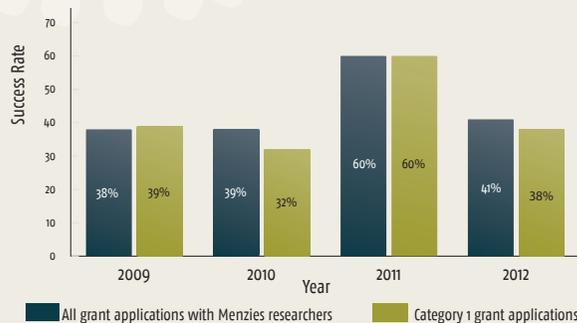


Dr Jaqui Hughes accepts her prize with Jonathan Carapetis at the NT Research and Innovation Awards



research and education at a glance

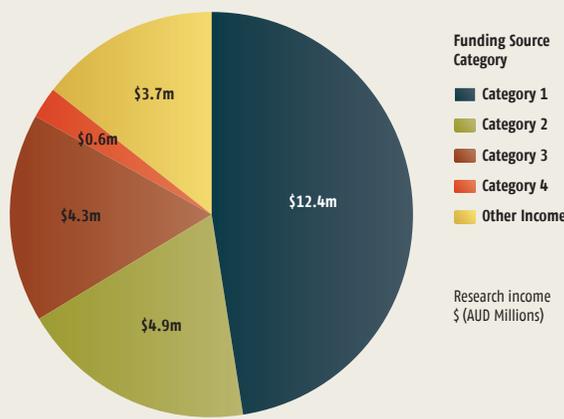
Menzies grant application success rate



In 2012, our success rate with grant applications remained high, with over 40 per cent of all grant applications approved.

*Note: Figures accurate as of March 2013 and may change following finalisation of all 2012 grant applications

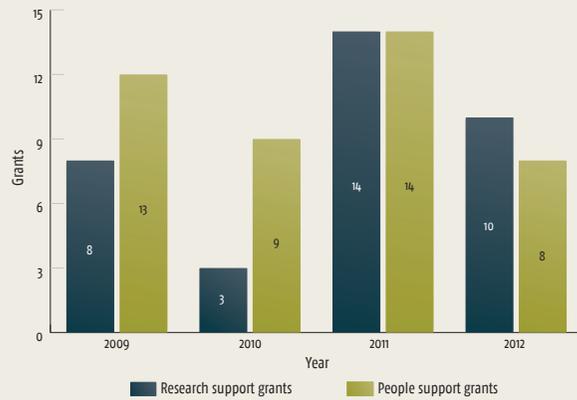
Menzies Research income by funding source category 2012



In 2012, a majority of Menzies' research income came from the Australian Government through competitive research grants.

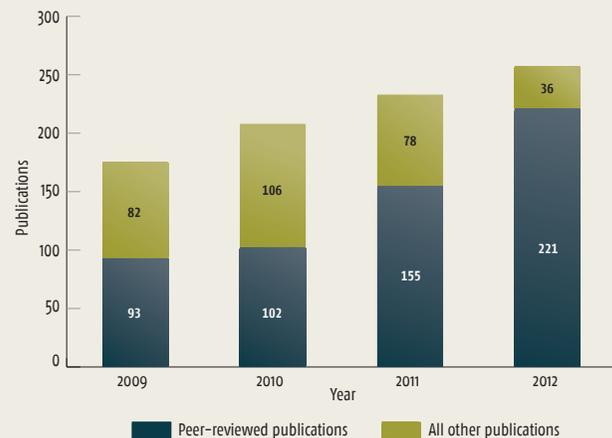
Funding source categories:
 Category 1 – Australian Competitive Grants
 Category 2 – Other public sector income
 Category 3 – Australian contracts, donations & bequests, international competitive grants
 Category 4 – Cooperative Research Centres
 Other income – tenders & consultancies, infrastructure grants, other Australian and overseas grants.

NHMRC grants awarded to Menzies from 2009 - 2012



In 2012, Menzies was awarded a total of 17 National Health and Medical Research Council grants to support research and education activities.

Publications authored by Menzies' researchers



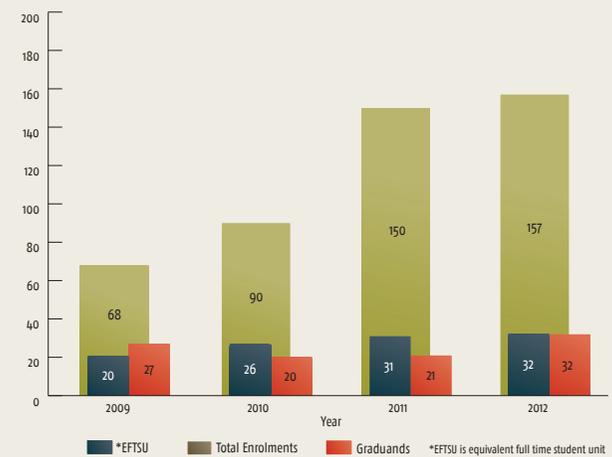
In 2012 Menzies researchers increased their publications output to over 255 publications, with 221 as peer-reviewed articles.

Higher Degree by Research: PhD and Master by Research Enrolments and Graduands



In 2012, there was a significant increase in the number of enrolments in Higher Degree Research.

Graduate Diploma, Master and Doctor of Public Health Enrolments and Graduands



In 2012, participation in the Graduate Diploma, Master and Doctor of Public Health continued to increase.

education and training

Menzies' Education and Training team coordinates and delivers the Charles Darwin University (CDU) postgraduate coursework in public health and research methodology training, and administratively supports Higher Degree Research Students.

A highlight for 2012 was seeing the first graduand of the Graduate Diploma in Health Research complete studies. This new course focuses on developing health research skills in research design, interpreting health information and using epidemiology, statistical and qualitative research methodologies.

The Graduate Diploma in Public Health (GDPH) and Master of Public Health (MPH) were re-accredited and introduced new elective units in the areas of Health Promotion, Indigenous Health Research, Clinical Trials, Research Design, Research Skills, Sexual and Reproductive Health and Community Development. A further seventeen graduands were awarded a Master of Public Health and thirteen a Graduate Diploma in Public Health.

Enrolment in the Master by Research and Doctor of Philosophy increased to 66 in 2012. Congratulations to the four PhD graduands and those who had scholarship success.

Research capacity development grew with five MPH students working on research projects and all Doctor of Health students progressing to their research component.

The annual week of introductory research skills training was well-attended and successful. Another highlight was a master class on qualitative research methods run by Professor Pranee Liamputtong that brought together NT qualitative researchers to conceive, plan and synthesise data and write up research for publication.

The high standard of Indigenous health content in Menzies public health courses was recognised by peers at the Council of Academic Public Health Institutions Teaching and Learning Forum in Adelaide in September. The national review of public health courses was conducted by the Public Health Indigenous Leadership in Education Network (PHILE). The results of the review are yet to be published.



Menzies' graduands Belinda Davidson, Robyn Marsh and Clare Wilson

Dr Marsh's research used DNA-based technologies to investigate the bacteria underlying acute otitis media.

"Using samples previously collected from a randomised control trial from across Northern and Central Australia, we found that many different types of bacteria are present in the nose and middle ear pus of children with acute otitis media. Similarly perforation was worse than was previously thought.

"This research is investigating how we can improve the ear health of Indigenous children so they can get the best start in life."

Dr Marsh's findings will contribute to the long-term understanding, treatment and management of middle ear infections in high-risk Indigenous populations.

PHD CASE STUDY: USING DNA TO UNDERSTAND EAR DISEASE

PhD research at Menzies is using DNA-based technologies to help to understand the causes of middle ear infection in Indigenous children.

Dr Robyn Marsh, who was conferred a PhD from CDU at its 2012 end-of-year graduation ceremony, conducted an analysis of acute middle ear infection (otitis media) bacteriology in Indigenous populations.

"In the NT, approximately 90 per cent of Indigenous children suffer from middle ear infections. In this population otitis media develops in the first weeks of life and commonly progresses to chronic disease," Dr Marsh said.

"Hearing loss from otitis media adversely affects language development and educational outcomes, which subsequently contributes to social disadvantage in adulthood."

Awarded a Doctor of Philosophy (PhD) in 2012:

- Dr Thomas Snelling – The effect of rotavirus vaccination on hospitalisations for gastroenteritis in the Northern Territory of Australia
- Dr Nitin Kapur – Improving diagnosis and management of children with non cystic fibrosis Bronchiectasis
- Dr Wajahat Mahmood – Characterisation of aspartic protease activity from the scabies mite *Sarcoptes scabieis*
- Dr Robyn Marsh – Culture-independent analysis of the bacteriology associated with acute otitis media in Indigenous Australian children

Scholarships announced in 2012

- Jessica Loughland, Blood dendritic cell viability and function in malaria, Australian Postgraduate Award
- Linda Viberg, A comparison of *Burkholderia pseudomallei* causing acute vs. chronic melioidosis using genomic and transcriptomic tools, Australian Postgraduate Award
- Vincent He, Survival analysis for stroke in NT from 1992 to 2007, University Postgraduate Research Scholarship
- Danielle Aquino, Exploring food choices and infant and young child feeding practices of Indigenous young parents in a remote community, Australian Postgraduate Award

- Mascha Friderichs, Towards a healthier future: conceptualisations, responsibility and determinants of health for young Indigenous people in Ngukurr, International Postgraduate Research Scholarship
- Gabrielle McCallum, Improving the management of bronchiolitis in Indigenous children, National Health and Medical Research Council (NHMRC) Postgraduate Scholarship
- Abbey-Rose Hamilton, Co-morbidities and cancer amongst Indigenous and non-Indigenous women, 1997-2009, NHMRC Postgraduate Scholarship
- Dr Danielle Longmore, Birth outcomes and body composition in babies born to mothers with diabetes in pregnancy, NHMRC Postgraduate Scholarship
- Kim Hare, Bacteriology of respiratory infections in Australian Indigenous children, Australian Academy of Science 2012 Douglas and Lola Douglas Scholarship in Medical Science
- Dr I-Lynn Lee, The role of inflammatory markers and lipids in the pathogenesis of gestational diabetes in Indigenous Australian women, Northern Territory Research and Innovation Board (NTRIB)
- Evan McRobb, The application of Whole Genome Sequencing to *Burkholderia pseudomallei*: The gateway to diversity and geographical understanding, NTRIB

PHD SCHOLARSHIP CASE STUDY: GABRIELLE MCCALLUM

A young nurse wandered into the Royal Darwin Hospital tearoom and looked quizzically at a job advertisement pinned to the notice board. The ad asked for a researcher. "I'm not qualified," she said to herself. But the idea had looped its way into her thoughts.

"I knew deep down that I wouldn't remain a hospital nurse. I wanted to make a difference to families in a less traditional way", she explains. Gabrielle McCallum is the 2012 NT Nursing and Midwifery Excellence Award Winner for 'Education and Research and Innovation'.

Gabrielle first came to the Territory as a nursing student in her final year of study. Initially seconded to Katherine, she soon headed to Darwin to gain further paediatric experience.

After dividing the past 11 years between Menzies and short stints at the hospital, her role now includes far more of the educational work that she cherishes.

Her team conducts clinical tasks and creates culturally-appropriate resources to teach health clinic staff, nurses and families about common lung diseases, such as bronchiolitis, pneumonia and bronchiectasis.



Gabrielle McCallum at the 2012 NT Nursing and Midwifery Excellence Awards

After receiving a recent grant from the Australian Respiratory Council, McCallum and staff developed a range of talking posters and flipcharts, produced in English as well as in 11 local languages.

Driven to see a change in the way young children with respiratory disease are managed, she's made this subject the focus of her PhD thesis.

Gabrielle's study will examine the management of Indigenous children with acute bronchiolitis.

indigenous capacity building

Menzies' Indigenous Capacity Building Unit aims to build a more capable and sustainable Aboriginal and Torres Strait Islander workforce through providing accelerated and improved work opportunities, as well as creating tailored pathways for growth.

2012 projects included delivering culturally-safe and respectful work environment programs, including mentoring and cultural awareness services.

The focus is to attract, recruit and retain Aboriginal and Torres Strait Islander staff and to ensure they have the best possible developmental opportunities. The unit also provides support and advice to all research divisions within Menzies.

Reconciliation Action Plan

The unit oversaw the start of the creation of a Menzies-wide Reconciliation Action Plan. As part of this, select senior staff were identified as 'champions' and made part of a working group. Reconciliation planning meetings were held, and a process was established to identify what 'reconciliation' means to staff. Feedback from 'reconciliation' workshops will form the initiatives underpinning the action plan.

Aboriginal Awareness Sessions

Awareness sessions were held at Menzies' Darwin and Adelaide offices in order to strengthen staff understanding about Aboriginal and Torres Strait Islander Australians. Staff attended the workshops covering topics such as Indigenous identity and expectations of working with Indigenous staff. Ideas were also collected on the topics of engagement, participation and retention of Indigenous people in the workplace.

Galiwinku Research Celebration Day

In May 2012, members of the Elcho Island community welcomed researchers and dignitaries from Menzies and Charles Darwin University (CDU) to Galiwinku to celebrate the extensive contributions of the Yalu group.

This group of Yolngu researchers has worked with Menzies and CDU in numerous research projects and other activities covering rheumatic fever, diabetes, education, healthy lifestyles and financial literacy since its foundation in 2000. The day celebrated the formation of the Yalu Marnggithinyaraw Indigenous Corporation.

Visitors also enjoyed performances by local dancers and the presentation of special certificates to community members involved in research activities.



Menzies researchers Therese Kearns and Ross Andrews thank Janice Garawirtja for the scabies artwork they received from the Galiwinku community



Young participants at NAIDOC week march in Darwin July 2012

NAIDOC Week

NAIDOC Week 2012 celebrated Aboriginal and Torres Strait Islander culture, providing the opportunity to recognise contributions made by Indigenous Australians in various fields. Menzies staff in Darwin and Adelaide participated in a march for NAIDOC Week under the theme of 'Sprit of the Tent Embassy: 40 years on.' Staff from the Brisbane office also represented Menzies at the Brisbane Family Fun day held at Musgrave Park.

menzies in the community

Menzies 'Science Sesh'

Menzies' annual student open day 'Science Sesh' was held in August as part of National Science Week to inspire students to consider science careers and to motivate them to think about how science underpins health research. A dynamic team of Menzies' researchers engaged 70 year 11 and 12 students from Darwin High School, Kormilda College, St John's College, Taminmin College and Essington Senior College in Darwin through interactive presentations. The event was well-received by students with over 90 per cent indicating they either enjoyed or really enjoyed the day and 89 per cent saying they would consider a career in science following the event.



Student swipes a jelly petri dish during Menzies Science Sesh

Science in Schools Awards

Menzies continued its support of the Science Teachers Association Awards by sponsoring the Middle School Science Encouragement Awards and the Senior School – Senior Science Student Awards. Award recipients were invited to attend a morning tea held at Menzies to discuss career opportunities in the field of health research, and were presented with certificates and bookshop vouchers by Menzies' Director Professor Alan Cass.



Runyararo Mubaira, St John's College receiving the Senior Science Student award from Professor Alan Cass

Menzies Oration

Menzies' incoming Director and esteemed kidney specialist, Professor Alan Cass delivered the 2012 Oration entitled: 'Research that matters: making a difference in the Territory and beyond'. Hosted by the Northern Territory Minister for Health, the Hon David Tollner at Parliament House on 25 October 2012, the Oration was Professor Cass' inaugural speech as Director of Menzies.



Professor Alan Cass



Internationally renowned leader in the science of knowledge translation, Professor Alison Kitson gave the keynote address

2012 Menzies Scientific Colloquium
The 2012 Menzies Scientific Colloquium, *Research that works: how health research becomes large-scale change*, was held on Friday, 26 October at Charles Darwin University's Mal Nairn Auditorium.

Internationally renowned as a leader in the science of knowledge translation and implementation, Professor Alison Kitson gave the keynote address. Prof Kitson is a Professor of Nursing and Head of School of Nursing at the University of Adelaide, Co-Director of the Centre for Evidence Based Practice South Australia, and an Associate Fellow at the University of Oxford. The Colloquium, attended by 136 participants, brought together a number of leading research and health identities to showcase how Menzies projects have achieved world-class success in translating research into significant change in health care and health outcomes.

The Scientific Colloquium provided an occasion to present the 2012 Menzies Medallion, the highest award offered by the Board of Menzies. The Yalu' Marnggithinyaraw Indigenous Corporation received the award for its significant contribution to improving the health of Yolngu people of Arnhem Land for over a decade. Yalu Marnggithinyaraw has been instrumental in developing Menzies partnerships with communities in the Northern Territory community of Galiwinku.



Joanne Garnggulkpuy, Dorothy Bepuka, and Elaine 'Lawurrpa' Maypilama receiving the 2012 Menzies Medallion from Menzies Director, Professor Alan Cass

The new development team
In 2012, Menzies created a new fundraising team based in Melbourne – a move that will enable Menzies to tap into the country's largest philanthropic and corporate community. Headed by Colin Baillie, the team brings a diverse range of strategic development skills and know-how to Menzies. This team also enjoys the support of a group of well-connected and passionate Development Committee volunteers who are committed to raising funds and awareness to further Menzies work.

Rioli Fund Dinner for Aboriginal Health
Spearheaded by former AFL star Dean Rioli, the second annual Rioli Fund dinner for Aboriginal Health was held in Darwin in March 2012 and attended by more than 200 guests. The fundraising event was supported by a number of high-calibre panellists, including comedian Sean Choolburra, basketballer Nick Anstey, sport commentator H.G Nelson, and Aussie Rules legends Peter Daicos, Glen Archer, Robert Shaw and Doug Hawkins.

Bids for auction items raised close to \$20,000 – money directed towards mental and children's health projects in remote communities. Menzies would like to thank Dean Rioli and all guests and participants who made this such an outstanding event.



Former Chief Minister of the Northern Territory Paul Henderson, Professor Jonathan Carapetis and ex-Essendon footballer Dean Rioli pictured with special guests at the Rioli dinner fundraiser 2012

DONORS IN THE SPOTLIGHT

Menzies especially acknowledges the important, ongoing support of the Ian Potter Foundation and the Sidney Myer Fund. Their commitment to The Centre for Child Development and Education (CCDE) has enabled the research needed to address the poor health, education and social circumstances of Indigenous children.



Major Donors and Partners

Menzies is grateful to the following donors and partners for their generous support in 2012:

Private Donors

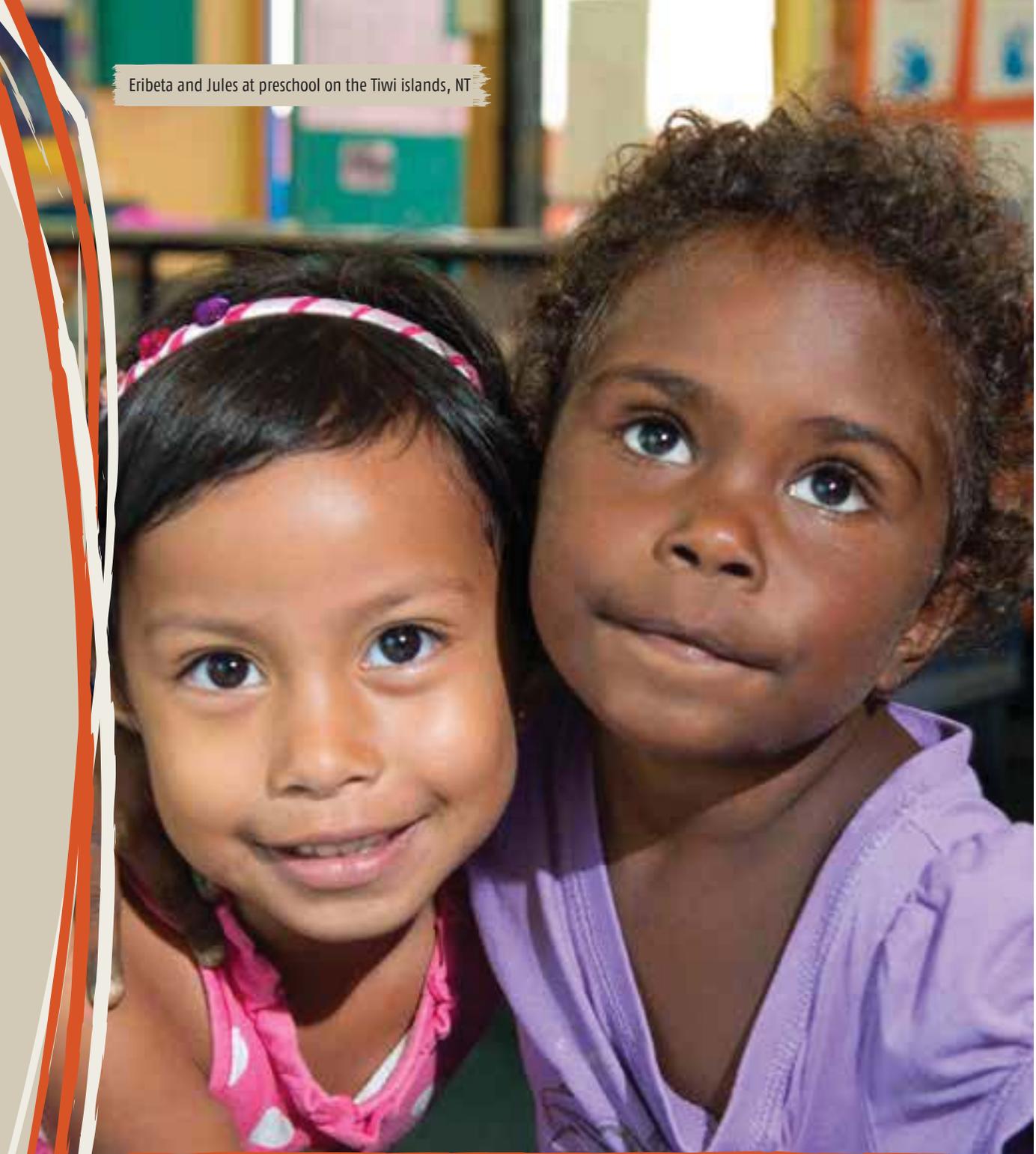
Rachel Bell-Booth
Graham Blashki
Renee Burchall
Nathan Campbell
Malcolm Cocking
Ann Cole
Christine Collingwood
Judy Dent
Rohan Duncan
Margaret B Fuller
Irene Ghannage
Belinda Gibson
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Minnie Smorgon
Ella Stack
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Deckchair Cinema
Department of Prime Minister and Cabinet
Diabetes Australia Research Trust
Essendon Football Club
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Community Services
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High Street Medical Centre, Melbourne
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Menzies Foundation
Momentum Energy
National Indigenous Employment Solutions
National Health and Medical Research Council
National Heart Foundation
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Northern Territory General Practice Education Pty Ltd
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Office for Aboriginal and Torres Strait Islander Health
OzEMalaR
Queensland Health
Ramaciotti Foundation
Relationships Australia
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Sidney Myer Foundation
Sitzler Pty Ltd
Australian Medicare Local Alliance
Swiss National Science Foundation
The Ray and Margaret Wilson Foundation
The Rioli Fund for Aboriginal Health
United Discounts Chemists Palmerston Pty Ltd
WA Hawks Supporters Club
Wellcome Trust
World Heart Foundation

Eribeta and Jules at preschool on the Tiwi islands, NT



MENZIES WISHES TO THANK THE MANY INDIVIDUALS AND COMMUNITIES WHO GRANTED PERMISSION TO USE PHOTOGRAPHIC IMAGES OF THEMSELVES AND THEIR CHILDREN THROUGHOUT THIS PUBLICATION.

construction starts on iconic buildings

Menzies has begun construction on its iconic \$47 million dollar building project, which will enable us to continue our vital medical research in world class facilities.

In August, the Federal Minister for Indigenous Health, Warren Snowdon MP joined former Northern Territory Minister for Health Kon Vatskalis MLA and Menzies researcher Jaqui Hughes to turn the sod at the Royal Darwin Hospital campus site.

The project includes two new buildings, one on Charles Darwin University's (CDU) Casuarina campus, and an upgrade to our existing facility at Royal Darwin Hospital (RDH).

The project's contemporary designs will allow Menzies to support the Australian Government's objective of providing research facilities that are integrated with improving clinical care and with health workforce training.

The buildings, currently under construction by Lahey Constructions, will create capacity for an additional 244 staff (a total of 446 staff); and a 200-person auditorium on the RDH campus will support Menzies' teaching and learning activities.



Former NT Minister for Health Kon Vatskali, Federal Minister for Indigenous Health Warren Snowdon and Menzies researcher Jaqui Hughes turn the sod in August 2012 at the Royal Darwin Hospital site, Darwin

The buildings are expected to be finished after October 2013, and to be fully occupied by February 2014 following a refurbishment of the John Mathews Building at RDH. These facilities were jointly funded by the Australian Government, the Northern Territory Government and CDU.

Royal Darwin Hospital site (pictured)

The \$29.5 million works at RDH include upgrading the research laboratory, provision of additional clinical and office working accommodation for up to 266 staff. The extension will provide dedicated spaces to undertake research, education and associated support elements such as conference rooms, and an auditorium.

Charles Darwin University site

The new \$17.5 million research, teaching and administration building on CDU's Casuarina campus will provide teaching facilities, clinical space, a conference room, tutorial rooms and sufficient office space to accommodate up to 180 staff.



strategic plan

2012 marked the first year of Menzies' updated and enhanced strategic plan (2012 to 2016) – developed in 2011 following five years' rapid growth and impressive achievement across each of our four research themes.

Menzies' current focus lies on consolidation and carefully targeted growth.

The following strategic priorities will ensure that our existing research and education themes and teams are strengthened and sustainable, and that we focus on developing and supporting the people who make up Menzies.

We will seek depth over breadth and quality over quantity and aim for excellence in all our research activities.



Menzies staff member Georgie Nutton with Strategic Plan 2012-2016

Strategic Priorities

1. Excellence in community based research

Menzies will develop new methodologies and extend its partnerships to position itself as the leader in community-based health and wellbeing research.

2. Creating the workforce of the future

Menzies will support, develop and provide career pathways for its staff, and for the researchers of the future.

3. Building on our strengths in postgraduate education and research training

Menzies will build on its existing strengths in postgraduate education and higher degree research training.

4. Increasing and diversifying funding

Menzies will enhance its public profile with the aim of diversifying its funding base and increasing the proportion of Menzies' income that is not restricted to specific projects.

5. Enhancing the work environment

Menzies will further enhance a work environment (physical, systemic and social) that sustains high morale, increases productivity, efficiency and quality, enhances staff supervision, recruitment and retention, and that operates to the highest standards of governance, management and accountability.

6. Translating research into action

Menzies will excel in translating research outcomes into policy and practice.

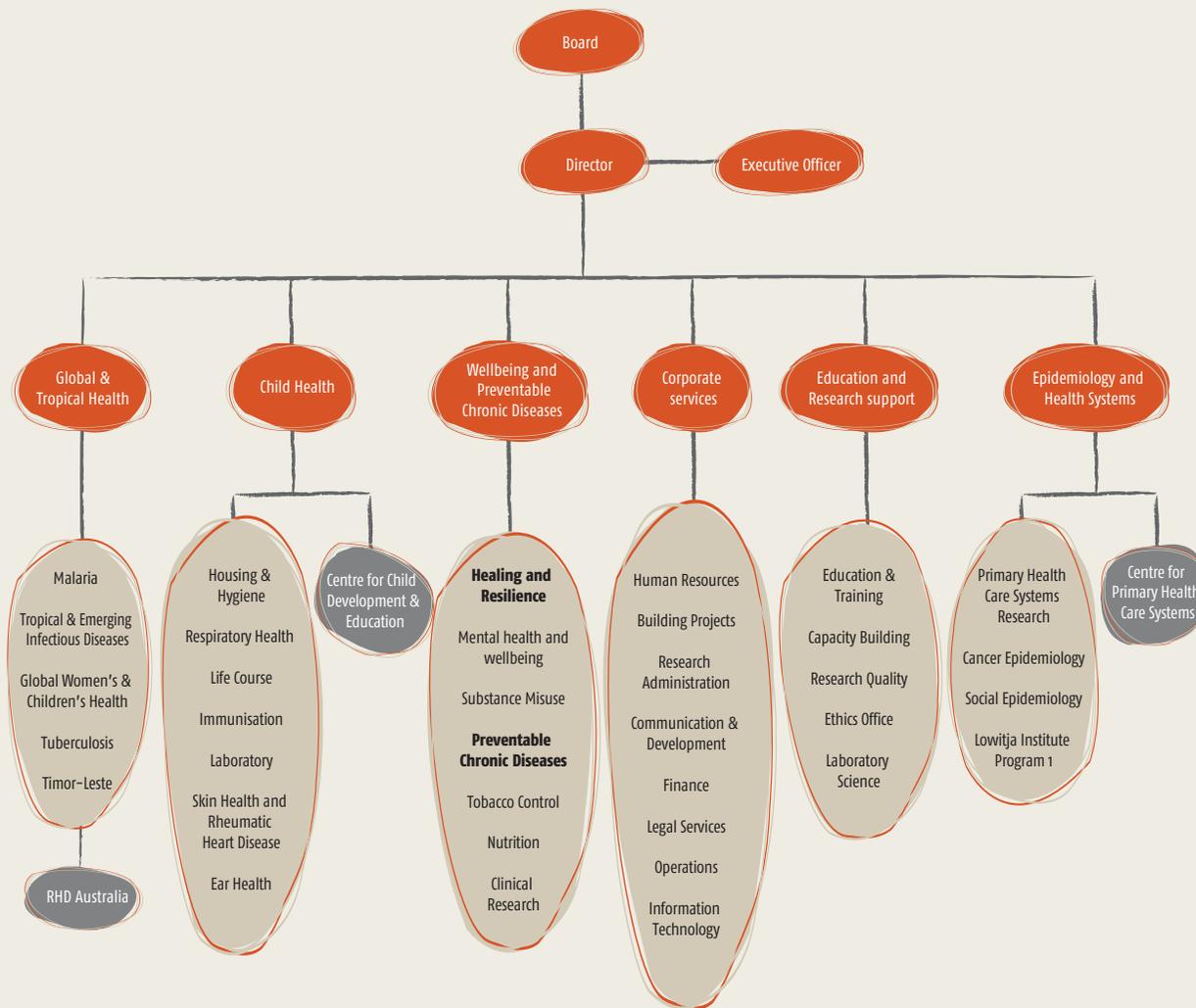
7. Working with health care providers

Menzies will better integrate our research with service providers and their priorities.

8. Making better use of our laboratories

Menzies will increase its capacity in laboratory research, with a continuing focus on infectious diseases and immunology, including applying emerging biomedical research technologies to its research projects.

organisational structure



Executive

board

The Menzies School of Health Research (Menzies) is an independent body corporate under the control of a governing board. Menzies is a major partner of Charles Darwin University. Menzies is required to furnish an annual report

and audited financial statements to an Annual General Meeting, with financial results consolidated within those of Charles Darwin University. Menzies accounts are subject to audit by the Auditor-General of the Northern Territory.



Professor Simon Maddocks (Chair)
Director, Science Partnerships, South Australian Research and Development Institute



Professor David Celermajer
Scandrett Professor of Cardiology, University of Sydney



Professor Clare Martin (Deputy Chair)
Professorial Fellow, The Northern Institute of Charles Darwin University



Professor Barney Glover
Vice-Chancellor, Charles Darwin University, Northern Territory



Professor Alan Cass
Director, Menzies School of Health Research (Since Nov 2012)



Ms Hilary Hannam
Chief Magistrate of the Northern Territory



Associate Professor Ross Andrews
Acting Director, Menzies School of Health Research (From June to Nov 2012)



Mr Rowan Johnston
Principal Greenhill & Co. Australia (Since Oct 2012)



Professor Jonathan Carapetis
Director, Menzies School of Health Research (To June 2012)



Mr Jeffrey Moffet
Chief Executive, NT Department of Health



Mr Gary Barnes
Chief Executive, NT Department of Education (To Sept 2012)



Mr Richard Ryan AO (Treasurer)
Director of a number of public and government boards including the Northern Territory Treasury, The Australian Government Solicitor's Advisory Board and The Adelaide Festival.



Professor Sharon Bell
Deputy Vice-Chancellor, Charles Darwin University, Northern Territory



Mr Robert Wells
Director Australian Primary Health Care Research Institute (To May 2012)

financial statement

Income Statement for the year ended 31 December 2012

	2012	2011
	\$	\$
Income from continuing operations		
Australian Government financial assistance	18,990,079	18,769,893
NT Government funding	5,955,990	5,934,458
Fees and charges	1,931,691	1,780,421
Investment income	1,956,398	2,355,122
Consultancy and contract research	6,816,315	6,837,084
Gain (loss) on disposal of assets	996	-
Other revenue	2,809,499	2,257,357
Total revenue from continuing operations	38,460,968	37,934,335
Total income from continuing operations	38,460,968	37,934,335
Expenses from continuing operations		
Employee related expenses	24,691,585	22,383,263
Depreciation	351,454	375,635
Repairs and maintenance	733,230	585,780
Bad and doubtful debts	2,000	-
Other expenses	12,909,807	10,801,008
Total expenses from continuing operations	38,688,077	34,145,685
Operating result from consulting operations	(227,109)	3,788,650
Operating result attributable to members of MSHR	(227,109)	3,788,650

Statement of comprehensive income for the year ended 31 December 2011

	2012	2011
	\$	\$
Operating result for the year	(227,109)	3,788,650
Gain (loss) on revaluation of investments	(4,092)	(2,935)
Total comprehensive income	(231,201)	3,785,715
Total comprehensive income attributable to the members of MSHR	(231,201)	3,785,715

Statement of Financial position as at 31 December 2012

	2012	2011
	\$	\$
Assets		
Current Assets		
Cash and cash equivalents	34,890,444	38,588,253
Trade and other receivables	2,100,039	2,449,223
Other financial assets	3,042,210	2,722,481
Other non-financial assets	261,183	276,919
Total Current Assets	40,293,876	44,036,876
Non-Current Assets		
Property, plant and equipment	7,756,017	3,088,209
Other financial assets	20,363	24,455
Total Non-Current Assets	7,776,380	3,112,664
Total Assets	48,070,256	47,149,540
Current Liabilities		
Trade and other payables	2,487,749	1,323,566
Provisions	2,620,380	2,755,273
Other liabilities	33,864	42,366
Total Current Liabilities	5,141,992	4,121,205
Non-Current Liabilities		
Provisions	544,822	413,692
Total Non-Current Liabilities	544,822	413,692
Total Liabilities	5,686,814	4,534,897
Net Assets	42,383,442	42,614,643
Equity		
Reserves	10,988,211	15,318,889
Retained earnings	31,395,231	27,295,754
Total Equity	42,383,442	42,614,643

Statement of Changes in Equity for the year ended December 31 2012

	Reserves (Note 20)	Retained Surplus (Note 21)	Total
	\$	\$	\$
Balance as at 1 January 2011	3,475,969	35,352,959	38,828,928
Profit or Loss	-	3,788,650	3,788,650
Net revaluation loss on investments	(2,935)	-	(2,395)
Total comprehensive income	3,473,034	39,141,609	42,614,643
Transfers	11,845,855	(11,845,855)	-
Balance as at 31 December 2011	15,318,889	27,295,754	42,614,643
Balance as at 1 January 2012	15,318,888	27,295,754	42,614,643
Profit or Loss	-	(227,109)	(227,109)
Net revaluation loss on investments	(4,092)	-	(4,092)
Total comprehensive income	15,314,797	27,068,645	42,383,442
Transfers	(4,326,586)	4,326,586	-
Balance as at 31 December 2012	10,988,211	31,395,231	42,383,442

The objective of these summary statements is to provide an overview of Menzies' financial affairs for the year ending 31 December 2012. Readers may wish to obtain a copy of the full audited financial statements available upon request.

Statement of Cash Flows for the year ended December 31 2012

	2012	2011
	\$	\$
Cash flow from operating activities		
Australian Government grants	19,597,770	18,767,675
NT Government funding	6,072,463	6,139,977
Receipts from student fees	2,039,361	1,780,421
Interest received	1,955,772	2,355,122
Consultancies and contract research	6,331,954	8,052,958
Other receipts	2,603,372	255,896
Payments to suppliers	(13,503,364)	(11,118,739)
Payments to employees	(24,695,347)	(21,742,196)
Net cash provided by operating activities	401,981	4,491,116
Cash flows from investing activities		
Proceeds on sale of assets	16,973	-
Payments for property, plant and equipment	(99,334)	(444,207)
Payment for work in progress	(4,017,426)	(2,171,402)
Net cash outflow from investing activities	(4,099,787)	(2,615,609)
Net increase in cash and cash equivalents	(3,697,806)	1,875,507
Cash and cash equivalents at the beginning of the financial year	38,588,252	36,712,745
Cash and cash equivalents at the end of the year	34,890,444	38,588,252



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discovery for a healthy tomorrow