

annual report 2010



discovery for a healthy tomorrow



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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 (Menzies Act). This Act was amended in 2004 to formalise the relationship with Charles Darwin University (CDU). Menzies is now a school within CDU's Institute of Advanced Studies.

In the spirit of respect, the 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.

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

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who we are and where we work

Menzies School of Health Research is a proud leader in Indigenous and tropical health research, having made a difference in people's lives for a quarter of a century. Through scientific excellence, education and research, the team at Menzies continues to discover ways of breaking the cycle of disease and improving the health and wellbeing of Australian society and beyond.

An important focus of our research is to address the appalling disparity between the health and wellbeing of Indigenous and non-Indigenous people, taking into account a broad range of social factors, including childhood development, education and housing. Menzies works in collaboration with leading global health and research organisations, to ensure our ground-breaking findings can be shared with the rest of the world while allowing us to benefit from the latest international research.

Menzies' headquarters are in Darwin, with offices in Alice Springs, Brisbane, Adelaide and Indonesia. We employ more than 300 staff and have an annual turnover of approximately \$30 million, mostly funded through competitive research grants. We carry out research in almost 60 Indigenous communities across Australia and in developing countries in our region; working with locals to find better ways of treating common problems. Our ground-breaking research, carried out in world-class laboratory facilities, includes the analysis of snake venom, melioidosis, malaria, deadly bacteria and drug resistance in scabies mites.

Menzies operates in the following areas:

Child Health – we are working to combat ear, lung and skin infections that affect the healthy development of Indigenous children. We are also focusing on the links between health and education from pre-birth to leaving school.

Healing and Resilience – our researchers are helping to prevent, diagnose and treat mental illness and substance misuse among Indigenous people.

Global Health – we are world leaders in research into major health problems in our region including rheumatic heart disease, malaria and tuberculosis.

Preventable Chronic Disease – we are working to discover the causes of chronic disease, including diabetes, heart and kidney disease, and find the best ways to diagnose, treat and prevent them.

Tropical and Emerging Infectious Diseases – we are unearthing new health threats so we can improve treatments, prevent the spread of disease and help develop vaccines.

Centre for Primary Health Care Systems Research – our researchers are investigating what works and what can be changed to improve the health care system, and the environments people live in, and in which health care is delivered.

Education and Training – we are training the researchers, clinicians and policy-makers of the future to help improve the quality of life of disadvantaged people across our region.



strategic plan

Goals

Menzies has set out four strategic goals in order to meet the challenges of today and tomorrow:

Goal 1 – excellence in health research.

Goal 2 – excellence in health education and training.

Goal 3 – strengthened capacity of researchers, particularly those from Indigenous backgrounds, and improved engagement of Aboriginal communities throughout the research process.

Goal 4 – improved income generation and services to support research and education activities.

The Menzies strategic plan (2007–2011) reflects a commitment to research, education and training, and translating research outcomes into policy and practice. The plan underpins our pledge to work hand-in-hand with Indigenous communities as we strive to achieve a healthy tomorrow. It addresses the urgent need to improve recruitment, development and retention of Indigenous staff and research leaders of the future. The plan outlines our commitment to broaden the range and scope of courses on offer and increase the number of students enrolled at all levels. In 2011, Menzies will start work on its next strategic plan.

Vision

To improve health outcomes in Aboriginal and Torres Strait Islander communities and in disadvantaged populations throughout the world, through excellence and leadership in research and training.

Values

Communication – to undertake an ongoing dialogue with partners and stakeholders during the research process, from conception to completion.

Innovation – to be willing to take risks, embrace new approaches, and pursue ground-breaking research.

Responsiveness – to be responsive to health needs and shared priorities, particularly of Indigenous Australians, disadvantaged populations and others living in central and northern Australia.

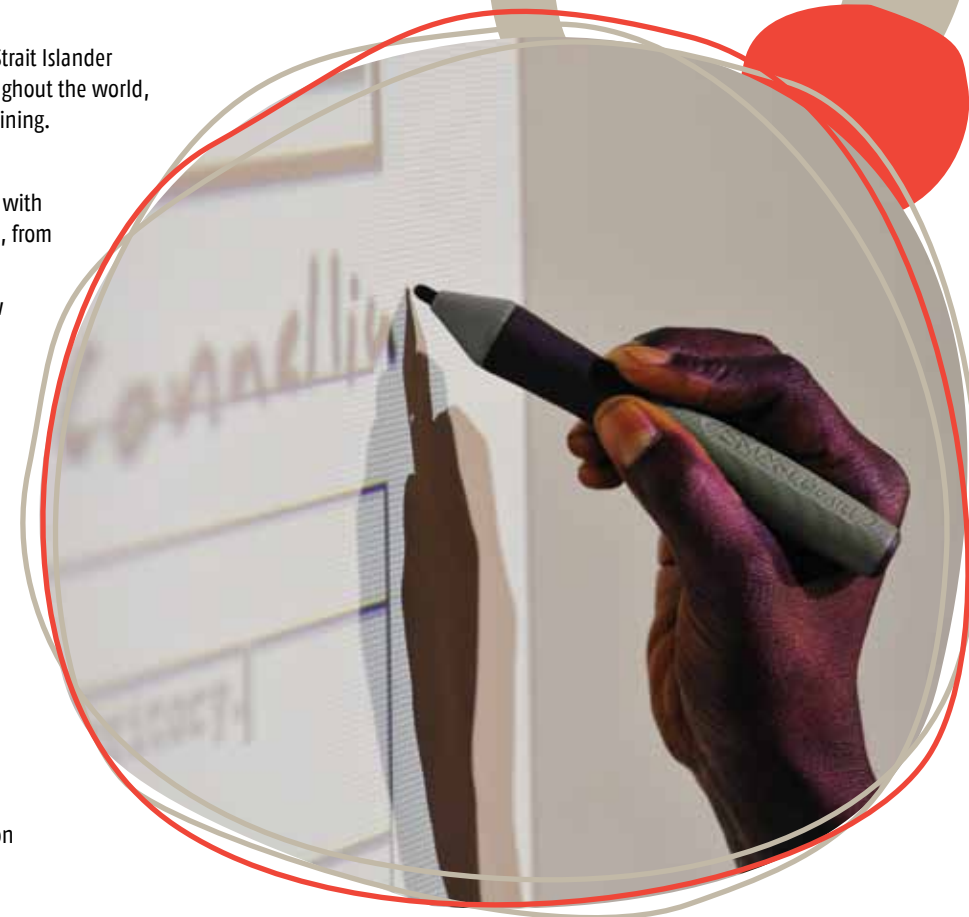
Quality – to be excellent in everything we do.

Collaboration – to work in partnership with communities, other researchers, policy-makers and those who deliver health and other services.

Integrity – to act with honesty and according to our values.

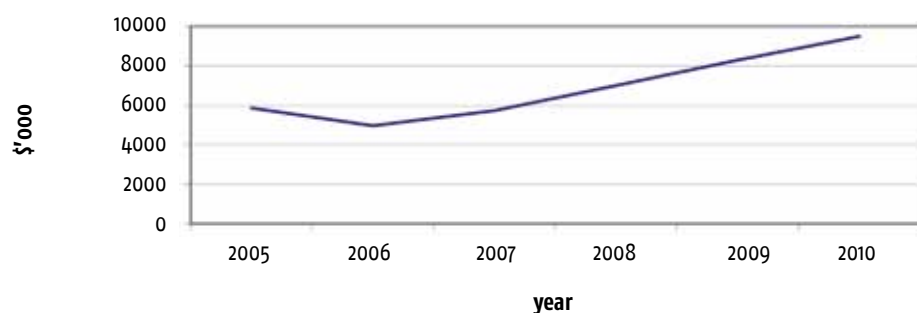
Relevance – to concentrate on solving problems that matter, whether they be big or small.

Building Research Capacity – to foster and develop researchers of the future, with a particular emphasis on Indigenous researchers.



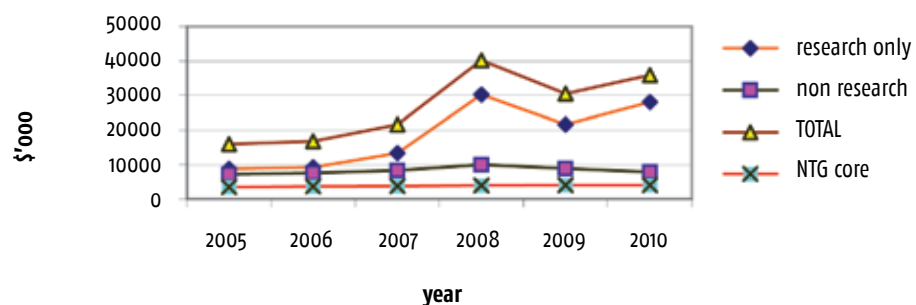
the year at a glance

Value of NHMRC Funding (Income Received)



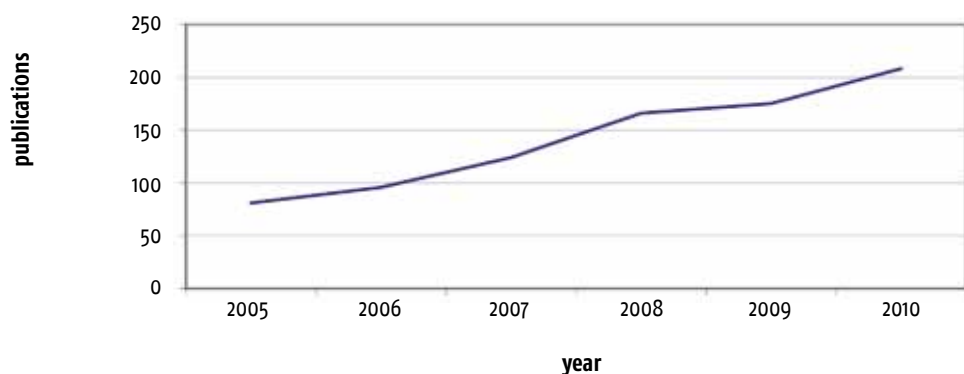
In 2010 Menzies received \$9.5 million from the Australian Government's National Health and Medical Research Council; a 14.6% increase from 2009.

Income (\$'000s) inc Building Grants



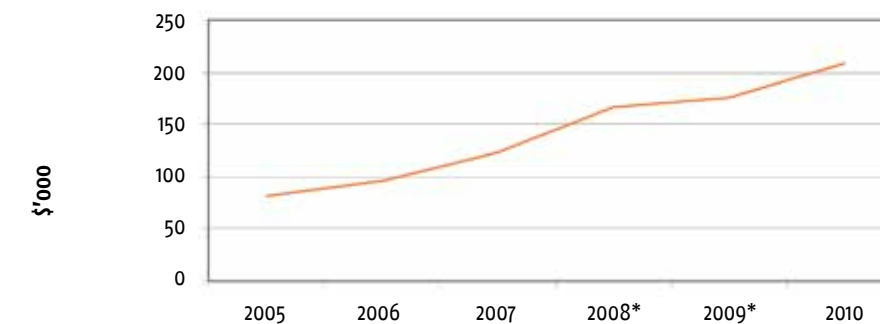
In 2010, Menzies received total funding of \$35,893,000; including \$28m in research funding; \$7.7m in non-research funding; and \$4m in NT Government core funding.

No. of Publications Including all Journals and Book Chapters



In 2010 Menzies researchers produced 208 publications (including all journals and book chapters); an increase of 18.86%.

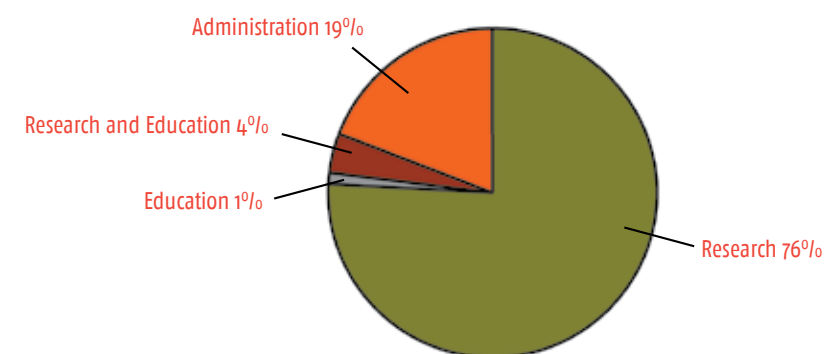
Number of Staff (FTE)



(nb: due to database changes 2008 and 2009 figs are not directly comparable)

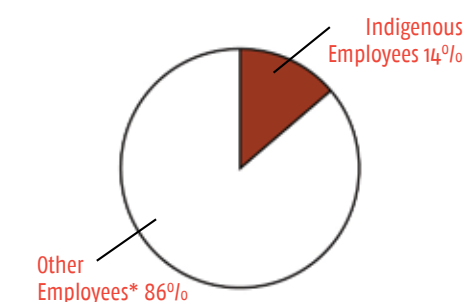
In 2010 Menzies had 351 staff; making up 225 full-time equivalent staff.

Employees by Category



In 2010, 81% of Menzies staff were engaged in Research and Education roles.

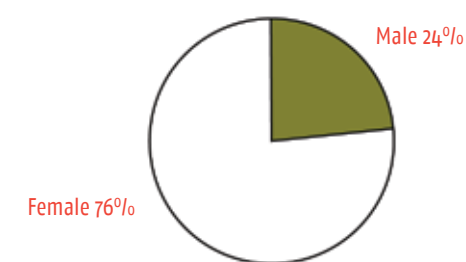
Indigenous Employees



*including those that have not indicated whether they are Indigenous or not

In 2010, 14% of Menzies staff identified themselves as Indigenous.

Employees - gender



In 2010, 76% of Menzies staff were female.

a message from the chair and director

a message from the chair and director

Menzies School of Health Research has had another successful year securing research grants and continuing to influence policy and practice in the Northern Territory, around the country, and internationally. We are proud of our continued growth and influence, but even more of the very high quality research that our staff and students produce.

Menzies received the fifth highest competitively awarded grants of all medical research institutes that received funding from the National Health and Medical Research Council (NHMRC) in 2010. This excellent result confirms that we are punching above our weight and reaffirming our reputation as a significant institution in the national health research field. Menzies achieved a 44% success rate for NHMRC grants commencing in 2010 and secured a total of \$8.4 million in new funding. Two successful project grants with a combined value of \$14 million commence in 2011.

In 2010, 30 Menzies research students received scholarships to assist with their work in Indigenous, tropical and global health. These included scholarships from the Australian Academy of Science, the Australian Postgraduate Award, the National Health and Medical Research Council and the University Postgraduate Research Scholarship.

We have provided further support to our students and young researchers through the creation of four new scholarships, including two combined Charles Darwin University and Menzies scholarships for Timor-Leste students to complete PhDs involving medical research; and two scholarships, funded by Perpetual trusts, for Indigenous students studying fulltime Masters in Public Health.



Professor Simon Maddocks, Chair

Research Highlights

Menzies research has continued to directly influence policy and health care practice in many ways, for example:

- We supported the work of the NT Child Protection Inquiry and the Northern Territory Government response. We will continue to focus on producing evidence in this critical field.
- We have collaborated with senior NT Government staff to co-produce a draft Early Childhood Plan.
- Menzies research has prompted the introduction of a new tobacco licence condition by the NT Government, obligating licensees to monitor wholesale orders of tobacco.
- Our published study about the impact of income management on store sales in some remote communities sparked significant interest.
- *RHDAustralia* is the national coordination unit to support better implementation in this area; this is the direct result of 15 years of Menzies research. It is an integral part of the National Rheumatic Fever Strategy.
- The Strong Teeth for Little Kids research project has directly led to children in NT remote communities receiving fluoride varnish to improve their oral health. It is recognised as one of the ten best NHMRC research projects in Australia.
- One of the most exciting developments is the major success of our high-resolution genetic fingerprinting methods for characterising bacteria. Quick, effective, simple and low cost, these methods have already been used to identify the nature of a cluster of antibiotic-resistant infections at Royal Darwin Hospital and have resulted in a number of publications.

Awards and Other Recognition

Many Menzies researchers have been recognised this year:

- Professor Anne Chang and the Menzies Tobacco Team both received Charles Darwin University Vice-Chancellor's Awards for Exceptional Performance in Research.
- Menzies Leishmania Project Team won the prestigious Chief Minister's Research and Innovation Award for their work identifying the insect that spreads the parasite leishmania in Australia.
- In the NT Research and Innovation Awards, the Menzies Audit and Best Practice in Chronic Disease Project was a finalist in the Minister for Business and Employment Innovation Award, while the Healthy Skin Research Group was a finalist in the Tropical Knowledge Award.
- The Asia Pacific Malaria Elimination Network (APMEN) has appointed Associate Professor Ric Price as Chairman of the Vivax Working Group. He has also been awarded a prestigious five-year Senior Fellowship by the Wellcome Trust.
- PhD student Asha Bowen was awarded the Lola Douglas Australian Academy of Science scholarship.

- Paul Burgess won the 2010 Australian Journal of Primary Health prize for the best paper (with co-authors), *The contribution of the Adult Health Check to preventative care in a remote Aboriginal primary care service*.
- Alice Rumbold was awarded the Future Justice Medal 2010 for her significant work improving the health of Indigenous women and children.
- Jaqui Hughes was awarded the inaugural University of Newcastle Indigenous Alumni Award, a wonderful achievement considering the stellar line-up of Aboriginal and Torres Strait Islander alumni.
- Jana Lai received the NT Young Achiever Award in the science and engineering category for her work on improving the diagnosis of two key bacteria in childhood pneumonia.
- Kate Mounsey was awarded the inaugural NT Young Tall Poppy Award. This award is designed to recognise exceptional young scientists who conduct high calibre research and spread the word about science to a broader audience.
- Menzies Researcher Kalinda Griffith was named Young Territorian of the Year, and Jana Lai was a finalist for the award.

In other developments during 2010, the Global Health division took steps to diversify into new places including Sabah in Malaysia, as well as Vietnam and Timor-Leste. The team is continuing its work in Indonesia, commencing a new collaboration with the Papuan Health and Community Development Foundation.

The Lowitja Institute was established in 2010 and has taken over permanent management of the Cooperative Research Centre for Aboriginal and Torres Strait Islander Health. Menzies was a founding partner in creating this centre, and retains a close link with the Lowitja Institute.

Menzies' *One21seventy* program provides continuous quality improvement services in Indigenous primary health care. This work continues to strengthen with an increasingly national focus, and this has enabled Menzies to become involved in research translation to the point of service-delivery for the first time. Operating under the Centre for Primary Health Care Systems, the program provides a model of research translation in Menzies.

Child Development and Education

It is worth singling out the work of the child development and education team. We identified this area as a priority in 2006, and since then Professor Sven Silburn has attracted an impressive team of researchers with a formidable program of work. The team was appointed to evaluate the NT Government's Transforming Indigenous Education program; Associate Professor Fiona Arney has overseen the establishment of a child protection research unit and Associate Professor Gary Robinson has brought his parenting research expertise to the group. Together, they are already undertaking major research projects aimed at improving developmental and educational outcomes, particularly for young Aboriginal children. In 2010, Menzies coordinated a symposium to address the best way for agencies to work together in supporting Indigenous families and children for better development, health and education outcomes.

With this team in place, we are well-advanced in our goal to create a Centre for Child Development and Education, which we hope to launch during 2011. This would be the culmination of a dream held by many of us at Menzies to establish this as an area of key research at Menzies over the coming decades.

Conditions of growth and development in early life – before birth and in early childhood – have a significant influence on brain development, which sets the foundation for subsequent learning and behaviour along with health and wellbeing. Education and early childhood development are a crucial link to improving health and wellbeing.

Other new initiatives

To help us manage continued growth and change, Menzies revised its organisational structure in 2010. This included the appointments of Associate Director of Research and Education, Ross Andrews; Chief Operating Officer Vicki Taylor; and Associate Director of Aboriginal Programs, Heather D'Antoine. These positions provide support to the Director as part of a streamlined Executive team. The new structure will support a framework for quality research and allow Menzies to adapt to change and meet future challenges.

During the year, NHMRC carried out two on-site audits at Menzies. One was a general and financial audit; the other certified the Menzies and NT Government Human Research Ethics Committee to consider multi-site ethics review applications. Furthermore, we progressed plans for our new buildings, with confirmation of funding from the Australian and NT governments and Charles Darwin University for significant new facilities at Royal Darwin Hospital and the Casuarina CDU campus. Construction is scheduled to commence in the second half of 2012.

Overall, this must go down as another successful year for Menzies. We express our thanks to the staff, students, board members and long list of friends and contributors to our institution. Special thanks goes to the many Indigenous communities across northern Australia with whom we work.



Professor Jonathan Carapetis, Director

child health

A healthy childhood is key to a healthy life. Unfortunately, many Indigenous children face chronic ear infections, respiratory problems, skin sores and other health problems in their earliest years. Not only do such health issues have a direct impact on a child's health, they also affect their ability to grow, develop and learn. Menzies' research investigates how we can improve the health of Indigenous children so they can get the best start in life.

The Child Health division is made up of researchers who work with communities and government agencies to produce evidence to address the current poor health, education and social outcomes of Indigenous children.

Life Course

The Aboriginal Birth Cohort (ABC) study began in 1987 and tracks trends of chronic disease from childhood to adulthood by observing the life course of a group of Indigenous Australians. Significantly, the study will help identify critical intervention points in the lives of the chronically ill. Data from the ABC study has enabled Menzies researchers to carry out the first ever analysis of iodine status – essential for healthy brain development – in a defined Indigenous population. This study identified iodine deficiencies in Aboriginal people of reproductive age in the Northern Territory. The research team now plans to reassess iodine levels in this group after the introduction of bread fortified with iodine.

A project to improve the environmental health of children in remote communities was completed in 2010. The project developed and trialled a Healthy Community Assessment tool, which is used to evaluate whether remote communities have the infrastructure needed to promote good health and prevent chronic disease. The tool can be used to help those involved in planning, service provision and promoting improvements in community social determinants of health. Maximum benefit will be gained when this tool is applied across different sectors and used as part of a continuous quality improvement program. As part of this research, evidence has identified indicators that can be translated for use in a remote Indigenous community context and a Household Assessment Form has been developed. This form is now used in one remote community by Aboriginal Community Workers as part of an early intervention system to prevent infants from failing to thrive.

Researchers are also involved in a project that investigated antenatal screening in remote communities to ensure Aboriginal women have access to the same standard of reproductive and maternal health as other Australian women.

Ear Health

Researchers are conducting an important trial to prevent and manage the high rate of Asymptomatic Acute Otitis Media (AOM) – or middle ear infection – among Aboriginal children. The trial involved the prescription of azithromycin to randomly selected Indigenous children with AOM and tested the benefits of the drug. Once available, the results will become the best available evidence to guide the medical management of asymptomatic AOM in high-risk children. In 2010, we provided additional training to clinics and support for appropriate diagnosis and management otitis media in Aboriginal children. We are also researching pneumococcal carriage and disease to help design appropriate treatment. Pneumococcal disease can cause serious illnesses such as pneumonia and middle ear infections.

Menzies is applying the new science of Metagenomics to ear health, in order to understand how ear disease develops and why some children do not respond to therapy. Involving the simultaneous study of numerous bacteria,

this method will allow the design of better interventions to improve ear health for Indigenous children.

Researchers are also undertaking a project to monitor changes in bacterial respiratory pathogens in response to the pneumococcal conjugate vaccine. These results will inform recommendations for the best use of newly licensed vaccines.

Menzies is studying the impact of the Mobile Phones for Improving Untreated Perforations (MOP-UP) project. MOP-UP provides an educational multimedia messaging service to families, including information about the importance of ear cleaning and clinic check-ups for children. This is specifically designed to prevent cases of Chronic Supportive Otitis Media (CSOM), involving a perforation in the tympanic membrane and active bacteria infection in the middle ear for several weeks or more. Researchers are studying the impact of the mobile phone education campaign on children with CSOM, compared to families who only received routine care and no mobile phone messages. This is the first study of its kind in an Indigenous setting.

Unique research is underway into the impact regular swimming in chlorinated pools has on the transmission of CSOM among Aboriginal children. This is the first study of its kind in the Northern Territory, and the first ever randomised control test. Indigenous children with tympanic membrane perforations underwent medical checks after swimming in a chlorinated pool every day for a month. Results included some health improvements in children with otitis media, with a modest trend in the clearance of pathogens from the nasopharynx. This confirms the potential for swimming in chlorinated pools to reduce the spread of ear infections among Aboriginal children.

The PREV-IX_COMBO study is comparing two new pneumococcal conjugate vaccines (PREVenar vs SynflorIX) with a four-dose combination schedule for maximum protection from pathogens that cause ear infections. Ethical approvals have been granted, and several Aboriginal Medical Services have received preliminary information with trials to start soon.

The MICROBIOME project is a PhD study using new technology to investigate cases of polymicrobial otitis media in Aboriginal children with AOM and eardrum perforation. Results are currently being analysed, but are expected to improve understanding of the microbial communities involved in middle ear infections and eventually pave the way to better treatment options.

Another project is investigating pneumococcal epidemiology with non-encapsulated pneumococci in young children. Our data suggests this bacterium play an important role in the development of antibiotic resistance. The study is also looking at treatment options.

Oral Health

The Strong Teeth for Little Kids project developed, implemented and evaluated the effectiveness of a community-oriented primary care intervention to prevent dental decay among pre-school children in Northern Territory Aboriginal communities. The controlled trial involved the application of fluoride varnish to children's teeth as well as health promotion activities to educate children and their families about good oral care. The trial found that children in remote communities would benefit from a broader range of preventive services. This project was recognised by the National Health and Medical Research Council as one of the ten best research projects in Australia in 2010.

The SMILE project investigated the oral microbiology that contributes to tooth decay, including the most implicated cariogenic bacterium, *Streptococcus mutans*. Analyses showed a strong connection between *Streptococcus mutans* and the number of dental cavities, with teeth brushing reducing total bacterial loads. Additionally, oral health was significantly better in children who received the fluoride varnish intervention as part of the study.

Respiratory Health

Menzies is currently studying the impact influenza and other respiratory viruses have on the high burden of disease among Aboriginal children. Key to this research is establishing whether viruses and bacteria work together to cause severe disease. The study also looks at the potential role of influenza in the development of future viral vaccines. The project met its recruitment target in 2010 and laboratory and data analysis is now underway.

Several studies are also underway into bronchiolitis, the most common cause of hospitalisation in Aboriginal infants. It is caused by a viral infection of the lower respiratory tract and results in inflammation of the airways, causing respiratory distress and hospitalisation. We are working in conjunction with the Darwin and Townsville hospitals along with researchers from the Queensland Children's Medical Research Institute to investigate new treatments for bronchiolitis and understand issues that may increase the severity of the illness.

Children with bronchiectasis (BE) usually present with a persistent moist cough, asthma-like symptoms and recurrent respiratory tract infections. The prevalence of BE in Northern Territory children is disproportionately high compared with urban Australia. Researchers are exploring whether the immune system in children with BE is compromised early in their development, predisposing them to respiratory infections and chronic airway inflammation.

Another study into BE among Indigenous children aims to define the natural history of the infection and chronic moist cough, and identify the associated risk factors. It will also evaluate the impact of the antibiotic treatment on antibiotic resistance.

Researchers are trying to better understand the bacterial causes of the condition by investigating children with suspected BE undergoing bronchoscopy under anaesthetic. Airway bacteriology studies are carried out comparing bacteria in the lung with that found in the upper airway. We are also looking at the antibiotic resistance of these organisms, particularly to azithromycin. The study will also look at the influence long-term azithromycin has on nasopharyngeal respiratory bacteriology, by examining Northern Territory children enrolled in the international Multi-centre Bronchiectasis Study. Both of these studies will contribute to the understanding of the aetiology of BE and influence the management of children with the illness.

Menzies researchers are working in conjunction with Dr Peter Bourke and Dr Paul Bauert from the Royal Darwin Hospital to establish why children with bronchiectasis have high levels of airway eosinophilia that cannot be explained by the presence of parasitic infections. This group of researchers is also looking at ways to improve the translation of respiratory research into better health practice and has been working with Edith Cowan University to establish lung health resources to help improve the education, prevention and treatment of lung issues in Indigenous children and adults.

Rheumatic Heart Disease

The Getting Every Child's Heart OK study has involved checking the hearts of 5000 young Indigenous children in remote communities and towns across the Northern Territory, Queensland and Western Australia. Follow-ups with communities and stakeholders will occur as results are available. This ground-breaking research will lead to evidence-based guidelines for screening of RHD in Australia, and globally.

Healthy Skin

After many years of planning, Menzies researchers started recruitment in the remote Arnhem community of Galiwin'ku to evaluate the impact of the mass drug administration of ivermectin to address endemic scabies and strongyloidiasis. The prevalence of scabies has been lower than anticipated, while strongyloidiasis has been within the expected range. We are currently conducting a six-month follow up of all participants with scabies and/or strongyloidiasis and preparation for the second screening at 12 months is underway.

Under the Healthy Skin Framework, we are also conducting trials to develop the next step in providing better treatments for skin sores. The study has included visits to Galiwin'ku, Nguiu, Maningrida, Mataranka and Jilkminggan. We have consulted with the communities of Ngukurr, Wadeye and Milingimbi with visits planned for 2011.



child health

We are consulting with other communities in Central Australia about their involvement in the program, and plan to commence recruitment in Alice Springs in 2011.

Immunisation

The PneuMum randomised controlled trial is looking at how effective the pneumococcal polysaccharide immunisation (PPV) for Indigenous mothers is in protecting their babies from ear disease. We have had strong community support for the study, which has been aided by the active participation of the Indigenous Reference Group and Data Safety Monitoring Board. The immune response to vaccination has been promising, showing:

- a good maternal immune response to the vaccine
- significantly higher cord blood antibody levels for infants whose mothers were immunised while pregnant, than infants who were vaccinated post birth.

The expansion of the study to Alice Springs was instrumental in achieving target recruitment, as well as forming ongoing relationships with Alukura, the women's health and birthing centre at the Central Australian Aboriginal Congress. We will continue to work closely with all communities, medical service providers and study participants to determine whether maternal vaccination can help prevent infant ear disease.

The Pneumococcal Protection Project aims to determine whether vaccinations generate an adequate immune response in Indigenous adults and whether previous vaccinations impact on the effectiveness of future immunisations. Following ethical approval, the study commenced recruitment in November 2010. This study's laboratory component has proved challenging to establish but we now have our quality assurance in place and are ready for a busy year ahead.

Rotavirus hospitalisations are more prevalent in the Northern Territory than anywhere else in Australia. They are also more likely to involve young infants, with longer periods of hospitalisation. The rotavirus vaccination was introduced into the routine vaccination schedule for NT infants in October 2006. The project is looking at the effectiveness of the rotavirus vaccine in the NT. It is important to confirm vaccine effectiveness not only against rotavirus-confirmed gastroenteritis, but also against all-cause hospitalisations for gastroenteritis. The project has met its recruitment target in both Darwin and Alice Springs, with results expected in 2011.

Child Development, Education and Wellbeing

In conjunction with the NT Department of Education and Training, Menzies is working with the NT's 20 Growth Towns to help boost educational opportunities in remote communities. Researchers are helping schools, communities, service providers and other stakeholders develop frameworks to encourage school-community planning, support ongoing processes of whole school reform, and establish transparent and accessible systems to enable schools and communities to monitor education outcomes. Initial planning workshops were held in 2010 to re-think how to achieve community and school goals, and work began on the technical design and support of the web-based data collection and reporting systems.

The Care for Child Development (CCD) program is a World Health Organisation (WHO) and UNICEF initiative designed to optimise children's psychosocial

development and physical growth in resource-poor developing nations. The program aims to strengthen bonding and attachment and enhance responsive care giving. The CCD program has potential benefit for Aboriginal children at risk of developmental problems or neglect and the possibility to foster optimal parent-child interactions and relationships. A trial of CCD professional training was conducted in a remote NT community with the support of WHO/UNICEF consultants. Potential positive outcomes include better training of health workers and the opportunity for higher level of inter-departmental collaboration for child and family services professionals. Results from this trial will inform policy regarding the rollout of CCD across the NT.

The Mobile Preschool Study explores how preschool attendance can lead to better health and prepare a child to learn more in their first year of school. Researchers gathered information during community visits in 2010. Feedback will be provided to mobile preschools, communities and organisations in 2011.

The Developmental Screening Tool Evaluation is examining whether enhanced training of Aboriginal Health Workers is linked to improved early childhood development practice. The program involves training Aboriginal Health Workers to use tools to better monitor the development of young children in remote communities.

The Child Protection program is jointly funded by Menzies and the NT Department of Health and Families. We aim to build strong evidence for child protection policy and practice in the NT, develop research capacity within the department through the delivery of training and promote collaboration between key stakeholders. The research team was involved in supporting the Inquiry into the Child Protection System in the Northern Territory, a role that was expanded to include providing content expertise in the latter stages of the Inquiry. Our literature reviews formed the basis for two chapters of the Board of Inquiry's final report.

Researchers are also evaluating the role and effectiveness of the NT's Mobile Child Protection Team, which was introduced as part of the Australian Government intervention. This project will provide valuable information about the development and implementation of mobile teams in remote areas with sparse populations. These findings will help improve services in the Northern Territory and could assist child protection systems other regions facing similar challenges.

Menzies is evaluating the effectiveness of the Family Group Conferencing pilot in Alice Springs. Family Group Conferencing gives a child's immediate and extended family decision-making powers over child protection issues and develops a partnership plan with the family. While Family Group Conferences are used extensively throughout the world, little information has been obtained about the short and long term outcomes of this approach.

Chlamydia trachomatis is one of the most commonly sexually transmitted diseases and a key cause of eye infection in Indigenous communities. The research team will examine the potential for false positives in the detection of chlamydia trachomatis in Aboriginal children in the NT.

Menzies is collaborating with researchers and service providers in Australia, Canada and the US to track evidence-based decision-making in the child protection system. This project aims to identify and map the evidence that can be used to inform decision-making at specific points. It is hoped this information will be useful for families, practitioners and policy-makers. It will also help identify gaps in the knowledge base for decision-making in child protection.

Let's Start is an early intervention program for at-risk children and families and has been running on the Tiwi Islands and in Darwin since 2005. In June 2010, it was formally transferred to the Menzies School of Health Research, where it has undergone redevelopment following the Review of Child Protection and the introduction of the Integrated Children and Family Services Agenda. The program manual has been adapted to better suit the needs of Aboriginal families and children and streamline delivery of prevention programs for at-risk children and families in remote settings.

Research Translation

The Child Health division seeks to translate its research to improve patient care and treatment outcomes for children with diseases including ear infections, pneumonia, respiratory conditions, skin disorders and rheumatic heart disease. Our clinical trials are performed in collaboration with Royal Darwin Hospital and other health facilities.

- Galiwin'ku's Ngalkanbuy Health Service is using the Healthy Community and Household Assessment tools to develop and implement an early intervention system to prevent young children from failing to thrive.
- A Menzies' initiative, the Australian Indigenous EarInfoNet is a national ear health and hearing web resource to increase communication and collaboration in this area. Established in conjunction with the Australian Indigenous Health Info Net, the website is funded by the Australian Government.
- The Lung InfoNet is a web-based resource providing health professionals and the community with information about improving lung health. This is a joint project initiated by Menzies, in partnership with Professor Neil Thomson from Edith Cowan University.
- Menzies developed a guideline to improve the treatment of children with bronchiectasis. This is now an accepted national guideline for health professionals.
- Menzies research has shown the benefits of health worker education on asthma outcomes, which is expected to improve service delivery and policy. This is the first study to provide high-level evidence of the benefits health worker education sessions have on families with chronic disease.
- Menzies held the first national Australian Otitis Media workshop, *Are you listening?*, to create a better understanding of otitis media. The workshop reinforced that ear infections are a major concern in Australia, identified important research advances and highlighted future research areas and strategies for long-term interventions.
- Menzies Associate Professors Fiona Arney and Gary Robinson led the development and organisation of the *Effective Integration of Child and Family Services Symposium*. This brought together senior academics, policy and practice organisations to support plans for integrated service delivery for early childhood in the Northern Territory. Menzies has also formed relationships with the University of Toronto and child protection services in Ontario and Manitoba in the areas of evidence-based child protection policy and practice.

Highlights and Achievements

1. Jana Lai – NT PowerWater Young Achiever Award in Science and Engineering.
2. Amber Revell – was accepted into medical school and has commenced her first year of the NT medical program. We are fortunate to have Amber's continual involvement in the research activities of the team.
3. Lesley Verteegh – received the inaugural Indigenous Respiratory Nurse Career Development Award from the Thoracic Society of Australia and New Zealand.
4. Anne Chang – received the CDU Vice Chancellor's Award for Exceptional Performance in Research – Individual Researcher.

Towards a Healthy Tomorrow

The division will continue to develop programs to prevent early childhood disease among children in Indigenous communities through novel, high quality intervention studies. We are seeking funding to progress our goals and aim to build a generation of researchers, particularly Indigenous scholars, who can lead these studies. Work is also underway to establish a Centre for Child Development and Education to promote integration and collaboration between the health, education, early childhood and family support sectors.



global health

The Asia Pacific Region is home to over half of the world's population, including areas of significant poverty. Each year, millions die from infectious diseases and malnutrition. Many of these deaths could be prevented by better research into prevention and affordable treatment.

The Global Health division at Menzies works in five key areas of public health importance: malaria, tuberculosis, bacterial infections, maternal and child nutrition, and international child health. Our partners in the region are diverse and include health care providers, policy makers, and researchers from countries such as Indonesia, Timor Leste, Lao PDR, Fiji, Thailand, Malaysia, Vietnam, Bangladesh, Nepal and Tanzania.

One of the key features of Menzies' global health research is translation – from bench top to bedside; evidence to policy to practice. Our research priorities are shaped by the work we do with international practitioners. Through collaborative research and capacity building, we aim to find meaningful and relevant ways to improve the health of people in the region.

Malaria

Malaria causes approximately 500 million clinical infections a year, and is a major cause of morbidity and mortality in the region. Menzies' malaria work spans a broad range of activities, with a focus on prevention and treatment, particularly in women and infants. We work on all five species of the Plasmodium parasite that cause human malaria, with a particular focus on the three that cause most disease and death in the region: falciparum, vivax and knowlesi malaria. Our work focuses on better understanding Plasmodium parasites: the ways in which they become resistant to drugs, how they cause severe disease and death, and how our immune system protects against malaria. Through improved knowledge of these parasites, we are identifying better ways to prevent and treat malaria in different environments, facilitating policy change and monitoring the impact of such change in the health of communities.



Maternal and Child Nutrition

Undernutrition is the underlying cause of 3.5 million child deaths and 11% of the total global burden of disease. While the causes of this condition are mostly predictable and preventable, countries with a high burden of undernutrition often lack the knowledge, capacity and resources to prioritise and deliver effective nutrition interventions. As part of the AusAID-funded Compass: Women's and Children's Health Knowledge Hub, Menzies will develop a simple, evidence-based tool to enable nutrition stakeholders to prioritise, appraise, plan and deliver effective nutrition interventions using integrated, comprehensive approaches.

International Child Health

Pneumonia is the most common cause of death in children, accounting for at least 18% of global child mortality, and 50% of deaths in some countries in the region. Most pneumonia deaths occur due to lack of simple antibiotic therapy. In Vietnam, our researchers are conducting a clinical trial on the most effective, least expensive dosage of pneumococcal conjugate vaccine. In Cambodia, we are evaluating community case management of pneumonia. Early data suggests that this community based, low-cost method of management could have a profound impact on pneumonia-related child deaths.

Tuberculosis

Tuberculosis (TB) remains a leading cause of illness and death in the Asia Pacific. The overlapping pandemics of TB and HIV create major challenges in under-resourced settings. Our broad TB research program ranges from improving understanding of physiological responses to TB infection, to helping TB programs implement treatment guidelines more effectively. We are using supplemental nutritional treatments to improve outcomes in people with TB. Proposed studies include investigating ways to expand TB screening and preventive therapy in people exposed to the infection, and to optimise the integration of TB and HIV care for people with both infections.

Bacterial Infections

Bacterial infections and sepsis continue to be major causes of death in our region. We have identified a major burden of sepsis and severe sepsis in the tropical north of Australia. We are identifying predictors of death and new mechanisms underlying severe infection. Currently we are studying new ways to treat and improve the outcome of sepsis.

Rheumatic Heart Disease (RHD)

Coordinated by Menzies, this programme works to support Pacific Island nations to strengthen and develop RHD prevention activities while undertaking research to:

- define and improve primary health care strategies
- establish baseline epidemiology
- undertake echocardiography screening research.

This year the project provided support for programs in Fiji and Tonga with remote support for the Polynesian Island nation of Tuvalu. More than 3,000 children were screened using echocardiography in 2010, and 4 training workshops were held for health professionals.

The Fiji GrASP project, the research arm of the national RHD program, aims to facilitate a feasible evidence-based approach to screening for the disease, and improve delivery of secondary prophylaxis medication.

Research Translation

The primary goal of the Global Health division is to translate research into practice. In Papua, Indonesia, our studies have led to policy change for uncomplicated and severe malaria; recent evidence suggests that both malaria-related morbidity and mortality have declined significantly. Our studies on how malaria parasites cause severe disease and death have now led to new treatment trials in severe malaria.

The RHD programme completed a pilot study in Fiji to train nurses in echocardiography. As a result of brief and focused training, the nurses were able to screen children to identify and refer those with abnormal cardiac pathology. This project has provided the basis to build local capacity and eventually facilitate routine screening of primary school aged children in Fiji. Funding has been secured to undertake a larger study, with the aim of defining and developing a training model that can be used in resource-poor regions across the world where there is a high prevalence of RHD.

Awards and Highlights

1. As a key member of the Asia Pacific Malaria Elimination Network, Menzies leads the Vivax Working Group. We are undertaking capacity building research activities on vivax malaria through a combination of workshops, small grants and technical assistance to 11 countries across the Asia-Pacific.
2. Menzies has entered into an important partnership with the Queen Elizabeth Hospital in Eastern Malaysia, on the study of a new form of severe malaria caused by *P. knowlesi*.
3. Menzies has signed a twinning arrangement with the Research Cabinet of Timor Leste's Ministry of Health. The collaboration focuses on research support and mentoring, with the aim of fostering independent research, aligned to the nation's health priorities.
4. Menzies has received an AusAID Australian Leadership Awards Fellowship Grant to host six Timorese nutritionists for in-service training at Royal Darwin Hospital and remote communities.
5. PhDs were successfully awarded to team researchers, Joshua Davis and Anna Ralph.
6. The problems of poverty, poor nutrition, and limited service delivery are shared by both developing countries and many areas within Indigenous Australia, particularly in the area of maternal and child nutrition. In these regions many stakeholders have limited or no prior training in nutrition and food security, and have few opportunities to learn from past experiences, reflect on best practice, and recognise appropriate interventions. With support from the Fred Hollows Foundation, Menzies researchers are using knowledge gained working in developing countries to develop *Nutrition and food security – approaches to improving the health of women and children*. This evidence-based short course is designed to enable nutrition stakeholders to identify, implement and advocate for effective approaches to improving nutrition and food security.

Towards a Healthy Tomorrow

The coming year will see an expansion in the breadth and depth of Menzies' collaborations. We will work in more countries, on diverse health needs, from scientific laboratory-based research to working with developing government health departments on surveillance and disease monitoring.



healing and resilience

The Healing and Resilience division aims to improve the health of Indigenous Australians through its research into the management of mental illness, substance abuse and other major factors that impact overall wellbeing. Our research helps us to better understand the “protective factors”, including connection to culture and family, which help build resilience to mental illness, and problems arising from substance abuse and gambling. This research is then used in practical ways to help develop Indigenous youth and adults into strong, resilient people.

Within the division, the Aboriginal and Islander Mental health initiative (AIMhi) explores approaches to understanding Indigenous perspectives of wellbeing and translates them into youth-focused and culturally adapted strategies, which can be used in community and service settings.

Brain Recovery Research

This project investigates brain function patterns in substance abusers during periods of abstinence and identifies psychosocial factors that affect relapse post-treatment. Recovery was observed in petrol and alcohol abusers within six weeks of abstinence, however petrol sniffers showed residual impairments even after 12 months of abstinence. The study found that cognitive and psychological problems and drug availability were key risk factors in causing relapse after treatment. The results highlight the importance of detecting, managing and monitoring cognitive and psychological problems during treatment. The information gained has been developed into educational resources and used to inform clinical practice.

Screening and Treatment of Alcohol Related Trauma Brief Interventions Trial (START)

This two-year project will introduce screening and brief interventions for high-risk drinkers admitted to hospital with facial trauma. Working with the NT Department of Health and Families, this research aims to determine whether at-risk drinkers treated for alcohol related facial trauma experience improved health outcomes following culturally adapted brief interventions. The results of this project will guide hospital management of substance misuse in high-risk Indigenous youth and young adults.

Gambling Worries: Attitudes to Gambling in NT Remote Communities

The ‘Gambling Worries’ project investigates ways of measuring the impact of gambling interventions in remote Indigenous communities. Using focus groups and key informant interviews, the research will establish attitudes, behaviours and consequences in relation to gambling. The development of an assessment tool, Yarning about Gambling Scale, will help measure the impact of gambling treatments.

Cultural Security and Care Planning

This project is based in the mental health unit in Darwin and is testing whether the AIMhi approach (involving setting goals to achieve lifestyle change) translates to the ward group program and discharge planning process. This study will evaluate changes in care and client outcomes and will help to inform strategies to promote cultural security for Indigenous people in mental health hospital settings.

Train the Trainer Project

The Train the Trainer Project is exploring the factors that influence the uptake of evidence-based mental health tools in service organisations. One of the areas we are exploring in this study is the degree to which the organisation’s readiness to change influences knowledge translation and uptake of new tools and processes. The study will help develop strategies to improve the translation of Indigenous health research evidence into practice.

Best Practice in Early Intervention, Assessment and Treatment (BEAT) of Depression and Substance Misuse

The AIMhi BEAT Depression Project aims to improve wellbeing in remote Indigenous communities by strengthening pathways to care and support for people at risk of depression and substance misuse. We are testing the AIMhi low intensity motivational intervention to help people deal with their worries and bad feelings. We are developing best practice pathways to care for the two communities involved in the project, at the same time as testing the intervention using experimental research methods. As communication is such an important issue in remote communities, the AIMhi team developed a talking poster that explains the BEAT depression project. The poster is embedded with voice recordings that play at the press of a button. The talking poster was presented at the 2010 Creating Futures Conference in Cairns.

The Grog Brain Story Animation Video

Menzies has created a short video to communicate to an Aboriginal audience the dangers of drinking too much alcohol, and the impact it has on your brain and behaviour. The animated video shows how a healthy brain works, and how alcohol affects its function and the way we think, act and feel. The animation is available in alternate language versions including Warlpiri, Katherine Kriol and Djambarrpuynu (Yolngu). This project communicates the findings from our Brain Recovery Research project to individuals and communities affected by alcohol.

Tobacco Multimedia Project

This project uses innovative technology to promote the cessation and prevention of tobacco use in Indigenous youth. An e-health website will feature multimedia resources, including educational animations, video messaging and interactivity through blogging, podcasting and social networking sites. The website encourages community interaction by providing instructions for people to contribute locally created digital stories about quitting smoking. Innovative marketing techniques will be used to promote the site, including viral marketing on mobile devices, as well as the more traditional modes of popular Indigenous media and websites.

Youth Diversion in Wadeye

This three-year project is exploring the youth gang culture in the remote community of Wadeye. Population data was collected and analysed to understand the cultural diversity of the area. Local leaders and other community members guide this process through a reference group. Our early findings show that youth activity, sometimes portrayed as gang involvement, has stimulated positive social change and community resource development on a broad scale.

Women’s Health

The STRIVE study is a clustered community project to test whether a sexual health quality improvement program implemented in remote health services in the NT, far north Queensland and the Kimberly region of WA can achieve best practice in clinical sexual health service delivery and, ultimately, reduce community STI prevalence.

Community Safety Research Project NSW

This research was conducted in three remote towns in the far west of NSW to gain a better understanding of ways to support the wellbeing of Aboriginal people in remote communities. The Indigenous experience here is characterised by lower levels of employment, education and socio-economic status than the non-Indigenous inhabitants of the region. The levels of violence in the communities are high, especially assaults. Scenarios were developed based on extensive discussion with Aboriginal Health Workers in the region and assessed by the project’s Indigenous reference group. The scenarios were used as the basis for individual and group interviews in the three communities, including prisoners.

Our Lives: Culture, Context and Risk

This project examines attitudes towards sexual health and sexual decision-making in Indigenous communities in the Northern Territory, Western Australia and South Australia. Supported by significant investment from its 26 research partners, the project has started with community-based research in Alice Springs and Borroloola. It is committed to empowering youth and is trialling a range of innovative research methods including visual interactive group techniques.

Research Translation

Research has been directly translated into practice by integrating multimedia resources into a variety of areas, including mental health, alcohol and other drugs, primary care, and perinatal services, best practice protocols and post graduate training programs.

We have also created original resources that tell important health stories in new ways, such as the Grog Brain Story animation. In addition, the team has been conducting training across Australia in the AIMhi brief intervention, which is recognised as a low intensity cognitive behavioural therapy. These therapies are increasingly considered appropriate treatments for broadening the base of mental health services.

Awards and Highlights

1. Sheree Cairney has been appointed a member of the National Health and Medical Research Council committee to develop national guidelines for the clinical management of volatile solvent use.
2. The AIMhi program conducted a well-attended, successful three-day course within the Menzies Masters of Public Health program (A strengths based approach to Indigenous mental health), which attracted the highest number of Indigenous students of a Menzies course to date.
3. The AIMhi intervention was showcased in a chapter of the recently published Oxford textbook of Low Intensity Cognitive Behavioural Therapy.
4. The past year has seen the development of a youth health and wellbeing focus within the division.
5. The youth health team coordinated a two-day workshop exploring youth friendly research methods and health services. This involved experts from Burnett, the Centre for Adolescent Health and the University of Western Australia. The workshop was well attended by local youth services and established a strong agenda for future research direction.

Towards a Healthy Tomorrow

The Healing and Resilience division is developing strategies for knowledge translation to ensure our research and the resulting evidence is accessible and can be used by the whole community. We are mixing methods to combine our expertise in science and communications, so that we can explore the journeys of individual community members. Our division aims to use these research methods to better understand resilience and develop service and community-based pathways to achieve improved care and wellbeing for youth and adults.



preventable chronic diseases

Chronic disease is the most significant contributor to the 'gap' in life expectancy and disability between Indigenous and non-Indigenous Australians. Many chronic diseases suffered by Indigenous Australians, such as diabetes, cardiovascular and kidney disease, are preventable to some degree. Our researchers are investigating ways to reduce risk factors, such as smoking, unhealthy diet and physical inactivity and are researching ways to prevent and treat conditions such as diabetes, chronic kidney disease and cancer. We have a special interest in the social determinants of health.

eGFR Study

This three-year study is assessing the accuracy of the standard clinical test for kidney function (eGFR) in Indigenous Australians. Our team had a very productive year and reached participants for this study, canvassing a vast region of remote Australia. We have almost completed data collection.

Perio-Cardio Study

Commencing in 2010, the study will assess the impact of treating inflamed gums and teeth on heart disease. Working with Danila Dilba Health Services and NT Oral Health Services, the team has recruited in Darwin and Palmerston, achieving almost half the target participants for the study.

Healthy Top Enders Study

This landmark study involves detailed assessment of body composition and metabolic make up of healthy Top End residents aged between 16 and 25 years. Data collection was completed in 2010.

Tiwi Primary Prevention Pharmacologic

This study trials the use of perindopril in the primary prevention of kidney disease and diabetes. The study team has completed its baseline recruitment.

Monitoring and Evaluating Aboriginal Tobacco Control

This project was completed this year. Throughout the project, participating communities were provided with six monthly updates describing local trends in tobacco consumption. As a result of this research, the NT Department of Health has made this monitoring work routine and it will be applied to all NT retail outlets as a condition of new Tobacco Retail Licences from 2010.

Talking about the Smokes

This is an ambitious national program assessing the impact of different tobacco control activities on a group of smokers. The impact on Indigenous non-smokers and staff at Aboriginal community controlled health services will also be assessed. The project is based on a similar international study carried out across 20 countries. In 2010, we established the project and started talking with Aboriginal health services.

Healthy Starts

This international study is testing whether a family based tobacco control program about second-hand smoke will reduce the number of Indigenous infants presenting to clinics for respiratory illness. Participants will include Indigenous families living in Darwin and Maori families from Auckland. In 2010, we presented at the Asia Pacific Conference on Tobacco or Health, with our Auckland collaborators.

Tobacco Research in California

David Thomas spent a 10-week sabbatical with Professor John Pierce at the University of California, San Diego. California is a world leader in tobacco control policy, and Professor Pierce has been involved in evaluating the effectiveness of these efforts in reducing smoking and the harm it causes. Dr Thomas worked with Professor Pierce on describing the dramatic decline and, now, near disappearance of pack-a-day smokers in California.

Cancer Australia

Joan Cunningham and John Condon contributed to a Cancer Australia-commissioned review of research on cancer control in Aboriginal and Torres Strait Islander Australians. The review provided a comprehensive summary of the evidence base and included 31 recommendations relating to improvements in data infrastructure, screening and prevention, cancer control programs and service delivery models. These recommendations are currently being considered by Cancer Australia. The review prompted the convening of a National Round Table on Priorities for Aboriginal and Torres Strait Islander Cancer Research.

Socio-Economic Status and Chronic Diseases

Joan Cunningham researched the relationship between socio-economic status and self-reported chronic disease (diabetes, heart disease, asthma and arthritis) in Indigenous, compared with non-Indigenous, Australians. Using data from national health surveys, Professor Cunningham found that relationships varied across diseases. Socio-economic status had strong correlation with diabetes and heart disease, but made very little difference in asthma patients. Patterns were generally similar to those seen in the non-Indigenous population, but all four diseases were substantially more common among Indigenous people than non-Indigenous people.

Darwin Regional Urban Indigenous Diabetes (DRUID) Study

Analysis of data from the DRUID study continues. During 2010, academic papers were published or accepted on a range of topics, including:

- racism and depression
- socio-economic status and carotenoids (a marker of dietary quality)
- C-reactive protein (a marker of inflammation)
- fibrinogen (a marker of heart disease risk); and
- subjective measures of social status.

In addition, Jacqui Boyle successfully completed a PhD thesis using DRUID data on women's health. Over the course of the year, researchers began planning a follow up of the DRUID Study group to look at factors associated with the development of heart disease, diabetes, and premature death among urban Indigenous adults. Liz Barr was awarded a post-doctoral fellowship to lead this work.

Cancer Outcomes for Indigenous Australians

Analysis of data on cancer incidence, survival and mortality continued as part of the studies on Cancer Outcomes for Indigenous Australians. Kalinda Griffiths undertook an Indigenous cancer epidemiology traineeship as part of this project.

Phase two of an investigation of a cluster of women's cancer, the SISTER Study, was completed and the results were fed back to the communities involved. Phase three of this investigation has recently been funded and work will commence in 2011.

Good Food Systems, Good Food For All

This collaborative project aims to help build capacity in remote stores and develop continuous quality improvement (CQI) tools that will improve food security in remote communities. We are testing the feasibility of supporting store communities in using CQI processes to build evaluation capacity and strengthen community decision-making. These tools and processes are currently being developed, tested and will be finalised in 2011 with the development of CQI for a better food systems facilitation guide.

Evaluating Store-Based Interventions

A study into the impact of income management on sales in ten remote NT community stores was published in 2010. It provided the first empirical evidence on the impact of one of the Australian Government's NT Emergency Response measures. This study found that the income management had no apparent effect on spending habits of people in the ten communities. Research concluded that such a mandatory restriction of people's income would be unlikely to positively influence people's spending or improve diet while issues of availability, quality, affordability and home storage remained.

STORES Project

We are collaborating with Outback Stores (OBS) and the University of SA to evaluate the impact of a range of pricing interventions on purchasing patterns across 24 remote community stores. This study commenced mid 2010 and has examined the impact of the Australian Government's excise on tobacco sales and initiatives to affect the sale of soft drinks, fruit and vegetables in OBS stores. This project has contributed to developing quality assurance processes in using point of sales data from stores.

Keeping Track of Health Food Tool

The nutrition research program aims to strengthen the capacity of stakeholders to monitor and evaluate food and nutrition-related practice in remote communities. In 2007 we developed the Keeping Track of Healthy Food tool, which uses store point of sales data to analyse and report key indicator foods. National interest in this tool has prompted funding from the Australian Government and Queensland, WA and NT health departments to broaden analysis of store sales data available to users and provide greater flexibility in reporting data and analysing trends over time. This project should be completed in mid 2011.

Examining Determinants of Food Security in Darwin-Palmerston Areas

Ian Potter Foundation Indigenous Fellow and PhD Scholar Leisa McCarthy is examining household food security issues and the impact on health outcomes in Indigenous children in the Darwin region. The study aims to test the reliability of a household-level food security measure among urban Indigenous families and to explore characteristics of food security from the perspective of primary caregivers. Recruitment has been completed for the first stage of this study.



preventable chronic diseases

Research Translation

Our use of point of sale data to monitor and report trends in the type and volume of food sold in remote stores has helped public health nutritionists and store associations better monitor trends in sales of key indicator foods and evaluate store-based interventions.

David Thomas has been invited onto several national and NT committees that are working to increase awareness of the harm smoking causes in Aboriginal communities and seeking funding for measures to reduce its incidence.

Awards and Highlights

1. Jaqui Hughes was awarded the inaugural University of Newcastle Indigenous Alumni Award.
2. David Thomas was awarded a National Heart Foundation Career Development Award Fellowship, and was appointed the inaugural Head of the Northern Australian Health Research Unit and Associate Director of the Lowitja Institute.
3. Kalinda Griffiths was named the NT Young Australian of the Year.
4. Joan Cunningham was appointed a Visiting Scientist at the Harvard School of Public Health and spent three months in residence at the Harvard Center for Population and Development Studies.
5. The Tobacco Control Research Team was awarded the 2010 CDU Vice-Chancellor's Award for Exceptional Performance in Research Team Category).



Towards a Healthy Tomorrow

The clinical research group is planning follow up for the DRUID and eGFR studies to look at factors contributing to heart disease and related conditions, as well as progression of kidney damage markers in the high-risk Indigenous Australian population. This new knowledge will contribute to clinical guidelines in an area where evidence is currently lacking. We are also working with Dr Christine Connors from NT Department of Health, Dr Alex Brown from BakerIDI and the NT Aboriginal Medical Services Alliance in setting up the NT Diabetes in Pregnancy Study, which aims to improve clinical care and outcomes of diabetes in pregnancy for both the mother and her baby.

In conjunction with NT Renal Services, Menzies researchers are planning a prospective study of the origin and transmission of serious and potentially life-threatening infections in people on dialysis. This study complements the renal program within the research division.

Building on past work, the nutrition research program is planning a randomised trial to examine the impact and cost-effectiveness of reducing the prices of fruit and vegetables, low joule drinks and water in remote NT communities, together with an in-store nutrition education strategy. We believe this could be the first study to provide empirical evidence on the potential impact and cost-effectiveness of a store level fiscal policy and combined education strategy on influencing purchasing patterns at a population level.

There is little evidence on the effectiveness of store-based nutrition education strategies in influencing spending patterns. A project to determine the feasibility and sustainability of a system for in-store healthy food promotion and labelling to enhance the consumer's ability to select healthy foods in the remote community context will commence in 2011.

tropical and emerging infectious diseases

The tropical environment of northern Australia provides an enviable lifestyle, but also some particular microscopic hazards. The Tropical and Emerging Infectious Diseases division conducts research into bacteria and parasites that are a particular threat to the human inhabitants in this region. These include the bacterial agents of skin disease golden staph and streptococcal, the scabies parasite, and the soil borne bacterium that causes melioidosis. In addition, researchers in this division are engaged in developing robust and cost-effective genetic fingerprinting technologies for bacteria, and these are finding wide application at Menzies and further afield.

Novel Technologies for the Genetic Analysis of Bacteria

We have developed a new approach for the genetic fingerprinting of bacteria. This is based on technology termed "high resolution melting" (HRM) analysis. To design these methods, we use a variety of computerised techniques to analyse large amounts of gene sequence data to identify particularly informative combinations of gene fragments, precisely predict the performance of methods and provide computerised tools for data analysis. This technology allows for very cost-effective tracking of bacterial transmission and dissemination, and has been applied to a range of important bacterial pathogens, including golden staph (*Staphylococcus aureus*), *Streptococcus pyogenes* and *Enterococcus faecium*. This approach is now used routinely for genotyping bacteria in Menzies research projects, and in collaborative projects with other institutions from around Australia.

Staphylococcus Aureus in the Top End

Menzies' genetic fingerprinting methods were applied to describe the patterns of disease caused by *S. aureus* (golden staph) and determined that many strains circulate in the Top End. The type of disease caused depends on the strain and carriage of a toxin called Pantone-Valentine leukocidin (PVL). The research found that approximately 50% of isolates in the Top End carry PVL and these caused disease in younger patients and had a tendency to cause large boils and abscesses, often requiring surgery. We are now considering using additional antibiotics to treat patients with severe staphylococcal disease caused by PVL+ strains.

Genome Sequence of the Novel Staphylococcus Taxon "CC75"

An isolate of the *Staphylococcus* lineage, CC75 was first identified in the NT as a common cause of skin lesions. It has now been reported at several locations around the world. CC75 resembles golden staph in many respects, and it is currently classified as such. In 2010, we completed a detailed analysis of the complete genome sequence of CC75 and discovered that it is only distantly related to other *S. aureus*. Remarkably, CC75 lacks the golden pigment that is a defining feature of *S. aureus*.

CC75 constitutes a group of bacteria that appears to warrant formal classification as a new species. Its characteristics and potential to cause disease are not fully understood. Current indications are that it is a common cause of minor skin lesions in populations living traditional lifestyles. Similar to conventional *S. aureus*, it can also cause severe invasive and systemic disease, but it may be less prone to do this than conventional *S. aureus*.

Chlamydia Trachomatis Population Structure

Chlamydia trachomatis is an important agent of genital and eye infections. In a new initiative, we've started research



tropical and emerging infectious diseases

into the population structure of *C. trachomatis* in the NT to develop genetic analysis methods to better understand possible transmission mechanisms, focusing on whether transmission from the eye to the genital site can occur. We have identified a set of genetic targets and are currently analysing them.

Pandemic H1N1 2009 Influenza in the Top End

We described the impact of Swine Flu (H1N1 2009 influenza) on the Top End. This study covered the impact on the community as well as on hospital and intensive care unit admissions at the Royal Darwin Hospital (RDH). We found that Indigenous people were significantly more affected across all levels. Compared to the non-Indigenous population, Indigenous people were 12 times as likely to be admitted to RDH with H1N1 influenza and 4.5 times as likely to be admitted to the intensive care unit. The admission rates in the Indigenous population were among the highest reported in worldwide literature.

Combination Antibiotic Therapy for MRSA (Methicillin – Resistant Staphylococcus Aureus)

We are leading an international Multi-centre randomised controlled trial on alternative treatments for MRSA (resistant golden staph) bloodstream infections. The mortality rate from MRSA infections is 20–30%. The antibiotic vancomycin is currently used as treatment and has a number of drawbacks. We are test whether combining vancomycin with another antibiotic, flucloxacillin, will reduce the duration MRSA survives in the blood of patients with infections. This is an initial pilot study involving six hospitals across Australia. If the results are positive, we may undertake a larger study that will more definitively answer whether adding flucloxacillin to vancomycin improves patient outcomes, including survival rates.

Melioidosis Bacterium Associated with Exotic Grass Species

We investigated the association of *B. pseudomallei* (which causes melioidosis) with different grass species in the Top End of Australia. We localised the bacteria in and around the roots and aerial parts of various grasses. In particular, we focused on exotic grasses introduced to northern Australia in the 20th century as pasture grasses that have since spread to non-target areas replacing native vegetation. Invasive grasses cause changes to biomass and the nitrogen cycle, and increase persistence of annual soil wetting. These factors might assist the survival of *B. pseudomallei*, thereby increasing the area of suitable habitat. We suggest that the ongoing spread of invasive grass species across northern Australia is contributing to the spread of the bacteria.

Distribution of the Melioidosis Bacterium

We are predicting the occurrence of *Burkholderia pseudomallei* in soil in the Top End by modelling its distribution using remotely sensed data and data from previous field studies at 210 sites in northern Australia. Model validation includes the use of independent test data sets and subsequent sampling in areas with predicted high and low probability of bacterium. This study contributes to understanding the environmental distribution of *B. pseudomallei* in tropical Australia and will help identify areas of increased risk.

Effects of Changes in Land use Practices Upon the Melioidosis Bacterium

Evidence is mounting that soil disturbance and changes in land use practices are associated with an increased occurrence of the melioidosis-causing soil bacterium *Burkholderia pseudomallei* in the environment. We are analysing the occurrence of the bacterium on construction sites, in residential gardens and rural bore water. As a next step, we will investigate ways to decrease the load of these bacteria in soil and water to reduce the risk of exposure.

Darwin Prospective Melioidosis Study

Now in its 20th year, this study aims to understand the clinical and microbiological aspects of melioidosis in the Darwin region and use this information to lessen the burden of the disease. There has been a large decrease in the mortality associated with melioidosis in that time.

2009/2010 saw a record number of confirmed melioidosis cases in the Top End, with 91 cases (11 fatal) from 1 October 2009 to 30 September 2010. This compares with a median of 27 cases yearly over the previous 20 years. The increased case numbers continued, with 56 cases between 1 October 2010 and 5 April 2011. There has been a statistically significant rise in the proportion of cases from the Darwin urban region and we are assessing the reasons for this. We are also analysing the genetic diversity of the *Burkholderia pseudomallei* strains from the various locations over recent years; in particular, strains from higher risk urban Darwin suburbs. In 2010 we have analysed and published a comprehensive clinical analysis of the 540 culture-positive cases from this study.

Melioidosis in Sarawak

In 2010, we started research into melioidosis in Sarawak, which is one of the two Malaysian states on the island of Borneo. This study is being carried out by PhD student Yuwana Podin in collaboration with the University of Malaysia, Sarawak. In 2010, the first bacteria samples from this project were genetically characterized. Initial indications are that these are more similar to isolates from the South East Asian mainland than those from Australia. This is consistent with previous reports that the Wallace line (the eco zone boundary between Asia and Australia) has been a barrier to the spread of this species.

Scabies Research

Scabies is a parasitic infestation of the skin with the parasitic “itch mite” *Sarcoptes scabiei*. It is a significant disease worldwide in humans, wildlife, livestock and domestic animals and is a particularly serious problem in many remote Indigenous communities where overcrowded living conditions are a major factor contributing to high rates of transmission.

We have been studying the molecular mechanisms of the emerging drug-resistance in scabies mites to monitor, and hopefully control, the development of such a resistance.

An established in vitro sensitivity assay is used to monitor the sensitivity to current treatments of scabies mites collected from crusted scabies patients. In this way we can monitor the emergence of drug resistance, as well as the progress of treatment for individual patients (and provide input).

We are also investigating the role of a scabies mite aspartic protease in burrowing into and surviving on the skin of their host. A molecule that is essential for mite survival would be an excellent target for the design of an alternative treatment for scabies. We have shown that the aspartic protease is localised to the gut of the scabies mite and that the protein is capable of digesting several skin molecules including fibrinogen, fibronectin and laminin. In collaboration with Professor Ben Dunn at the University of Florida, we have studied the properties of this enzyme and have identified a molecule that inhibits the activity of this enzyme. We will now test this inhibitor for activity against live mites. The development of alternative treatments is a high priority given the emerging resistance of scabies mites to current treatments.

Australian Leishmania Life Cycle Investigation

Leishmaniasis is an infection caused by Leishmania parasites and ranges from asymptomatic or self-limiting infections of the skin to infection of abdominal organs (which can be fatal if untreated). The discovery of a novel type of Leishmania parasite infecting kangaroos in the Northern Territory in 2003 was entirely unexpected. Prior to this, Australia and Antarctica were thought to be the only regions of the world free of this disease. We have continued to build on our previous work, which implicated a biting midge in the transmission of the disease. This was the first evidence anywhere in the world of transmission by an insect other than a phlebotomine sandfly.

Supported by the Wildlife Exotic Disease Preparedness Program, we expanded our collection of biting midges in the Darwin area. We sampled the midges from different microhabitats in an effort to identify breeding sites. We also trialled numerous trapping methods to specifically increase the number of biting midges caught. Screening the midges revealed the presence of parasites, with evidence of ongoing transmission in the Darwin rural area. Further work is critical to assess the risk that both Australian and exotic Leishmania pose to wildlife and human health in Australia.

Research Translation

In 2010, researchers in this division made many discoveries and advances:

- Menzies used its new genetic fingerprinting technology to identify the nature of a cluster of antibiotic-resistant *Enterococcus faecium* infections at Royal Darwin Hospital.
- We identified an association between *B. pseudomallei* abundance in the soil, landscape flora and geochemistry, and this will lead to better awareness and prevention of melioidosis infections.
- Research into golden staph identified that strains carrying the PVL toxin are particularly common in northern Australia. We are now considering using additional antibiotics to treat patients with severe *staphylococcal* disease caused by PVL+ strains.
- Research shows CC75 may constitute a group of bacteria that warrants formal classification as a new species. Its characteristics and potential to cause disease are still not fully understood.
- Research into the impact of Swine Flu on Indigenous people influenced health advice on who received the H1N1 vaccine and treatment of suspected cases.
- Scabies research is investigating the cause of drug-resistance and possible alternative treatment. These results will have a direct impact on scabies treatment.

Awards and Highlights

1. Steven Tong is the winner of the inaugural Fulbright Northern Territory Scholarship, supported by the NT Government, Charles Darwin University and corporate sponsor Blackboard Asia Pacific. Dr Tong will study *Staphylococcus aureus* (golden staph) as a major cause of severe community and hospital acquired infections at Duke University in the United States.
2. Deborah Holt and her Leishmania project team were the 2010 winners of the NT Research and Innovation Board Tropical Knowledge award and also the prestigious Chief Minister's award as the overall winner across all categories.
3. Menzies researchers have commenced studying the population structure and diagnosis of *Chlamydia trachomatis*. In 2010 this project was awarded a NHMRC grant.
4. Mirjam Kaestli received a prestigious Australian Research Council Linkage grant to support her melioidosis research and a new project that will analyse environmental factors contributing to soil bacteria.

Towards a Healthy Tomorrow

In 2011, our team will continue work in scabies, melioidosis-causing bacteria, golden staph and other skin infections to better understand tropical and infectious diseases, and improve treatment and patient care.



centre for primary health care systems

Established in 2010, the Centre focuses on research into primary health care systems and applies evidence from research to implement better health care systems, and provides a model of research translation. It is home to *One21seventy*, which provides quality improvement services to Indigenous primary health care centres. The Centre also supports two of the Australian Government's Indigenous health projects.

An independent review in 2010 identified that this area of Menzies had become a successful and recognised research translation unit delivering benefits to Indigenous Australians. As a result of this review, the Centre now operates under the governance of an Executive Committee.

Its focus is on developing research and evidence to help improve the quality of services provided by health clinics to Indigenous clients. This includes investigations into how to improve systems to deliver high quality primary care, implement and evaluate change in health systems policy and practice and the impact of system change on the quality of care.

Audit and Best Practice for Chronic Disease Extension (ABCDE)

The Audit and Best Practice for Chronic Disease Extension project (ABCDE) was conducted over a five-year period, finishing in 2010. This built on the findings of the ABCD project, which demonstrated the effectiveness of a continuous quality improvement (CQI) model in supporting Indigenous primary health



care centres to use evidence-based good practice. The ABCDE refined the CQI process to adapt it to a more diverse range of Indigenous primary health care settings across Australia. The project collected and analysed indicators of quality of care, health outcomes and processes from 69 health centres. The research found the CQI process achieved measurable improvements in chronic disease care for Indigenous clients.

ABCD National Research Partnership

This project continues the research focus on improving the quality of care in Indigenous primary healthcare systems. It's a partnership between Australian health service providers, researchers and policy-makers designed to improve the quality of care in Indigenous primary health care settings - achieving better practice through research. The project explores the factors associated with variation in quality of care, examines effective strategies in improving the delivery of care and works with partners to enhance the effective implementation of successful strategies. It also incorporates the key principle of research transfer, bringing together service providers, government agencies and researchers to determine research priorities and build relationships to pave the way for future partnerships.

Rheumatic Heart Disease ABCD

Under this project, research has been used to develop CQI tools to improve the prevention and management of rheumatic heart disease (RHD), based on newly developed national guidelines for treatment. Clinical audits and assessments helped refine the tools and the development of health centre systems to support RHD prevention and care. A similar program of research was supported in Fiji where tools were adapted for the local context. The project included a high level of stakeholder involvement and resulted in findings that contributed to the development of new intervention programs.

Improving Health Promotion

This project is a three-year study aimed at lifting the quality of health promotion practice to prevent chronic disease through CQI. Data collection is complete and work has started on refining the tools and protocols that have been developed as part of this research. An Indigenous advisory group, mainly made up of Aboriginal Health Promotion Officers from the NT Government, has provided valuable advice and feedback. One of the project's earliest findings was a lack of existing systems to support the documentation of health promotion activity. The NT Government is exploring changes that will address this situation.

Housing Improvement and Child Health

The Housing Improvement and Child Health project looked at the complex relationships between housing infrastructure, child health and a number of social and environmental factors. The research focused on ten NT communities that received substantial government investment in housing from 2004 to 2005. Data is still being analysed, but an initial finding is that large-scale housing programs focusing on infrastructure alone appear unlikely to lead to



more hygienic living environments. A broader ecological approach to housing is needed in remote Indigenous communities, including better access to health hardware, hygiene promotion and by creating a broader enabling environment in communities.

Research Translation

The ABCDE project has had significant influence on Indigenous primary health care:

- It has informed the development of the Australian Government's Healthy for Life program. ABCD system and clinical audit tools are included in the Healthy for Life Toolkit and have been used more widely by health centres to meet a range of reporting and other requirements.
- The NT Government has adopted the CQI process as routine practice across all government-funded health centres and has created regionally based co-ordinator positions to support its implementation. Many of the NT's community controlled health services have also adopted the model.
- Queensland Health is implementing the ABCD process across Queensland.
- South Australia has adopted ABCD tools and processes in government-managed primary health care centres.
- NSW's Maari Ma Aboriginal Health Corporation has been using the ABCD processes to support and evaluate implementation of its chronic disease strategy over the past four years.

The ABCD model is being adapted by Menzies researchers for use in other settings and areas of practice, including health promotion and food security. Improving health promotion CQI tools are being trialled by health services in New Zealand and Tonga.



centre for primary health care systems

The *One21seventy* model not only provides a system that supports health centres to improve the quality of care in a sustained way, it ensures evidence is translated into practice. This is done by exposing staff to best practice standards through the audit process, increasing the data available, engaging staff in clinical governance and looking for ways to integrate improvements into day-to-day practice and clinical systems.

An independent review in 2010 found a high level of customer satisfaction with this service, with clients describing its tools, training and training manual as 'excellent'.

One21seventy continues to expand its client base and will begin providing services to a small number of health centres in WA, SA, NSW and, potentially, Victoria in 2011. This will be done in conjunction with the Audit and Best Practice for Chronic Disease (ABCD) Research Partnership, thanks to funding from the Lowitja Institute. We will continue to develop new CQI tools to meet client demand and expand our suite of training resources and services.

The *One21seventy* program name reflects our aspiration to improve health for increased life expectancy beyond one year, 21 years and 70 years of age.

SCARF

The Support, Collection, Analysis and Reporting Function (SCARF) project aims to implement a Continuous quality improvement approach to the delivery of chronic disease management and maternal and child health care. SCARF is part of the Evaluation and Outcomes Framework of the Australian Government's Healthy for Life (HfL) program. Menzies has been providing support to SCARF services since 2007, and this year continued to provide support to HfL Services nationally by assisting them to report data on a web-based reporting tool (OSCAR). They also provided training to health services through clinic visits and workshops, with the opportunity for networking and sharing experiences about the HfL Program.

Sentinel Sites

In March 2010, Menzies School of Health Research was awarded a contract to undertake formative evaluation for the Australian Government's Closing the Gap initiative the Indigenous Chronic Disease Package (ICDP). The ICDP aims to reduce the burden of chronic disease among Aboriginal and Torres Strait Islander people. Evaluation of the ICDP will involve analysis of its impact on 24 Sentinel Sites across Australia, and provide feedback to inform the ongoing rollout of the package.

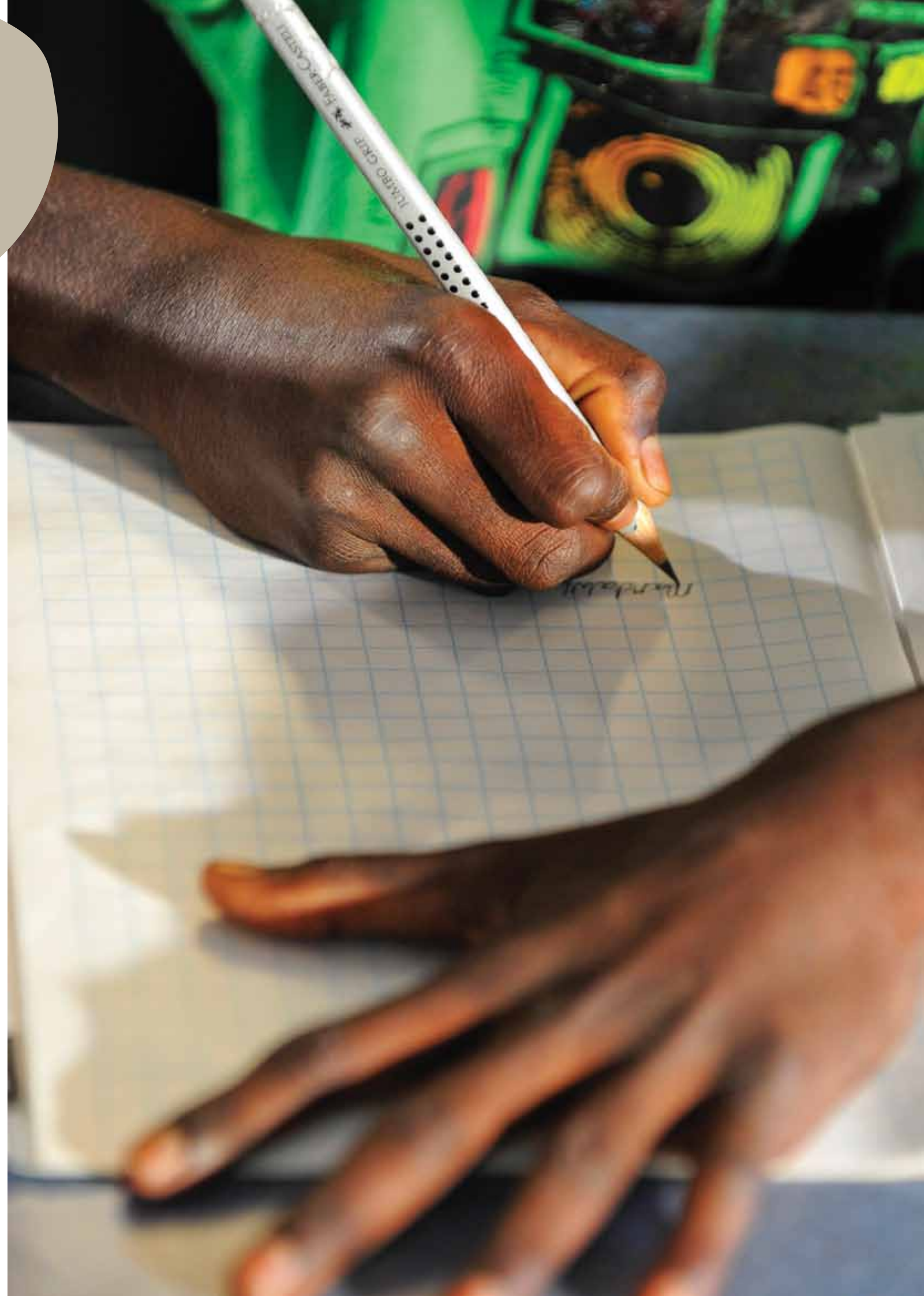
Eight sentinel sites were established across Australia in 2010, with a further 16 to be set up by mid-2011.

Awards and Highlights

- The ABCDE project team was a finalist in the Chief Minister's Research and Innovation Award.
- Professor Ross Bailie and Damin Si were joint winners of the Australian Association of Academic Primary Health Care's award for Distinguished Paper for *Improving quality of preventative care for well adults in Indigenous community health centres*.
- Nikki Clelland and Lyn O'Donoghue were swamped with interest from international health services and researchers following their presentations about the Improving Health Promotion project at the IUHPE World Conference on Health Promotion in Geneva.

Towards a Healthy Tomorrow

In 2011, Menzies will focus on expanding its base of senior researchers in the area of Primary Health Care Systems. The Centre will continue to build capacity and experience in managing and delivering quality, evidence-based evaluation and service delivery programs in the area of primary health care systems.



education and training

The Education and Training division coordinates and delivers Charles Darwin University's post-graduate public health courses and supports higher degree research students. Offerings include the Graduate Diploma in Public Health, Master and Doctor of Public Health and a range of short courses.

In 2010, the course content was aligned with the Australian Network of Academic Public Health Institutions' National Foundation Competencies for Master of Public Health Graduates. Content improvement will continue through 2011 as part of the course re-accreditation processes. Advancements in the online teaching platforms and the use of e-reserve and e-journal repositories have created new ways for students to participate in the courses.

Enrolment in public health courses continued to increase with a total of 90 students across the three courses. An increase in the support provided to Menzies' Higher Degree Research students and Professional Doctorate in Health students has been led by the arrival of Dr Suzanne Belton. In conjunction with the Evaluation and Research Support Unit, this division has facilitated the inaugural Research Skills Training Fortnight to further support training.

Menzies' short courses enable researchers to share their wisdom and expertise with students and provide an opportunity to share research findings with a broader audience. In 2010, 178 people participated in nine short courses.

Three new postgraduate short courses were developed and offered:

- A Strength Based Approach to Indigenous Mental Health;
- Tropical Child Health; and
- Current Issues in Tropical Health.



The division also offers courses in:

- Promoting Aboriginal and Torres Strait Islander Health;
- Issues in Indigenous Health Research and Community Development; and
- Public Health.

The Alan Walker Series on *Improving Aboriginal Child Health* and the *Youth Futures* symposium continue to showcase local research and explore new directions in these fields.

2010 Graduates

Doctor of Philosophy

Annette Dougall: Australian Leishmania Lifecycle Investigation

William Ivory: *Kunmanggur*, Legend and Leadership: A study of Indigenous leadership and succession focusing on the northwest region of the Northern Territory of Australia

Steven Tong: The clinical and molecular epidemiology of community-associated *Staphylococcus aureus* in Northern Australia

Anna Ralph: Tuberculosis project in Timika (ANU)

Doctor of Public Health

Greg Rickard

Bachelor of Science Honours

Jariah Kaissis

Jana Yun Reng Lai

Master of Public Health

Catherine Bateman

Kalinda Griffiths

Lauren Grose

Divya Kannan

Freda Moloney

Zvanyadza Nesvinga

Margaret Stewart

Graduate Diploma of Public Health

Jeanette Boland

Angela Booth

Deanne Burge

Hazel Clarke

Chontel Gibson

Nigel Green

Bridgette Hutchinson

Gorana Kosanovic

Janet Prior

Tracy Spillman

Graduate Certificate in Public Health

Joanne Fox

Melanie Legg

2010 Higher Degree research students

Doctor of Philosophy

Anita D'Aprano: Developmental surveillance of Indigenous children Northern Territory Research Innovation Board, Australian Postgraduate Award

Anna Stephen: Ways of improving outcomes of severe ear infections in Aboriginal children living in the NT

Anna Szava: Household decision-making and child nutrition interventions Australian Postgraduate Award

Asha Bowen: Randomised controlled trial of co-trimoxazole versus intramuscular penicillin for impetigo in Aboriginal children National Health and Medical Research Council, Australian Academy of Science.

Bart Currie: The Darwin prospective melioidosis study

Bridget Barber: A prospective study of the epidemiology, clinical features and pathogenesis of human *Plasmodium knowlesi* infection National Health and Medical Research Council

Christabelle Darcy: The role of arginine and tryptophan metabolism in severe infections Australian Postgraduate Award

Gabrielle McCallum: Bronchiolitis in Indigenous children

Georgina Nutton: Mobile Preschool Program participation and the health, developmental and learning outcomes in the short and medium term

Jacklyn Ng: MRSA-potential diagnostic tools for the early and rapid identification of carriers NT Research Innovation Board, International Postgraduate Research Scholarship

Jaquelyne Hughes: The relationship of obesity, insulin resistance and inflammation in Aboriginal and Torres Strait Islanders with diabetes and renal impairment National Health and Medical Research Council, Australian Academy of Science.

Jeanne (Rini) Poespoprodjo: Assessing the Efficacy and Safety of DP for the Treatment of Uncomplicated Malaria AusAid

Kathryn Roberts: Population-based echocardiographic screening for rheumatic heart disease in northern Australian children Australian Postgraduate Award

Kim Hare: Bacteriology of respiratory pathogens in Australian Indigenous children

Laurel Teoh: Paediatric respiratory medicine

Leisa McCarthy: Exploring Indigenous Australians' perceptions of health in relations to health promotion activities and type 2 diabetes Ian Potter Foundation Scholarship

Matthew Stevens: Socio-economic and environmental determinants of health in Indigenous communities in the Northern Territory

Megan Lawrance: An evaluation of intersectoral action for suicide prevention in the Northern Territory: Does collaboration facilitate better outcomes Australian Postgraduate Award

Naor Bar-Zeev: The vaccine-preventable burden of influenza and other respiratory viruses among Aboriginal children in the Top End National Health and Medical Research Council, Australian Academy of Science

Nicole Clelland: Improving Health Promotion through Continuous Quality Improvement National Health and Medical Research Council

Nitin Kapur: Defining exacerbation in non cystic fibrosis bronchiectasis Australian New Zealand Bank

Paul Burgess: Where the dreaming changed shape: The Aboriginal and Torres Strait Islander Adult Health Check in a remote Aboriginal community

Rachael McMahon: Does case referencing improve quality of life at the end of life for end-stage renal/palliative care clients from remote communities in the Top End of the NT? Australian Postgraduate Award

Robyn Marsh: Nasopharyngeal micro ecology: correlations with otitis media in Indigenous children National Health and Medical Research Council

Robyn Williams: Integration of Indigenous health into nursing curricula Australian Postgraduate Award

Samantha Colquhoun: Epidemiology, prevention and control of rheumatic heart disease in Pacific Island countries-filling the gaps Menzies Scholarship

Santie Du Plessis: Adaptive behaviour assessment scale Indigenous adaptation study

Sarah Ireland: Rosaries, ovaries and the rainbow serpent: Aboriginal women's experiences of reproduction and fertility in Wadeye Australian Postgraduate Award

Sue McMullen: Family fighting - domestic violence in a remote Aboriginal community Australian Postgraduate Award Industry Scholarship

Susan Pizzutto: Immune function in children with chronic suppurative lung disease Australian Cochrane Airways Group

Therese Kearns: Epidemiological study of scabies and strongyloides infections in a remote indigenous community in the NT before and after a community wide treatment intervention with Ivermectin National Health and Medical Research Council, Australian Academy of Science. Sidney Myer Health Scholarship

Tina Noutsos: Toxinology and Haematology (coagulopathy) University Postgraduate Research Scholarship

Tom Snelling: Rotavirus gastroenteritis in the Aboriginal population and the effect of immunisation Menzies Scholarship, National Health and Medical Research Council

Wajahat Mahmood: Characterisation of "Sarcoptes Scabei" spartic proteases Pakistan Scholarship

Yuwana Podin: An epidemiological investigation on melioidosis and *Burkholderia pseudomallei* in Sabah and Sarawak, East Malaysia University Postgraduate Research Scholarship

Master by Research Students

Emily Bailey: Improving the management of respiratory health in Indigenous children

Gregory Wills: At preschool and ready to learn? An assessment of prerequisite skills for writing and reading in children entering preschool in the Darwin, Palmerston and rural areas

Sara Noonan: The development and evaluation of a continuous quality improvement model for rheumatic heart disease control and prevention in Fiji

Sue Edwards: Psycho-educational assessment of Indigenous students in remote NT schools: An assessment framework *OCHRE Honours Scholarship*

Supervision of Advanced Medical Science Students (University of Melbourne)

Lachlan Brennan: Are hospital acquired *S aureus* infections due to acquisition of *S aureus* during the hospital admission, or are they due to endogenous *S aureus* carried by the patient at the time of admission?

Louise Boyle: The PROMPT Follow Up Study: Long term outcomes of otitis media in remote Aboriginal children in the Top End

Matthew Morey: How reliable is the history of cough in Indigenous children?



Awards and Highlights

1. Menzies commenced the re-accreditation of the Graduate Diploma and Masters in Public Health for 2012.
2. We introduced new marketing strategies including an electronic newsletter Learnvine, advertising in regional newspapers and through social media.
3. We developed new Short Courses in the areas of Indigenous mental health, youth health and tropical health and an online module in Indigenous mental health for remote health staff.
4. We identified several scholarship opportunities: Scholarship funding for Indigenous students at Masters level in course work or research (funded by the estate of the late Arthur Hatt Cook, The Bridge Business College Gift Fund and the Ellen Violet Broan Scholarship); Future Leaders to fund course work or research students studying Indigenous health; and Menzies' Ros Bracher Scholarship opportunity for research training.
5. Dr Suzanne Belton was awarded a \$10,000 teaching grant for software training from QSR International.

Towards a Healthy Tomorrow

One of our key goals is to build the educational pathway between public health education and research, and to better equip people with research skills in the health sector. We will introduce a new Graduate Diploma of Health Research to meet this need from 2012. The Graduate Diploma in Health Research will include core units in Research Skills, Research Design, Qualitative Research Methods, Epidemiology and Biostatistics with new elective units in Indigenous Health Research, Health Promotion and Clinical Trials.

The Evaluation and Research Support Unit (ERSU) aims to improve the quality of research projects and evaluations by supporting researchers through training and one-on-one assistance. Our team includes experts who support the various stages of the research process, including statistics, data management, epidemiology, evaluation and administration. We aim to ensure best quality design, implementation and monitoring of research projects, along with high quality interpretation, communication and translation of results into action.

In 2010, training opportunities included:

- monthly Research Skills Training Seminar Series
- the Research Skills Training Fortnight
- biostatistics and Stata training
- evaluation training.

Training events were well attended by both Menzies and external staff working in research with 800 people attending the training fortnight. Feedback indicated a high level of satisfaction and demand for similar events. We improved our outreach in 2010 by developing an extensive training network, communicating with external offices through video-link and making our seminar series available on the web.

ERSU established a centralised system for managing and monitoring requests, with our staff assisting with approximately 100 separate research projects in areas including project and evaluation design, database development and maintenance, statistical analysis planning and conduct and grant applications. ERSU provided over 1100 hours of assistance for more than 690 consultations. In liaison with NT Department of Health and Families, Menzies also worked to improve collaborative research efforts, access to training and consulting in research methods and updated processes for undertaking and conducting research.

Towards a Healthy Tomorrow

In 2011 ERSU will proactively engage with researchers and project managers to provide input at the very start of projects and at key times throughout the research process.

In-house training in data and project management will be offered for the first time. By using a train-the-trainer model, we will embed expertise within all research divisions. We also plan to revise training in biostatistics and Stata to improve quality and accessibility.

2011 is likely to bring further changes in staffing to improve our capacity to assist researchers and those conducting evaluations. A potential new area will be capacity building of clinical trials through new links with the National Health Medical Research Council Clinical Trials Centre. A research staff induction pack will also be developed.



corporate and research support

This year Menzies has implemented a new organisational structure to help support a framework for quality research. This includes the appointment of a Chief Operating Officer to oversee the corporate and research support functions. The new arrangements will enable us to develop key initiatives to ensure Menzies receives the support needed as the organisation grows and evolves. Many of the new initiatives in corporate support focus on providing better services to research and education activities, including the allocation of specific administration support staff and better business support to research divisions.

Key initiatives for 2010 include:

- Putting a comprehensive set of policies and procedures together to provide stronger corporate support and systems
- implementing performance management and development framework and training that was specifically designed for Menzies' needs as a medical research institute of national renown
- establishing internal legal services and processes for contract management and collaborative research agreements
- developing systems to meet the new requirements of the Australian Code for the Responsible Conduct of Research

- certification of the Human Research Ethics Committee under the National Health and Medical Research Centre Harmonisation of Multi-Centre Review (HoMER) initiative.

The Aboriginal Ethics Sub-committee continues to play an essential role in the review of research project applications submitted for ethics approval. Menzies is now better able to coordinate remote research, with an improved ethics database identifying communities that have agreed to participate in projects.

This year the NHMRC also conducted a site audit to monitor Menzies' governance, research administration, financial procedures and other processes. A final report has yet to be provided.

In order to undertake malarial parasite work as part of our Global Health research, we have begun the process of seeking certification approval from the Australian Quarantine Inspection Service for Menzies' Darwin Laboratory Facility. A site inspection also took place at the Laboratory Radiation Lab with no problems identified.

Recent growth at Menzies has prompted the relocation of more research teams to the new Darwin office space in Winnellie and an upgrade of IT storage arrangements.

Goals for next year include working rapidly towards completion of the new buildings, creating a computerised records management system and formalising a centralised data management system.



new building project

Development and Education. The 2900 square metre building will accommodate 180 staff. The functions of the building include:

- teaching spaces
- office accommodation
- interview/observation room
- various sized meeting rooms.

The projected timeframes for the major milestones are:

Engaging architects
May 2011

36 week design period
May 2011 - February 2012

Build new facilities
April 2012 - March 2013

Refurbish JMB
January 2013 - June 2013

Menzies will soon commence the construction of two new buildings, featuring state-of-the-art facilities, to meet the organisation's growing needs. The two sites chosen, Charles Darwin University (CDU) and Royal Darwin Hospital (RDH), recognise Menzies' important links to medical research and academic excellence. Building works will commence later in 2012.

Menzies has made good progress on its new building project during the year. We have secured a total of \$49.7 million (including GST) for the project, including \$37.6 million from the Health and Hospital Fund, \$6.4 million from the Australian Government, \$4.5 million from the Northern Territory Government and \$1.2 million from Charles Darwin University, with an additional \$1.8 million in additional facilities support over the next decade.

The two new facilities at CDU and RDH will strengthen existing relationships and support our research outcomes. The design process is expected to be complete by February 2012, with both buildings scheduled for Practical Completion by June 2013.

The building on the hospital site will be adjacent to the existing John Matthews Building (JMB). It will be approximately 3000 square metres, and will accommodate an additional 117 staff. This will bring the total number of Menzies people on this site to 243. The functions of the building will include:

- office accommodation
- clinical trials
- improved field trip preparation and sample processing
- increased staff amenities
- reinstatement of the expansion of the PC2 laboratory
- refurbishment of the John Matthews Building
- car parking and improved traffic flows
- cafe
- boardroom
- various sized meeting rooms
- 200 person seminar room
- community recognition wall.

The building on the Charles Darwin University site will strengthen education and learning ties. It will be co-located with CDU's Office of Research Innovation and house Menzies' proposed new Centre for Child



menzies indigenous development unit

The Menzies Indigenous Development Unit (MIDU) plays a unique role in supporting Aboriginal and Torres Strait Islander staff and research at Menzies.

One exciting initiative this year is the creation of a Certificate II in Child Health, and the training of five staff to deliver the course in remote communities, upon completion of a Certificate IV in Training and Assessment. This is part of Menzies' commitment to ensure our research and training reaches the people who are most affected.

This year MIDU helped promote science as a potential career through NT career days and establishing science awards to secondary school students in partnership with the NT Science Teachers Association.

Menzies now has three Indigenous reference groups who provide valuable input into research direction: the Aboriginal and Torres Strait Islander Advisory Committee, the Healing and Resilience Indigenous Reference Group and the Child Health Indigenous Reference Group. They are all supported by MIDU.

As part of the Menzies restructure, an Associate Director of Aboriginal Programs position has been established within the Executive team. This position is responsible for developing, implementing and evaluating strategies, projects, and policies that realise the Aboriginal and Torres Strait Islander focused outcomes of the Menzies Strategic Plan. Associate Professor Heather D'Antoine has been appointed to this position.

Finally, we thank the staff of MIDU, including Normie Grogan, Nadine Lee, Lindy Quall and Bilawara Lee. Bilawara, the previous manager of MIDU, established many initiatives that are now in place at Menzies. Bilawara has left Menzies to take up a senior position with the Flinders NT Medical Program.



rhdaustralia

Towards a Healthy Tomorrow

In 2011, *RHDAustralia* will work with the Heart Foundation to disseminate the National ARF/RHD guidelines across Australia to ensure that diagnosis and management of disease is at a high and consistent standard.

A national repository will be developed to store data for national disease reporting. Governance arrangements for the collection and reporting of data from the RHD programs in WA, NT and Queensland are yet to be finalised.

RDHAustralia will host a second workshop for program staff in June 2011. It will focus on persistent clinical issues and provide an opportunity to showcase their work to their peers.

We will also run a workshop on RHD at the CSANZ Indigenous Cardiac Conference in Alice Springs in June 2011.

RHDAustralia is the national coordination unit for rheumatic heart disease (RHD) and was established by the Menzies School of Health Research in partnership with James Cook University and the Baker IDI Heart and Diabetes Institute. The unit is funded through the Australian Department of Health and Ageing's National Rheumatic Fever Strategy. Its primary function is to work with rheumatic heart disease control programs and other partners throughout Australia to reduce death and disability from acute rheumatic fever (ARF) and RHD among Aboriginal and Torres Strait Islander people and other high-risk populations. The activities of *RHDAustralia* focus on providing support for existing RHD programs, standardising disease information and reporting, and improving quality and access of education and training for health professionals. *RHDAustralia* also promotes awareness of RHD at meetings and workshops, and supports research to help develop a better understanding of the disease and its impact in Australia.

RHDAustralia is working to establish national ARF/RHD guidelines, develop key performance indicators to help evaluate RHD program performance, establish a national data collection system and strengthen education and training to improve health outcomes.

Achievements

- In April 2010, *RHDAustralia* held a clinical workshop for RHD program staff and other interested individuals from across Australia to increase awareness of ARF and RHD, and to develop clinical expertise in the field.
- In August 2010, *RHDAustralia* hosted a workshop for a wide range of experts and organisations to share knowledge and reflect on the work that is being done, and recommend future strategies to help reduce the burden of RHD in Australia. Researchers from Australia and throughout the world also had an opportunity to discuss a wide variety of current and future research projects across the ARF/RHD disease spectrum.
- In *RHDAustralia* staff presented at conferences hosted by the Australian Disease Management Association and Australian Centre for Remote and Rural Medicine.



menzies in the community

Menzies is active in the community. We hold events to raise awareness about our work, share important information with the community and raise funds for our research.

Thank-you Day Gunbalanya

Menzies researchers have been working hand-in-hand with the Gunbalanya people for more than 20 years. The community's participation in our research has allowed us to make significant gains in understanding health issues facing Indigenous Australians, not only in the Territory but also across Australia. In August 2010, Menzies hosted a barbecue in Gunbalanya to thank the community for their ongoing support. The NRL's One Community ambassadors Hazem El Masri, Mario Fenech, David Peachey and Wendell Sailor and OPSM's One Sight Foundation also attended the celebrations.

Oration

Every year, Menzies hosts an oration in Darwin with a high profile speaker discussing a topic relevant to our work in Indigenous, tropical or international health. The 2010 Orator, Australian of the Year Professor Patrick McGorry, highlighted the importance of youth mental health in his speech, *A 21st Century Approach to Mental Health*, before a crowd of more than 250 people. Menzies will continue to work towards improving youth mental health in urban and remote settings, particularly among Indigenous people.

25th Anniversary Celebrations

In 2010, we celebrated Menzies' 25th birthday. We held several community events throughout the year to mark the occasion and reflect on 25 years of ground-breaking research.

Fundraising

Thanks to our generous donors and 25th anniversary partners, we raised money to support a new Youth Health and Wellbeing Research Program, which will focus on issues such as mental, sexual and reproductive health, substance misuse, education and chronic disease.



Menzies Open Day

An open day in Darwin gave students the opportunity to see some of our research work and consider future career options. More than 150 students attended the event, which coincided with National Science Week. NT Health Minister Kon Vatskalis also attended the open day to meet with students and celebrate the occasion.

Scientific Colloquium

Some of the nation's leading medical experts presented a series of lectures reflecting on 25 years of health research at Menzies. Speakers included Anne Chang, Bart Currie, Joan Cunningham, John Mathews, Jonathan Carapetis, Julie Brimblecombe, Ngiare Brown, Michael Good and Nick Anstey. Their presentations can be viewed online from the Menzies website.

Parliamentary Reception

The Chief Minister of the Northern Territory hosted a reception to celebrate Menzies' anniversary at Parliament House in Darwin. The event acknowledged the commitment and support of Territorians who have helped to establish Menzies and contribute to its ongoing success.

Message of Thanks to the Aboriginal and Torres Strait Islander Communities from Menzies

In 2010, we unveiled a canvas to thank the Aboriginal and Torres Strait Islander communities who support Menzies. It was unveiled by: former Menzies staff member and Director of the Poche Centre for Indigenous Health at the University of Sydney, Professor Ngiare Brown, and respected Tiwi Islands Traditional Owner and Elder Mr Marius Puruntatameri. Mr Puruntatameri is a long-time Menzies collaborator, a strong advocate for improving health and living conditions in Indigenous communities, and the recipient of a Community Honorary Appointment. The canvas read:

We thank you for your partnership and friendship that has lasted the twenty five years that Menzies has been researching in the Northern Territory and beyond. You welcome us into your communities, your families and your lives. You are our participants, researchers, advisors, board members and collaborators, but most of all our teachers and mentors. At times we make mistakes, but we learn and you never give up on us.

We come to you with our knowledge, but you carry the wisdom and knowledge of more than 40 000 years. We are humbled and honoured that you entrust us with it, and together we work to improve the lives and the future of Aboriginal and Torres Strait Islander peoples.

For all of this, we thank you.

Menzies Medallion

A special 25th Anniversary Menzies Medallion was awarded to long-term collaborator with the School, Professor Michael Good. Professor Good works at Griffith University and last year won Australia's top award for science leadership, the Eureka Prize. The medallion was presented by the Administrator Mr Tom Pauling AO QC to honour Professor Good's considerable contributions to global and Indigenous health through research and leadership.

If you are interested in raising funds for Menzies or being involved in future community events please contact: supportus@menzies.edu.au or visit our website.



The Menzies School of Health Research is an independent body corporate under the control of a governing Board. Menzies is also a controlled entity of Charles Darwin University.

Menzies School of Health Research 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)

Professor Maddocks is the South Australian Chief Scientist, South Australian Research Development Institute Livestock Systems, Roseworthy Campus, University of Adelaide. His research interests are in reproductive immunology and cell biology, and epigenetic influences on foetal development.

Professor Maddocks is a Director of the Board of the Sir Robert Menzies Memorial Foundation, and is the Menzies Foundation nominee to the Menzies Board.

Professor Clare Martin (Deputy Chair from August 2010)

Professor Clare Martin is a fellow at the Northern Institute of the Charles Darwin University. Prior to this appointment in August 2010, Clare was the CEO of the Australian Council for Social Service, the peak body for the community services sector and national voice for Australians on low incomes.

Professor Jonathan Carapetis

Professor Carapetis has been Director of the Menzies School of Health Research in Darwin since 2006. He is a paediatrician, infectious diseases and public health physician and a leading mind in the Australian health field, with particular expertise in Indigenous child health.

Professor Barney Glover

Professor Barney Glover is Vice-Chancellor, Charles Darwin University in Darwin, NT. He also holds an Adjunct Professorial Fellowship in the WA Centre of Excellence in Industrial Optimization. Barney has held various Board positions on Cooperative Research Centres and other research organisations and maintains a strong interest in research management and professional development.



Mr Gary Barnes

Gary Barnes was appointed as Chief Executive, Department of Education and Training, in May 2009. He came to this position from the role Deputy Chief Executive, Queensland Public Service Commission where he led sector-wide reform in the area of Workforce Performance.



Mr Richard Ryan AO (Treasurer from August 2010)

Deputy Chancellor of Charles Darwin University since November 2009. Previously, Richard was the Chancellor of the Charles Darwin University from 26th November 2003 to November 2009. Mr Ryan is a professional company director who is a member of a number of public and government boards.



Professor David Celermajer

Professor Celermajer is Scandrett Professor of Cardiology, University of Sydney Director of Echocardiography and Cardiologist, Royal Prince Alfred Hospital; Clinical Director, The Heart Research Institute, Sydney and Chairman, Research Committee, National Heart Foundation.



Mr Robert Wells

Robert is Co-Director of the Menzies Centre for Health Policy and Executive Director of the College of Medicine and Health Sciences at the Australian National University, Canberra. He works on a range of health policy and systems issues, including primary care, private health insurance, rural health and health workforce. He has participated in national advisory committees on

neurosciences research and attracting greater private sector investment in health and medical research.



Ms Kate George

Ms Kate George is from the Murchison District of Western Australia and belongs to the Putejorra people. Kate is the Principal Consultant of Claypan Services Pty Ltd. Kate holds a law degree from the Australian National University and was admitted to practice as a barrister and solicitor in Western Australia in 1992 and New

South Wales in 1989. Kate has provided national consultancy services to private and government sectors as well as Aboriginal communities.



Professor Shane Houston

Shane Houston is a Gangulu man from Central Queensland. Shane is the Executive Director of Systems Performance and Aboriginal Policy. He has worked in Aboriginal Affairs for more than 30 years mainly in the health and employment areas. Shane has held a range of positions at local, state, national and international levels including thirteen years in senior public sector management roles and a stint with the World Council of Indigenous Peoples.



Mr Jeff Moffet

Mr Jeff Moffet commenced in the position of Chief Executive, Department of Health and Families in September 2010 after acting as the Chief Executive of WA Country Health Service, the largest country health service in Australia. He is a highly experienced health administrator who has occupied senior leadership and management roles in the health sector for the past decade.

Mr Peter Carew – Deputy Chair until April 2010

Mr Michael Martin – Treasurer until April 2010

Mr Ken Davies – Board member until April 2010

Dr David Ashbridge – Board member until April 2010

Ms Cindy Shannon – Board member until August 2010

Observers of the Board

Secretary to the Board – Ms Adrienne Farago

Menzies Staff Representative – Ms Emma Bevington

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The Governing Board was assisted by the following committees.

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Mr Richard Ryan (Chair from August 2010)

Mrs Sue Bradley (Independent member)

Prof Jonathan Carapetis

Mr Peter Carew (until June 2010)

Mr Shane Smith (Financial Controller and Secretary until June 2010)

Mr David Blair (Financial Controller and Secretary from August 2010)

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Prof Shane Houston (Chair from August 2010)

Mr Peter Carew (until June 2010)

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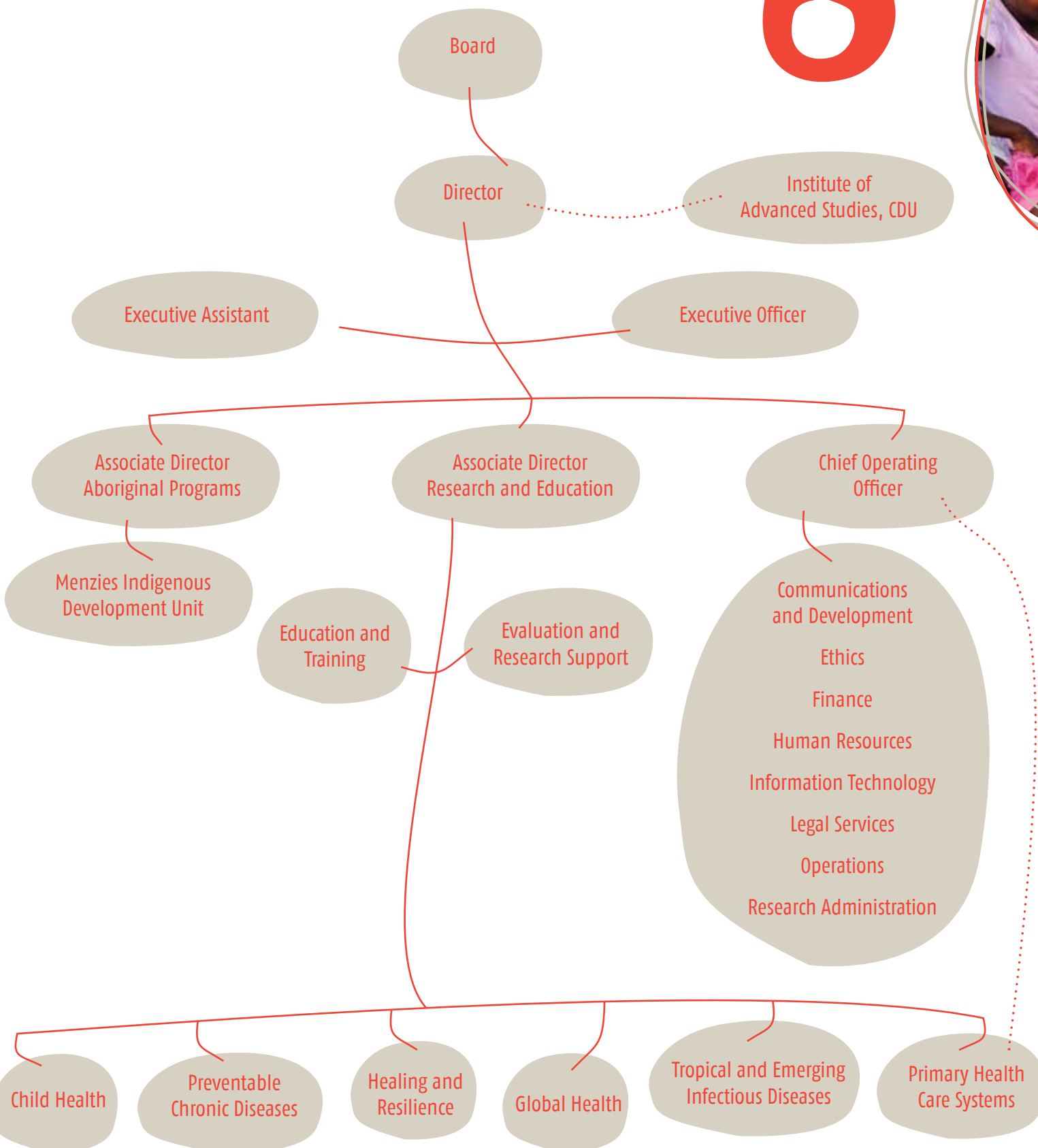
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 Ms Vijaya Joshi
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Funding Body	Chief Investigators	Title	Grant Type	Year From	Year To	Total \$ Awarded
CRC Aboriginal Health	BAILIE, Ross; SMITH, Shane	ABCD – CQI	-	1 July 2008	30 January 2010	\$41,476.00
AusAID	POESOPRODJO, Jeanne Rini	Alison Sudjrat Award for Leadership	Award	2010	-	\$25,000
Australian Institute of Policy and Science	MOUNSEY, Kate	2010 Young Tall Poppy Science Awards	Award	1 June 2010	2 June 2010	-
Northern Territory Government	DOUGALL, Annette; HOLT, Deborah; WALTON, Shelley	Leishmania Project Team	Award	30 August 2010	31 December 2010	\$10,000.00
Flinders University of South Australia	SKULL, Sue	Research Support and Education Program	Capacity Building	28 October 2008	30 September 2011	\$171,000.00
Ian Potter Foundation 20070455	MCCARTHY, Leisa; BRIMBLECOMBE, Julie; LEE, Bilawara	The Ian Potter Foundation Indigenous Research Fellowship	Capacity Building	1 January 2007	31 August 2011	\$249,000.00
Perpetual Charitable Planning Services including estate of the late Arthur Hatt Cook, The Bridge Business College Fund and the Ellen Violet Brown Scholarship	CLARK, Louise	Perpetual Indigenous Masters Degree Scholarship(s)	Capacity Building	1 July 2010	30 June 2012	\$72,209.00
National Heart Foundation of Australia CR 09D 4712	THOMAS, David	Smoking and tobacco control amongst Aboriginal and Torres Strait Islander people.	Career Development	1 July 2010	30 June 2014	\$331,630.00
NHMRC Centre for Clinical Excellence in Child and Adolescent Immunisation	CARAPETIS, Jonathan; ANDREWS, Ross	Immunisation CCRE – Child and Adolescent Immunisation Travel Scholarships.	Centre of Excellence	30 June 2009	31 December 2009	\$5,000.00
NHMRC Centre for Clinical Excellence in Child and Adolescent Immunisation	CARAPETIS, Jonathan; ANDREWS, Ross	A Pilot Study to Assess the Presence of Circulating Respiratory Viruses and Bacteria in a Remote Indigenous Community Using Different Specimen transport methods and sensitive molecular techniques.	Centre of Excellence	1 January 2009	31 December 2010	\$35,000.00
Alcohol Education and Rehabilitation Foundation Ltd	NAGEL, Tricia; THOMPSON, Valerie; GRIFFIN, Carolyn	NIDAC 2010	Conference	16 June 2010	18 June 2010	-
National Water Commission National Risk Assessment RFT NWC4/2008	BAILIE, Ross; MCDONALD, Elizabeth	National Water Commission National Risk Assessment	Consultancy	21 September 2008	31 March 2010	\$36,960.00
NT Department of Health	ARNEY, Fiona	The Safe Kids Strong Futures Project	Consultancy	1 May 2009	30 June 2010	\$30,905.10
Arizona Board of Regents for and on behalf of Northern Arizona University MGN35TR-01	CURRIE, Bart; MAYO, Mark	High Resolution/Highly Sensitive Assays for Forensic Analysis and Attribution of Bacterial Biothreat Agents.	Contract	21 September 2006	30 April 2010	\$75,000.00
Australian Respiratory Council	CHANG, Anne	The Respiratory Educational Resource Project	Contract	19 May 2010	19 May 2011	\$35,000.00
Beyond Blue Limited	BAILIE, Ross	Support of the Development of a One21seventy web-based mental health audit tool for use by Indigenous primary health care services.	Contract	19 August 2010	31 January 2011	\$39,000.00
Beyond Blue Limited 09-534	NAGEL, Tricia	BEAT: Best Practice in Early Intervention Assessment and Treatment of Depression and Substance Misuse	Contract	16 September 2009	31 December 2014	\$801,340.00
Brotherhood of St Laurence	NUTTON, Georgie	HIPPY Evaluation – Hebrew University of Jerusalem	Contract	18 October 2010	31 December 2010	\$44,940.00
Children's First Foundation	CARAPETIS, Jonathan; KELPIE, Lorraine	Getting Every Child's Heart Okay (gECHO)	Contract	28 May 2008	30 September 2010	\$207,000.00
Department of Health and Ageing	BAILIE, Ross; GODDARD, Marcus; THOMAS, David; CLELLAND, Nikki; BRIMBLECOMBE, Julie; KELAHER, Margaret; ANDERSON, Ian; O'DONOHUE, Lyn; MCCARTHY, Leisa; ROWLEY, Kevin	Sentinel Sites Program as part of the monitoring and evaluation of the monitoring and evaluation of the Indigenous Chronic Disease Package.	Contract	1 March 2010	30 November 2012	\$692,090.00
Department of Health and Ageing	MORRIS, Peter; WARD, Felicity	Evaluation of a comprehensive case management support program for prevention of hearing loss associated with otitis media with perforation in Indigenous children 0 to 5 years of age.	Contract	25 June 2010	30 April 2012	\$1,093,279.00
Department of Prime Minister and Cabinet 091223	CURRIE, Bart; KAESTLI, Mirjam; MAYO, Mark	National Security Program to Undertake Burkholderia pseudomallei Sampling – United States Department of Homeland Security.	Contract	1 January 2010	30 April 2010	\$30,000.00
Lifeline Australia	NAGEL, Tricia	Review 3 Indigenous-specific Lifeline toolkits: Coping with sorrow; help when your're feeling down; and Aboriginal suicide prevention information.	Contract	22 December 2010	31 March 2011	\$4,500.00
Mallee Family Care	NUTTON, Georgie	Evaluation of TLC Transition to School Project 2009-09. Beyond the Rainbow – Story-play.	Contract	2 March 2009	30 December 2010	\$14,545.60



Funding Body	Chief Investigators	Title	Grant Type	Year From	Year To	Total \$ Awarded
NT Department of Health	CAIRNEY, Sheree	Gunja Flipchart	Contract	1 January 2010	31 December 2010	\$20,000.00
NT Department of Health	SILBURN, Sven	Care for Child Development	Contract	1 January 2010	31 December 2010	\$30,000.00
NT Department of Health	SILBURN, Sven	Integrated Services Symposium	Contract	1 June 2010	30 June 2011	\$60,000.00
University of Queensland	-	Asia Pacific Malaria Elimination Network (APMEN)	Contract	30 November 2009	31 December 2013	\$318,300.00
Clive and Vera Ramaciotti Foundation 3072/2010	BOURKE, Peter	Equipment Grant for BD FACS Cantoll Flow Cytometry System with BD FACS Loader.	Equipment	1 October 2010	2 October 2010	\$75,000.00
NHMRC 640317	FALLS, Gabrielle	NHMRC Standard Equipment Grant – 2009	Equipment	1 October 2009	30 June 2010	\$100,559.00
NHMRC GNT9000040	MCKAY, Kate	NHMRC Standard Equipment Grant 2010	Equipment	1 January 2010	31 December 2010	\$135,608.00
NHMRC 283303	BAILIE, Ross	Fellowship in Indigenous Environmental Health and Health Services Research.	Fellowship	1 January 2004	31 December 2010	\$810,250.00
NHMRC 490307	ANSTEY, Nicholas	Pathophysiology and treatment of malaria and other tropical infectious diseases in our region.	Fellowship	1 January 2008	31 December 2012	\$463,975.00
NHMRC 545200	CUNNINGHAM, Joan	Fellowship on Social and System Determinants of Indigenous Health.	Fellowship	1 January 2009	31 December 2013	\$560,000.00
NHMRC 545216	CHANG, Anne	Clinical research and evidence-based approaches to management of respiratory illnesses.	Fellowship	1 January 2009	31 December 2013	\$504,875.00
NHMRC Centre of Clinical Research Excellence in Clinical Science in Diabetes	HUGHES, Jaquelyne	Fellow of the Centre for Clinical Research Excellence in Clinical Science in Diabetes.	Fellowship	1 January 2010	31 December 2010	\$20,200.00
NT Department of Health	BOURKE, Peter	Father Frank Flynn Fellowship	Fellowship	1 January 2010	31 December 2011	\$174,000.00
Swiss National Science Foundation Fellowship	MARFURT, Jutta	-	Fellowship	1 February 2009	31 January 2010	-
CRC Aboriginal Health	BAILIE, Ross; SMITH, Shane	Audit and Best Practice for Chronic Disease – CQI	Infrastructure	1 July 2008	30 January 2010	\$458,576.72
Department of Health and Ageing	CARAPETIS, Jonathan; DOUGLAS, Brendon; SMITH, Shane	Menzies Building Extension Project	Infrastructure	1 July 2007	30 September 2012	\$5,000,000.00
CSL Biotherapies	ANDREWS, Ross; CARAPETIS, Jonathan	Annual Sponsorship for Menzies School of Health Research to assist with communicating its Research on Paediatric and Adult Vaccines.	Network	25 March 2009	25 March 2012	\$45,000.00
Ian Potter Foundation	STEPHEN, Anna	Understanding the association between otitis media and educational outcomes for Aboriginal children living in a remote Northern Territory community.	Pilot Project	1 March 2010	30 April 2011	\$15,000.00
Lowitja Institute	BAILIE, Ross	Quality of Care Product	Priority Driven Research	2 June 2010	31 December 2010	\$536,300.00
NHMRC 490300	THOMAS, David; JOHNSTON, Vanessa; FITZ, Joe	Monitoring tobacco consumption to evaluate Indigenous tobacco control.	Priority Driven Research	1 January 2008	31 December 2010	\$217,000.00
NHMRC 490344	MCMAHON, Rachael; SENIOR, Kate; BOUGHEY, Mark	Case conferencing, quality of life and palliative care for clients from remote communities in the Northern Territory.	Priority Driven Research	1 January 2009	31 December 2011	\$42,750.00
AusAID	ANSTEY, Nicholas; DOUGLAS, Brendon; PRICE, Ric	Strengthening the Timika Translational Research Facility (AusAID Timika)	Program	1 January 2009	31 December 2013	\$1,222,487.00
Caritas	CARAPETIS, Jonathan; COLQUHOUN, Samantha	Rheumatic Heart Disease Control and Prevention Programme	Program	1 January 2009	31 December 2009	\$40,000.00
Department of Health and Ageing	CARAPETIS, Jonathan; FARAGO, Adrienne; GREEN, Brenda	Rheumatic Fever Strategy – National Coordination Unit	Program	1 January 2009	30 June 2012	\$2,418,400.00
Department of Health and Ageing Hearing Research and Prevention Program REI-224/0708	MORRIS, Peter; LEACH, Amanda; ANDREWS, Ross	Single versus combination pneumococcal conjugate vaccines (13PCV and PHiD-CV) for high-risk Aboriginal children (COMBO).	Program	1 September 2008	30 April 2012	\$1,044,879.00
NHMRC	ANSTEY, Nick, GOOD, Michael	Immunity and Pathogenesis in Tropical and Infectious Diseases: Implications for Vaccines and Drug Development.	Program	2008	2010	\$14,900,000
NHMRC 496600 (Administered by Queensland Institute of Medical Research)	KEMP, David J, GOOD MF, MCMANUS, Donald P, TOTH, Istvan, ANSTEY, Nicholas M, SRIPRAKASH, Kadaba S, DOOLAN, Denise L, ENGWERDA, Christian R, LOUKAS, Alexander C, WOODBERRY, Tonia	Immunity and Pathogenesis in Tropical and Infectious Diseases: Implications for Vaccines and Drug Development.	Program	1 January 2008	31 December 2012	\$14,902,357.80
NT Department of Education	CARAPETIS, Jonathan; NUTTON, Georgie	Transforming Indigenous Education	Program	1 January 2009	31 December 2013	\$2,516,369.97



Funding Body	Chief Investigators	Title	Grant Type	Year From	Year To	Total \$ Awarded
NT Department of Education	CARAPETIS, Jonathan; NUTTON, Georgie	Transforming Indigenous Education 09-177 DET variation NT AEDI data release.	Program	1 December 2009	30 June 2010	\$250,000.00
NT Department of Health	SILBURN, Sven	Child Protection Research and Education	Program	1 June 2008	30 May 2011	\$1,359,138.00
NT Department of Health and Department of Justice	D'ABBS, Peter; SENIOR, Kate	Substance Abuse Research	Program	1 July 2008	30 June 2011	\$1,349,700.00
World Heart Foundation/Vodafone	CARAPETIS, Jonathan	World Heart Federation Rheumatic Fever/ Rheumatic Heart Disease Secondary Prevention Programme in the Pacific Island Nations - COORDINATION COSTS.	Program	1 July 2005	1 January 2010	-
AusAID	MULHOLLAND, Kim, CARAPETIS, Jonathan, ANSTEY, Nick, DOUGLAS, Brendon	Women's and Children's Knowledge HUB	Project	2009	2011	\$2,000,000
Cabrini	CARAPETIS, Jonathan	Cabrini Contribution to gECHO Project	Project	1 July 2008	30 June 2010	\$50,000.00
Channel 7 Children's Research Foundation of SA Inc 114	CHANG, Anne	Does azithromycin improve the clinical recovery of hospitalised bronchiolitis in Indigenous and non-Indigenous infants: A randomised controlled trial.	Project	1 January 2009	30 June 2010	\$50,000.00
Channel 7 Children's Research Foundation of SA Inc 117	LEACH, Amanda	Study of microbiology linked to evaluation of strong teeth for little kids (SMILE_STLK).	Project	1 January 2009	31 December 2011	\$40,000.00
Channel 7 Children's Research Foundation of SA Inc 42	BAR-ZEEV, Naor	Burden of severe disease due to influenza and other respiratory viruses in Aboriginal children in the Northern Territory.	Project	1 January 2009	31 December 2009	\$40,000.00
Community Benefit Fund	NAGEL, Tricia	Gambling worries: attitudes to gambling in NT remote communities.	Project	1 January 2009	31 December 2011	\$300,000.00
CRC Aboriginal Health	MORRIS, Peter; LEACH, Amanda; SMITH-VAUGHAN, Heidi; CHANG, Anne; VALERY, Patricia; TORZILLO, Paul	Azithromycin versus placebo in the treatment of asymptomatic acute otitis media in young Aboriginal children: A RCT.	Project	1 January 2009	31 December 2010	\$34,000.00
Criminal Research Council	SENIOR, Kate; CHENHALL, Richard; IVORY, William; NAGEL, Tricia; CUNNINGHAM, Teresa	Developing successful diversionary schemes for youth from remote Aboriginal communities.	Project	1 January 2009	1 January 2012	\$169,280.00
Criminal Research Council	SENIOR, Kate; CUNNINGHAM, Teresa; IVORY, William	Drinking Paddocks Research	Project	1 January 2009	31 December 2011	\$186,000.00
Department of Agriculture, Fisheries and Forestry (administered by Taronga Conservation Society Australia)	ROSE, Karrie, DOUGALL, Annette, HOLT, Deborah, WALTON, Shelley, SHILTON, Cathy	Field Surveillance and monitoring Leishmania transmission by the blood-sucking midge Forcipomyia subgenera, Lashiohelea in the Northern Territory.	Project	11 January 2010	30 June 2010	\$18,496.00
Department of Families, Community Services and Indigenous Affairs	ROBINSON, Gary; GUNTHORPE, Wendy; SILBURN, Sven; ZUBRICK, S; RUMBOLD, Ibtisam; GRAY, B; QUONG, T	Let's Start Indigenous Preschool Evaluation Project: Links between behaviour and outcome.	Project	1 February 2010	31 December 2011	\$211,250.00
Department of Health and Ageing	CAIRNEY, Sheree	Innovative and interactive multimedia communication strategies aimed at reducing tobacco consumption among Indigenous young people.	Project	1 January 2010	31 December 2012	\$692,090.91
Department of Health and Ageing	THOMAS, David	Senior Evaluation Researcher for Indigenous Tobacco Control Initiative at Menzies - Talking about the smokes.	Project	1 October 2009	30 September 2011	\$245,620.00
Department of Health and Ageing Office of Aboriginal and Torres Strait Islander Health	CARAPETIS, Jonathan; MCDONALD, Malcolm; CURRIE, Bart; ILTON, Marcus; MAGUIRE, Graeme	Screening for rheumatic heart disease in Indigenous children.	Project	1 January 2007	30 April 2011	\$1,365,338.00
Financial Markets Foundation for Children 2009-014	CHANG, Anne; MACLENNAN, Carolyn; MORRIS, Peter	Improving the management and outcomes for infants hospitalised with bronchiolitis.	Project	1 June 2009	30 May 2011	\$132,644.00
GlaxoSmithKline Australia 113313	LEACH, Amanda	Surveillance of ear disease and nasal carriage of respiratory pathogens in the NT in 2009.	Project	1 May 2009	31 March 2010	\$416,356.08
National Institute of Health	WEINBERG, JB, ANSTEY, Nick, YEO, Tsin	Arginine, Nitric Oxide, and Severe Malaria	Project	2008	2011	USD \$348,358.00
National Rural Health Alliance Inc; Queensland Health, NT Department of Health	BRIMBLECOMBE, Julie	Remote Indigenous Stores and Take away Project and tool enhancement.	Project	5 February 2007	31 December 2010	\$214,061.00
NHMRC 389837	MORRIS, Peter; VALERY, Patricia; CHANG, Anne; GRIMWOOD, Keith; SINGLETON, Rosalyn; TORZILLO, Paul	MULTI-CENTRE BRONCHIECTASIS STUDY: A collaborative and international study of bronchiectasis in Indigenous children.	Project	1 January 2006	31 December 2011	\$1,444,500.00
NHMRC 436014	CONDON, John; JELFS, Paul; RODER, David; CUNNINGHAM, Joan; COORY, Michael; THRELFALL, Tim	Health system performance and outcomes for Indigenous Australians with cancer: A national study.	Project	1 January 2007	31 December 2011	\$490,902.98



Funding Body	Chief Investigators	Title	Grant Type	Year From	Year To	Total \$ Awarded
NHMRC 436023	MORRIS, Peter; LEACH, Amanda; SMITH-VAUGHAN, Heidi; CHANG, Anne; VALERY, Patricia; TORZILLO, Paul	Azithromycin versus placebo in the treatment of asymptomatic acute otitis media in young Aboriginal children: A RCT.	Project	1 January 2007	30 June 2011	\$1,290,125.00
NHMRC 490302	BAILIE, Ross; CLELLAND, Nikki; TSEY, Komla; SIBTHORPE, Beverly	A structured systems approach for improving health promotion practice for chronic diseases in Indigenous communities.	Project	1 January 2008	31 December 2011	\$640,514.00
NHMRC 490305	ISBISTER, Geoffrey; BROWN, Simon; BUCKLEY, Nicholas; SELDON, Michael	A randomised controlled trial of factor replacement therapy in snake bite coagulopathy.	Project	1 January 2008	31 December 2010	\$689,500.00
NHMRC 490314	RUMBOLD, Alice; BOYLE, Jacqueline; KILDEA, Sue; WALLACE, Euan; THOMPSON, Robyn	Antenatal screening for fetal anomalies in Indigenous women: views of Indigenous people and their health care providers.	Project	1 January 2008	31 December 2011	\$360,350.00
NHMRC 490320	ANDREWS, Ross; LEACH, Amanda; MORRIS, Peter; TORZILLO, Paul; TANG, Mimi; MULHOLLAND, Edward	PneuMum: An RCT of maternal pneumococcal vaccination for protection of Indigenous children from ear disease.	Project	1 January 2008	31 December 2010	\$573,100.00
NHMRC 490321	CHANG, Anne; MORRIS, Peter; ROBERTSON, Colin; VAN ASPEREN, Peter; GLASGOW, Nicholas; MASTERS, Ian	Multi-centre evaluation of a clinical pathway for chronic cough in children – can its use improve clinical outcomes.	Project	1 January 2008	31 December 2011	\$932,975.00
NHMRC 545202	MAPLE-BROWN, Louise; LAWTON, Paul; HOY, Wendy; CASS, Alan; JERUMS, George; MACISAAC, Richard; WARD, Leigh; THOMAS, Mark	To improve the accuracy and precision of estimated GFR (eGFR) measurements in Indigenous Australians.	Project	1 January 2009	31 December 2011	\$926,200.00
NHMRC 545203	THOMAS, David; JOHNSTON, Vanessa; BROWN, Ngiare; CHANG, Anne; SEGAN, Cathy	A randomised controlled trial of a family tobacco control program to reduce respiratory illness in Indigenous infants.	Project	1 April 2009	31 December 2012	\$1,100,875.00
NHMRC 545207	BRIMBLECOMBE, Julie; BAILIE, Ross; MCCARTHY, Leisa; RITCHIE, Jan; COVENEY, John; HOBSON, Vivienne; WOOD, Margaret; LEONARD, Dymrna	Improving capacity of Aboriginal and Torres Strait Islander communities to influence food systems for food security.	Project	1 January 2009	31 December 2013	\$1,537,450.00
NHMRC 545220	HOLT, Deborah; WALTON, Shelley; BAKER, Bo; DUNN, Ben	Towards novel therapies for scabies: functional analysis of Sarcoptes scabiei aspartic proteases.	Project	1 January 2009	31 December 2011	\$315,150.00
NHMRC 545223	LEACH, Amanda; CHANG, Anne; CHENG, Allen; MCDONALD, Malcolm; TORZILLO, Paul; BROWN, Ngiare; HARE, Kim	Is long term weekly azithromycin use for bronchiectasis in Indigenous children associated with antibiotic resistance?	Project	1 January 2009	31 December 2011	\$384,875.00
NHMRC 545224	CARAPETIS, Jonathan; ELLIOTT, Alison; ALPERSTEIN, Garth; ANDREWS, Ross; LOUDEN, William; NUTTON, Georgie; MCTURK, Nicholas	Evaluation of the effectiveness of mobile pre-school for child health and development in remote Aboriginal communities.	Project	1 January 2009	31 December 2011	\$442,276.00
NHMRC 545232	LEACH, Amanda; SMITH-VAUGHAN, Heidi; ANDREWS, Ross; RILEY, T; O'GRADY, Kerry-Ann	Community based surveillance of bacterial respiratory pathogens in the NT and WA.	Project	1 January 2009	31 December 2012	\$751,150.00
NHMRC 545233	ANDREWS, Ross; CARAPETIS, Jonathan; KIRKWOOD, Carl; ROSEBY, Rob; SNELLING, Thomas	A case control study of rotavirus vaccine effectiveness against gastroenteritis hospitalisation of children in the NT.	Project	1 January 2009	31 December 2011	\$449,925.00
NHMRC 545234	CARAPETIS, Jonathan; CURRIE, Bart; MCDONALD, Malcolm; ANDREWS, Ross; TONG, Steven; BOWEN, Asha	A randomised controlled trial of alternative treatments to intramuscular penicillin for impetigo in Aboriginal children.	Project	1 January 2009	31 December 2013	\$1,268,925.00
NHMRC 566792	MULHOLLAND, Edward; RUSSELL, Fiona; CARAPETIS, Jonathan; TANG, Mimi; BALLOCH, Anne; DANG, Duc; YOSHIDA, Lay; SATZKE, Catherine; LICCIARDI, Paul	Impact of DTP schedules on the immunogenicity of 2 doses of 13v-PCV followed by an early booster.	Project	1 January 2009	31 December 2011	\$2,555,649.00
NHMRC 605804	ANDREWS, Ross; SPEARE, Richard; CARAPETIS, Jonathan; MCCARTHY, James; CHENG, Allen; KEARNS, Therese; MARKEY, Peter; MULHOLLAND, Eddie; HOLT, Deborah	Impact of an ivermectin mass drug administration program against endemic scabies and strongyloidiasis.	Project	1 January 2010	31 December 2011	\$1,257,125.00
NHMRC 605806	ANSTEY, Nicholas; KELLY, Paul; KENANGALEM, Enny; MAGUIRE, Graeme; BASTIAN, Ivan; MORRIS, Peter; RALPH, Anna; SANDJAJA,	A randomised controlled trial of L-arginine and/or vitamin D to improve outcomes in pulmonary tuberculosis.	Project	1 January 2010	31 December 2012	\$909,774.00
NHMRC 605807	ANSTEY, Nicholas; YEO, Tsin; DUFFFULL, Stephen; LAMPAH, Daniel; KENANGALEM, Enny	Endothelial dysfunction as a therapeutic target in severe malaria.	Project	1 January 2010	31 December 2012	\$812,500.00
NHMRC 605808	SKULL, Sue; MULHOLLAND, Edward; BALLOCH, Anne; LICCIARDI, Paul	Immunogenicity of 23-valent pneumococcal polysaccharide vaccination among Indigenous Australian adolescents and adults.	Project	1 January 2010	31 December 2011	\$657,925.00
NHMRC 605809	CHANG, Anne; MORRIS, Peter; GRIMWOOD, Keith; SLOOTS, Theo; WHITE, Andrew; MACLENNAN, Carolyn	Randomised controlled trial of azithromycin to reduce the morbidity of severe bronchiolitis in Indigenous infants.	Project	1 January 2010	31 December 2013	\$1,407,075.00
NHMRC 605810	LEACH, Amanda; MULHOLLAND, Edward; SANTOSHAM, Mathuram; TORZILLO, Paul; BROWN, Ngiare; MCINTYRE, Peter; SMITH-VAUGHAN, Heidi; SKULL, Sue; BALLOCH, Anne	Single versus combination pneumococcal conjugate vaccines (13PCV and PHiD-CV) for high-risk Aboriginal children (COMBO).	Project	1 January 2010	31 December 2013	\$2,870,025.00



Funding Body	Chief Investigators	Title	Grant Type	Year From	Year To	Total \$ Awarded
NHMRC 605820	CURRIE, Bart; CHENG, Allen; GIFFARD, Philip; MAYO, Mark; KEIM, Paul; SPRATT, Brian	Diversity and virulence determinants among 1000 clinical and environmental isolates of Burkholderia pseudomallei.	Project	1 January 2010	31 December 2012	\$499,500.00
NHMRC 496635 (administered by Queensland Institute of Medical Research).	MCCARTHY, James, WALTON, Shelley F, PASAY, Cielo, HOLT Deborah	Diagnostics for drug resistance in scabies	Project	1 January 2008	31 December 2010	\$168,437.50
NT Department of Health	MCDONALD, Elizabeth	Research to develop children's environmental health frameworks, indicators and survey tool.	Project	1 March 2008	30 June 2009	\$13,636.36
NT Department of Health	NAGEL, Tricia	BEAT Project : Best practice in Early intervention Assessment and Treatment of depression and substance misuse.	Project	1 July 2009	30 June 2014	\$387,800.00
NT Department of Health	ROBINSON, Gary; GUNTHORPE, Wendy; SILBURN, Sven; ZUBRICK, S; RUMBOLD, Ibtisam; GRAY, B	Let's Start Indigenous Preschool Evaluation Project: Links Between Behaviour and Outcome.	Project	1 June 2010	30 June 2011	\$30,000.00
NT Department of Health	SENIOR, Kate; CHENHALL, Richard	Investigation of Young People's Understandings of Sexual Behaviour and Sexual Risk.	Project	22 April 2009	30 June 2010	\$20,000.00
NT Research and Innovation Board	BAR-ZEEV, Naor; CARAPETIS, Jonathan; ANDREWS, Ross; CHANG, Anne; NISSEN, Michael; KRAUSE, Victoria; GUTHRIDGE, Steve	Burden of Influenza and respiratory viruses among Aboriginal children in the Top End.	Project	1 January 2008	30 June 2010	\$60,000.00
NT Research and Innovation Board	BAR-ZEEV, Naor; O'GRADY, Kerry-Ann; CARAPETIS, Jonathan; ANDREWS, Ross; LAMBERT, Stephen; TORZILLO, Paul; SMITH-VAUGHAN, Heidi	Impact of bacterial colonisation and viral co-infection on rates of respiratory illness among Aboriginal children.	Project	1 January 2009	31 December 2010	\$25,000.00
NT Research and Innovation Board	DAVIS, Joshua; TONG, Steven; ANSTEY, Nicholas; HAJKOWICZ, Krispin	CHARIOT (Cellulitis: Hastening Resolution with Ibuprofen adjunctive Therapy).	Project	1 September 2010	1 September 2011	\$15,130.00
NT Research and Innovation Board	DAVIS, Joshua; TONG, Steven; CURRIE, Bart	Combination antibiotic treatment for methicillin-resistant Staphylococcus aureus.	Project	1 September 2010	30 September 2011	\$24,525.00
NT Research and Innovation Board	GIFFARD, Philip; TONG, Steven; SPENCER, Emma; JOHNS, Tracy	Urine surrogates in the quality control of Chlamydia diagnosis	Project	30 September 2010	31 December 2010	\$17,050.00
NT Research and Innovation Board	KAESTLI, Mirjam; CURRIE, Bart; MAYO, Mark	The microhabitat of the melioidosis bacterium Burkholderia pseudomallei in Darwin.	Project	1 January 2009	31 December 2010	\$7,000.00
NT Research and Innovation Board	KEARNS, Therese; ANDREWS, Ross; CARAPETIS, Jonathan; CURRIE, Bart; CHENG, Allen; MCCARTHY, James; SPEARE, Richard; SHIELD, Jenny; PITTMAN, Barbara; CONNORS, Christine	Beating scabies and strongyloides in Galiwin'ku	Project	1 January 2009	31 December 2011	\$46,000.00
NT Research and Innovation Board	TONG, Steven; GIFFARD, Philip; CURRIE, Bart; MOSER, Ralf	High-throughput SNP based molecular typing of Burkholderia pseudomallei.	Project	1 October 2009	1 August 2010	\$25,000.00
Queensland Government (administered by Queensland Institute of Medical Research)	MCCARTHY, James, WALTON, Shelley F, PASAY, Cielo, HOLT Deborah	The mechanism of acaricide resistance.	Project	1 March 2007	31 December 2010	\$154,500.00
Sidney Myer Fund	MORRIS, Peter; STEPHEN, Anna	Swimming Study for Severe Otitis Media	Project	1 January 2010	31 December 2010	\$20,000.00
The Fred Hollows Foundation	BRIMBLECOMBE, Julie	Nutrition Promotion and Education in Remote Stores - What really works?	Project	18 October 2010	31 December 2010	\$49,005.00
The Fred Hollows Foundation	GRIEVE, H	The development and implementation of a short course "Evidence based nutrition approaches to improve the health of women and children".	Project	18 October 2010	31 December 2010	\$22,000.00
UNICEF	BAILIE, Ross; MCDONALD, Malcolm; CARAPETIS, Jonathan; EDWARDS, Keith	Proposal for integrating the principles of the National Guidelines for Rheumatic Fever and Rheumatic Heart Disease into the Audit and Best Practice for Chronic Disease (ABCD) programme.	Project	1 March 2008	31 December 2010	\$115,888.00
Western Australia Department of Health	SENIOR, Kate; CHENHALL, Richard	Investigation of Young People's Understandings of Sexual Behaviour and Sexual Risk.	Project	22 April 2009	31 December 2010	\$40,000.00
AusAID	POESOPRODJO , Jeanne Rini	Australian Leadership Award - Fellowship	Scholarship	2009	2013	-
AusAID	THIO, Fransisco	Australian Leadership Award - Fellowship	Scholarship	2009	2013	-
Australian Academy of Science	BAR-ZEEV, Naor	Vaccination strategies to reduce ear disease in Aboriginal and Torres Strait Islander children in the Northern Territory.	Scholarship	1 January 2007	23 January 2010	\$14,000.00



Funding Body	Chief Investigators	Title	Grant Type	Year From	Year To	Total \$ Awarded
Australian Academy of Science	HUGHES, Jaquelyne	The relationship of body composition, renal impairment and inflammatory cytokines in Indigenous persons with diabetes.	Scholarship	1 January 2008	31 December 2010	\$21,000.00
Australian Academy of Science	KEARNS, Therese	Epidemiological study of scabies and strongyloides infections in a remote indigenous community in the NT before and after a community wide treatment intervention with Ivermectin.	Scholarship	23 February 2009	23 February 2011	\$21,000.00
Menzies School of Health Research	COLQUHOUN, Samantha	The epidemiology and control of Rheumatic Heart Disease in Pacific Island countries (PICs), filling the gaps.	Scholarship	1 July 2009	1 July 2010	\$25,817.00
NHMRC 383515	BOYLE, Jacqueline	Polycystic ovary syndrome, reproductive health and metabolic abnormalities in Indigenous women in the Northern Territory.	Scholarship	1 January 2006	30 June 2009	\$91,800.00
NHMRC 436031	DAVIS, Joshua	Endothelial function and adjuvant therapies in sepsis	Scholarship	1 January 2007	31 March 2010	\$94,266.00
NHMRC 436032	SNELLING, Thomas	Rotavirus gastroenteritis in the Aboriginal population and the effect of immunisation.	Scholarship	1 June 2007	30 October 2010	\$94,266.00
NHMRC 436039	BAR-ZEEV, Naor	Vaccination to reduce ear disease in Aboriginal and Torres Strait Islander children in the Northern Territory.	Scholarship	1 January 2007	31 December 2011	\$94,266.00
NHMRC 436041	DINGWALL, Kylie	The nature of brain function recovery following abstinence from petrol sniffing.	Scholarship	1 January 2007	31 July 2010	\$65,598.00
NHMRC 490337	CLELLAND, Nikki	Improving Health Promotion Practice through Continuous Quality Improvement.	Scholarship	1 January 2008	31 December 2010	\$66,771.00
NHMRC 490339	MARSH, Robyn	Nasopharyngeal metagenomics in Indigenous children: correlations with otitis media aetiology and treatment failure.	Scholarship	1 January 2008	31 December 2011	\$76,140.86
NHMRC 490348	HUGHES, Jaquelyne	The relationship of body composition, renal impairment and inflammatory cytokines in Indigenous persons with diabetes.	Scholarship	1 January 2008	31 December 2010	\$96,009.00
NHMRC 545239	KEARNS, Therese	Community treatment intervention with ivermectin to reduce the prevalence of scabies and strongyloides.	Scholarship	1 January 2009	31 December 2011	\$85,827.00
NHMRC 605842	BARBER, Bridget	Improving the diagnosis, treatment and outcomes of patients infected with Plasmodium knowlesi.	Scholarship	30 June 2010	30 June 2013	\$107,250.00
NHMRC 605845	BOWEN, Asha	Randomised controlled trial of co-trimoxazole versus intramuscular penicillin for impetigo in Aboriginal children.	Scholarship	1 January 2010	31 December 2012	\$79,077.00
NT Research and Innovation Board	D'APRANO, Anita	TRAK Study: Talking about Raising Aboriginal Kids: Evaluation of a developmental monitoring instrument for use with Australian Aboriginal children.	Scholarship	1 November 2010	31 October 2011	\$2,500.00
NT Research and Innovation Board	HARE, Kim	Bacteriology of respiratory infections in Australian Indigenous children.	Scholarship	30 November 2010	31 December 2011	\$2,500.00
NT Research and Innovation Board	MCCALLUM, Gabrielle	Improving the understanding and management of bronchiolitis in Indigenous children.	Scholarship	30 November 2010	31 December 2011	\$2,500.00
Sidney Myer Fund	KEARNS, Therese	Beating scabies and strongyloides in Galiwin'ku	Scholarship	1 January 2009	31 March 2012	\$50,049.00
Centre for Clinical Research Excellence in Child and Adolescent Immunisation	CARAPETIS, Jonathan	CCRE: Indigenous Immunisation Research	Strategic Research	1 January 2007	30 March 2010	\$441,640.00
NHMRC 333421	BURGESS, C; JOHNSTON, Fay; CONNORS, Christine; MCDERMOTT, Robyn; ROBINSON, Gary; BAILIE, Ross	Implementing the Aboriginal and Torres Strait Islander Adult Health Check. Improving early detection and evaluating innovative prevention activities in remote areas.	Strategic Research	1 April 2006	30 June 2010	\$229,875.00
NHMRC 333421	BURGESS, C; JOHNSTON, Fay; CONNORS, Christine; MCDERMOTT, Robyn; ROBINSON, Gary; O'DEA, Kerin	Implementing the Aboriginal and Torres Strait Islander Adult Health Check. Improving early detection and evaluating innovative prevention activities in remote areas.	Strategic Research	1 January 2005	31 March 2010	-
NHMRC 545267	BAILIE, Ross; SHANNON, Cindy; SEMMENS, James; ROWLEY, Kevin; SCRIMGEOUR, David; NAGEL, Tricia; SI, Damin	National Research Partnership to Improve Primary Health Care Performance and Outcomes for Indigenous Peoples.	Strategic Research	1 January 2010	31 December 2014	\$1,557,400.00



Funding Body	Chief Investigators	Title	Grant Type	Year From	Year To	Total \$ Awarded
JTA International Pty Ltd	CHANG, Anne; D'APRANO, Anita; HARRISON, Nea; BAILIE, Ross	Australian Nurse-Family Partnership Program (ANFP) – Monitoring and Evaluation – Phase 1.	Sub-Contract	1 September 2008	30 June 2011	\$318,938.00
University of Queensland	DRABSCH, Katrina	A randomised controlled trial of medical prophylaxis for hypertension, renal disease and diabetes in Australian Aborigines.	Sub-Contract	2 June 2008	10 January 2015	\$3,152,977.06
Department of Health and Ageing RFT 071/0607	BAILIE, Ross	The Healthy for Life Support, Collection, Analysis and Reporting Function.	Tender	1 January 2010	30 June 2011	\$4,931,245.18
NHMRC 323248	CHENHALL, Richard	Best practice guidelines for evaluating Indigenous residential alcohol and drug programs.	Training Fellowship	1 July 2005	30 June 2010	\$264,000.00
NHMRC 436034	TOWERS, Rebecca	Investigation of cardiac autoantigens identified by screening a cDNA library with acute rheumatic fever sera.	Training Fellowship	1 January 2007	30 June 2011	\$274,000.00
NHMRC 437008	ANDREWS, Ross	Prevention of pneumococcal diseases, streptococcal disease and influenza among Indigenous populations.	Training Fellowship	1 January 2007	31 December 2010	\$274,000.00
NHMRC 490335	MCDONALD, Elizabeth	The Better Environmental Health, Housing and Child Health Study (BEHHCH).	Training Fellowship	1 January 2008	31 December 2011	\$279,000.00
NHMRC 490340	SKULL, Sue	Optimising prevention and vaccination policy for pneumococcal disease, influenza and RSV in Indigenous Australians.	Training Fellowship	1 January 2008	31 December 2011	\$139,500.00
NHMRC 545241	JOHNSTON, Vanessa	Researching effective strategies to tackle tobacco use in Indigenous populations in Northern Australia.	Training Fellowship	1 January 2009	31 December 2012	\$345,000.00
NHMRC 545245	MINIGO, Gabriela	Immune regulation during uncomplicated and severe P. falciparum and P. vivax malaria.	Training Fellowship	1 April 2009	31 March 2013	\$285,000.00
NHMRC 545253	BRIMBLECOMBE, Julie	Improving food systems in remote Aboriginal and Torres Strait Islander communities for better food security.	Training Fellowship	1 January 2009	31 December 2012	\$285,000.00
NHMRC 605829	TONG, Steven	Investigating the genomics of significant bacterial pathogens in northern Australia.	Training Fellowship	1 January 2010	31 December 2013	\$345,000.00
NHMRC 605831	YEO, Tsin	Consequences of decreased vascular nitric oxide bioavailability in the pathogenesis of severe malaria	Training Fellowship	1 January 2010	31 December 2013	\$245,022.40
NHMRC 605833	NAGEL, Tricia	Best practice of Early intervention, Assessment and Treatment (BEAT) of depression and co morbid disorders.	Training Fellowship	1 January 2010	31 December 2013	\$185,500.00
NHMRC 605837	MAPLE-BROWN, Louise	Improving management of diabetes and chronic kidney disease in Indigenous Australians	Training Fellowship	1 January 2010	31 December 2013	\$265,000.00
NHMRC 605839	SINGH, Gurmeet	To identify markers of chronic disease, study their onset and progression over time in an Aboriginal birth cohort	Training Fellowship	1 January 2010	31 December 2013	\$265,000.00

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summary financial report

Income Statement Menzies School of Health Research for the Year Ended 31 December 2010

	2010	2009
Income from continuing operations	\$	\$
Australian Government Financial Assistance	20,275,487	14,889,998
NT Government Funding	6,223,675	4,327,545
Fees and Charges	2,244,855	3,402,398
Investment Income	2,158,578	1,374,229
Consultancy and Contract Research	4,692,057	4,926,950
Gain (Loss) on Disposal Of Assets	5,167	-
Other Revenue	1,742,085	1,722,975
Total Revenue from Continuing Operations	37,341,903	30,644,094
Total Income from Continuing Operations	37,341,903	30,644,094
Expenses from Continuing Operations		
Cash Flows from Investing Activities		
Employee Related Expense	20,895,003	17,016,519
Depreciation	341,438	405,549
Repairs and Maintenance	537,742	554,017
Bad and Doubtful Debts	-	(33,000)
Other Expenses	10,789,037	8,962,488
Total Expenses from Continuing Operations	32,563,219	26,905,573
Operating Result from Continuing Operations	4,778,684	3,738,521
Operating Result Attributable to Members of MSHR	4,778,684	3,738,521

Statement of Comprehensive Income Menzies School of Health and Research for the Year Ended 31 December 2010

	2010	2009
	\$	\$
Operating Result for the Year	4,778,684	3,738,521
Gain (Loss) on Revaluation of Investments	(24,951)	18,673
Total Comprehensive Income	4,753,733	3,757,194
Total Comprehensive Income Attributable to the Members of MSHR	4,753,733	3,757,194

summary financial report

Statement of Financial Position Menzies School of Health Research as at 31 December 2010

Assets	2010	2009
		\$
Current Assets		
Cash and Cash Equivalents	36,712,746	33,993,268
Account Held in Trust	-	803,069
Trade and Other Receivables	3,863,779	1,335,603
Other Non-Financial Assets	624,336	439,978
Total Current Assets	41,200,861	36,571,918
Non-Current Assets		
Property, Plant and Equipment	848,234	989,790
Other Financial Assets	27,391	51,984
Total Non-Current Assets	875,625	1,041,774
Total Assets	42,076,486	37,613,692
Current Liabilities		
Trade and Other Payables	632,586	663,738
Account Held in Trust	-	803,069
Provisions	2,310,107	1,682,175
Other Liabilities	87,075	16,916
Total Current Liabilities	3,029,769	3,165,898
Non-Current Liabilities		
Provisions	217,790	372,599
Total Non-Current Liabilities	217,790	372,599
Total Liabilities	3,247,559	3,538,497
Net Assets	38,828,928	34,075,194
Equity		
Reserves	3,475,969	3,159,483
Retained Earnings	35,352,959	30,915,711
Total Equity	38,828,928	34,075,194

Statement of Changes in Equity Menzies School of Health and Research for the Year Ended 31 December 2010

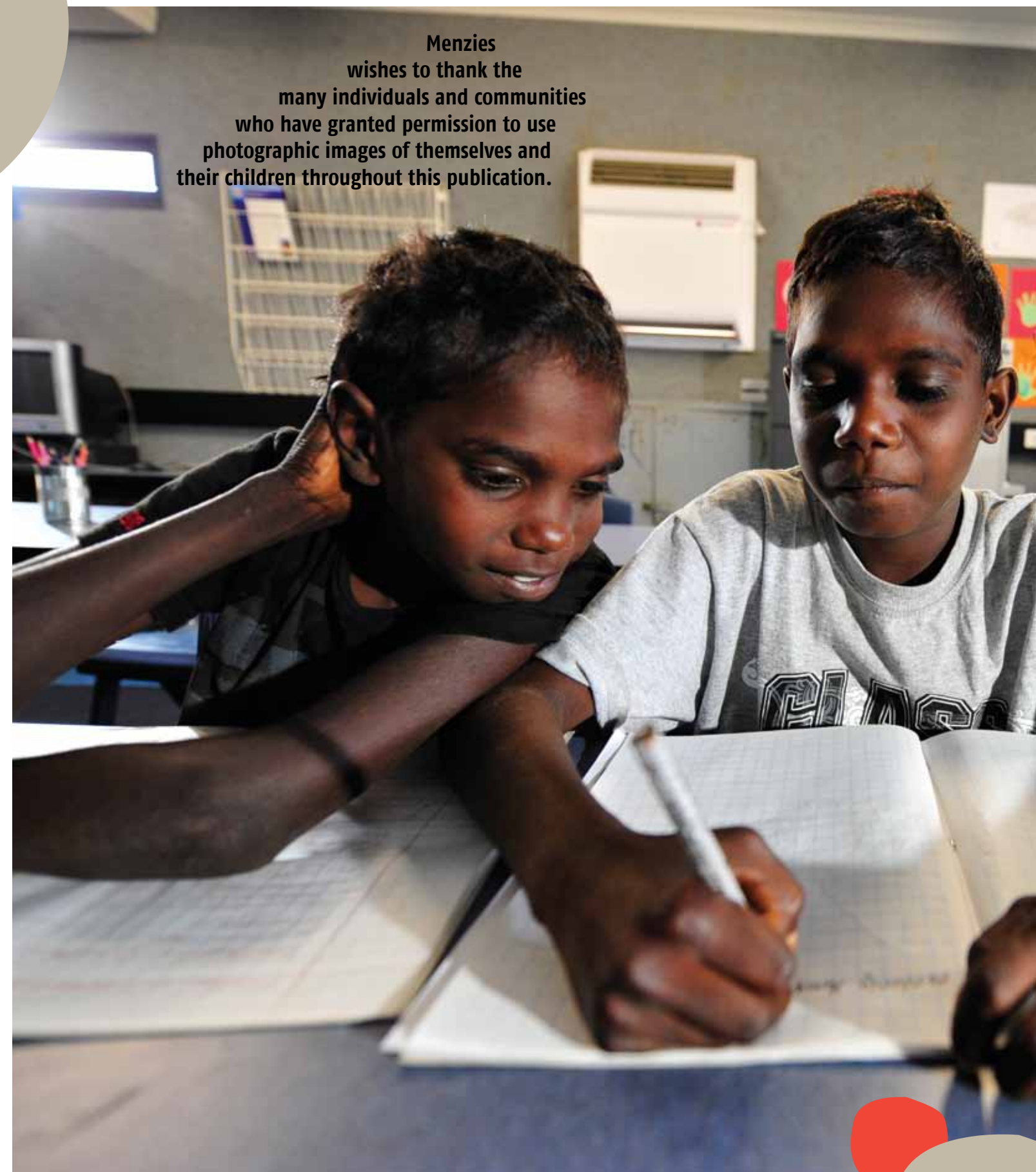
	Reserves	Retained Surplus	Total
Balance at 1 January 2009	2,479,162	27,838,838	30,318,000
Profit or Loss	-	3,738,521	3,738,521
Net Revaluation Loss on Investments	18,673	-	18,673
Total Comprehensive Income	2,497,835	31,577,359	34,075,194
Transfers	661,648	(661,648)	-
Balance at 31 December 2009	3,159,483	30,915,711	34,075,194
Balance at 1 January 2010	3,159,483	30,915,711	34,075,194
Profit or Loss	-	4,778,684	4,778,684
Net Revaluation Loss on Investments	(24,951)	-	(24,951)
Total Comprehensive Income	3,134,532	35,694,395	38,828,928
Transfers	341,437	(341,437)	-
Balance at 31 December 2010	3,475,969	35,352,959	38,828,929

summary financial report

Statement of Cash Flows Menzies School of Health Research for the Year Ended 31 December 2010

	2010	2009
	\$	\$
Cash Flows from Operating Activities		
Australian Government Grants	18,956,901	14,886,648
NT Government Funding	6,003,374	3,977,556
Receipts from Student Fees	2,244,855	99,219
Interest Received	2,158,220	1,078,333
Other Grant Receipts	3,301,134	4,928,617
Other Receipts	1,918,963	6,344,072
Payments to Suppliers	(11,247,375)	(9,687,819)
Payments to Employees	(20,421,880)	(16,620,640)
Net Cash Provided by Operating Activities	2,914,193	4,995,986
Cash Flows From Investing Activities		
Share Dividends Received	-	252
Proceeds from Sale of Plant and Equipment	9,591	-
Payments for Property, Plant and Equipment	(204,307)	(457,332)
Payment for Financial Assets	-	-
Net Cash Outflow from Investing Activities	(194,716)	(457,080)
Net Increase in Cash and Cash Equivalents	2,719,478	4,538,906
Cash and Cash Equivalents at the Beginning of the Year	33,993,268	29,454,364
Cash and Cash Equivalents at End of the Year	36,712,746	33,993,268

Menzies wishes to thank the many individuals and communities who have granted permission to use photographic images of themselves and their children throughout this publication.





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This Annual Report was produced by the Communications and Development Unit of the Menzies School of Health Research with input and much welcomed assistance from the staff and students of Menzies.

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