Researchers give helping hand with bushfires

After the recent devastating Tasmanian bushfires, the Tasmania Fire Service asked the national Bushfire Cooperative Research Centre to assemble an independent research task force to focus on how people respond to pre-bushfire season advice about community preparedness and to emergencies.

The task force drew up to 20 researchers from universities all over Australia, including researchers from the University of Tasmania. Professor Tim Skinner, Director of UTAS’ Rural Clinical School was asked to coordinate the research on behalf of the Bushfire CRC.

Dr Charlotte McKercher, a postdoctoral research fellow from Menzies decided to join the task force as a volunteer researcher and help conduct interviews in Tasmania’s south-east region, including Dunally.

“My family has had a shack at White Beach since I was a child so I have a strong emotional connection to that part of the world. I was evacuated from Nubeena during the bushfires and I felt that being part of the taskforce was a great way for me to make a contribution,” Dr McKercher said.

The task force conducted qualitative interviews with residents affected by the bushfires, from Lewisham down to Taranna. Menzies’ BioBus was also put to good use, as it was used as a research base by the researchers.

The researchers talked directly with residents about their experiences with the bushfire, focussing on their knowledge of their bushfire risk, preparations before the bushfire and their actions on the day.

“We had a highly motivated and skilled research team drawn from all over the country and we were knocking on doors in Dunally after a few hours of training. Being invited into people’s homes, or in some cases sitting among the burnt out remains of their homes, in the aftermath of such a catastrophic event was a huge privilege,” Dr McKercher said.

“Residents were overwhelmingly supportive of the research and were happy to share their experiences. There were tears, laughs and lots of cups of tea.”

Over 240 interviews were completed and analysis of the data is now being undertaken.

Bushfire CRC CEO Gary Morgan said the research was of national significance.

“The data collected will help inform future public policy not just in Tasmania, but around Australia and New Zealand,” Mr Morgan said.
Welcome to the first issue of the Bulletin for the year.

2013 marks a major milestone in the history of Menzies with the opening of our new building and the celebration of our 25th Anniversary. I hope you will join us for our 25th Anniversary celebrations on the evening of May 10.

Over the last 25 years, significant breakthroughs have been made by our scientists into the cause, prevention and treatment of a number of diseases impacting Tasmanians and people around the world.

Over the next decade, our research activity will continue to primarily focus on the major diseases affecting Tasmanians including arthritis, cancer, dementia, diabetes, heart disease, mental health and multiple sclerosis. Menzies is dedicated to improving the health outcomes for all Tasmanians, today and in the future.

On behalf of Menzies, I would like to express sincere thanks for the generous support and encouragement we have received over the last 25 years. We look forward to an exciting 2013.

Yours sincerely,

Professor Tom Marwick
Director

Sharpening our research focus

Menzies recently sharpened its research focus to emphasise five themes that reflect the burden of disease in the Tasmanian community and our expertise in addressing them.

Menzies performs high quality basic, clinical and population health research that takes a bench-to-bedside approach aimed at improving patient care and clinical outcomes for the community. Over the next decade, research activity will continue to primarily focus on the major diseases affecting the Tasmanian community, including arthritis, cancer, dementia, diabetes, heart disease, mental health and multiple sclerosis.

Director of Menzies, Professor Marwick says "this is the best way forward for the Institute and in turn, for the Tasmanian community".

“The way that research works these days, particularly in Australia, is that it is important to focus, to bring disparate researchers with common interests together so they see problems from multiple angles,” Professor Marwick said.

“My eventual goal is to have the five themes linked across the spectrum of research that goes from the bench in the laboratory to the bedside in the hospital, from clinical research to primary care and the general population.”

Menzies five new research themes are:

**Public Health and Primary Care**

This group seeks to better prevent and manage important population health problems. Projects address a broad range of conditions including cardiovascular disease, type-2 diabetes, cancer, multiple sclerosis and depression. Several projects are investigating how lifestyle factors (e.g. smoking), obesity and hormones in childhood and early adulthood, affect the risk of developing disease later in life.

**Neurodegenerative Diseases/Brain Injury**

Using cutting-edge tools, our neuroscientists aim to understand the mechanisms underlying the brain’s response to trauma (e.g. road accidents and falls) and diseases such as dementia including Alzheimer’s disease, multiple sclerosis, Parkinson’s disease and motor neurone disease.

**Cardio-Metabolic Health and Diseases**

The primary aim of this group is to reduce the burden of cardiovascular and metabolic disease on our community. The group uses interventions targeted at identifying and preventing the development of obesity, insulin resistance, type-2 diabetes, hypertension and heart disease.

Particular areas of interest include blood pressure assessment, assessment of large and small blood vessels functioning and cardiac imaging in heart disease.

**Musculoskeletal Health and Diseases**

Research in this area optimises Tasmania’s unique population characteristics to investigate musculoskeletal disease, with a particular emphasis on osteoarthritis, osteoporosis and ankylosing spondylitis. Epidemiological research into musculoskeletal disease helps us understand the impact of arthritis and other musculoskeletal conditions on both the individual and the community, so the best medical care can be developed and delivered where it is needed.

**Cancer, Immunology and Genetics**

The team comprises laboratory-based researchers and biostatisticians. Research into cancer genetics is aimed at understanding genes that contribute to the development of different types of cancers. At present the group is studying genetic susceptibility to prostate cancer and blood cancers, such as leukaemia. In addition, the team is looking at the immune response in the context of cancer including the Tasmanian devil facial tumour disease, infectious diseases and autoimmune diseases, with a particular interest in lupus and multiple sclerosis.
Wood heaters can be bad for your health

A new study led by Menzies’ Dr Fay Johnston has found that a reduction in smoke from wood burning stoves and wood heaters is associated with a reduced risk of death.

Although a large amount of research has been carried out on the adverse health effects of air pollution, very few studies have evaluated interventions to improve air quality.

“Reductions in deaths associated with reducing urban air pollution from traffic and industry and the burning of coal for home heating have been reported - but this is the first study to look at wood-smoke,” Dr Johnston said.

In 2001, Launceston was the setting for a series of moves to reduce wood-smoke pollution because air quality in the valley, where some of the coldest nights are the stillest, was among the worst in Australia. The interventions included a buyback scheme that let people switch to alternative heating sources, as well as education programs.

The interventions dramatically accelerated a general trend towards using electric rather than wood heaters. Wood heater prevalence fell from 66 per cent to 30 per cent of all households and the three month average particulate (complex mixture of extremely small particles and liquid droplets) air pollution during winter was reduced by 40 per cent.

Researchers used this data to assess whether there were any significant changes in death rates. They compared the population of Launceston with the population of Hobart, which did not have any air quality interventions.

“The difference between deaths in 1994 - 2001 and 2001- 2007 were statistically significant. Results taken during the winter months showed a reduction in cardiovascular related-deaths by 20 per cent and respiratory related-deaths by 28 per cent,” Dr Johnston said.

The research team concluded that there was a trend towards a reduced rate in deaths during the period of improved air quality which was greatest during winter with stronger associations in males.

Evaluation research provides crucial evidence to inform public health policy. These findings highlight the potential for important public health gains from interventions to reduce wood-smoke pollution.

“Often only 10 to 20 per cent of wood heaters being used in an area are responsible for around 80 per cent of the pollution,” Dr Johnston said.

“Hopefully these findings will lead to better education and safer use of wood heaters or ideally a switch to other forms of heating.”

“This research shows us that improving air quality improves death rates.”

To find out how to use your wood heater safely and efficiently visit the Environment Protection Authority Tasmania website http://epa.tas.gov.au/epa/improving-wood-heater-use

Women taking statins have less heart problems during chemotherapy

Breast cancer is the most commonly diagnosed cancer among women in Australia, with one in eight women developing breast cancer in their lifetime. Treatment options for breast cancer vary depending on the stage and type of breast cancer.

A recent observational study, led by Director of Menzies, Professor Tom Marwick, found that women who were taking a statin during and after being treated for breast cancer with anthracycline chemotherapy, had fewer heart problems than women who were not taking a statin during their cancer treatment.

Statins are a type of medication used for lowering “bad” (LDL) cholesterol. Zocor, Vytorin, Pravachol, Lipitor and Crestor are all commonly prescribed statins. High levels of cholesterol in the blood stream are a risk factor for coronary artery disease (heart attacks and angina).

Anthracycline chemotherapy is a common form of chemotherapy used for breast cancer patients. Anthracyclines kill cancer cells by damaging their genes and interfering with their reproduction.

Cumulative dosing of anthracycline is associated with cardiomyopathy (a condition in which your heart muscle becomes inflamed and enlarged and you may develop heart failure), which often is irreversible and potentially fatal.

Researchers reviewed the medical records of 628 women who had been recently diagnosed with biopsy-confirmed breast cancer, identifying 67 who were taking statins during and after chemotherapy and choosing 134 controls not taking the drugs.

A significantly lower risk for new-onset heart failure was seen among women receiving a statin throughout their chemotherapy, according to Professor Marwick.

“During more than two years of follow-up, we found only four cases of new-onset heart failure in the patients receiving statins, compared with 23 cases among the controls,” Professor Marwick said.

“Women who get anthracycline chemotherapy should be tested for heart problems before they start treatment and should be continuously monitored for developing heart problems during treatment,” he said.

“While these results are promising, more research is still needed to understand the role statins may play in protecting the heart during anthracycline chemotherapy.”

The research was published in the December 2012 issue of the Journal of the American College of Cardiology.
Loss of a fearless campaigner for health equality

In 2009, he was awarded an Honorary Doctorate by the University of Cape Town as ‘one of the founding fathers of health economics’. He held professorial positions at the Universities of New South Wales, Sydney, Cape Town, Southern Denmark and Aarhus. He worked as a health economist for 40 years, first in the UK, then Denmark and for the last 20 years in Australia.

Professor Mooney had over 200 publications on health economics, including more than 20 books. He recently published, The Health of Nations. Towards a New Political Economy.

Professor Mooney and Dr Weston moved from Perth, Western Australia to Mountain River, Tasmania in September 2011.

Here in Tasmania he was a consultant to the Tasmania Medicare Local and was involved in facilitating Citizens’ Juries in other Medicare Locals. He had a particular research interest in the impact of poverty and inequality on health. He was appointed an Honorary Associate at Menzies in September 2012.

Menzies’ Deputy Director, Professor Alison Venn said that Professor Mooney was deeply committed to fairness in the health system and equal access to equal care for equal need.

“He was especially interested in the economics of indigenous health, social justice and supporting the role of communities in decision-making about their health systems,” Professor Venn said.

“One of the many privileges of working with Gavin Mooney was his passion for his work.”

“We have lost a truly remarkable colleague and human being.”

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Professor Mooney was an inspirational and thought provoking campaigner for health equity. He believed passionately in social justice – something his parents instilled in him as he grew up in Glasgow, Scotland.
**What is the current focus of your research?**

We are working on a series of studies to improve health outcomes related to blood pressure. This ranges from understanding the basic human physiology of blood pressure to exploring the value of new blood pressure methods for improving patient diagnosis and care. These new methods include the ability to measure central blood pressure – this is the blood pressure experienced by the organs, rather than the pressure in the upper arm as conventionally used.

Central blood pressure has been shown to be more important than upper arm blood pressure in terms of cardiovascular risk, but despite this, doctors generally continue to use upper arm blood pressure to diagnose and make therapeutic decisions in the management of people with high blood pressure. Some of our work aims to make progress towards improving this management process.

We are also finding out if blood pressure measured during exercise may have clinical usefulness as a means to identify people at higher risk who would otherwise go unnoticed by standard medical screening. This is proving to be a very worthwhile area of enquiry.

**What are some of the recent findings from your work?**

We recently completed a national, multi-centre, clinical trial which has shown that using central blood pressure methods to guide the care of patients with high blood pressure results in significantly less use of medication to achieve good blood pressure control. This is a world-first study and the findings are expected to eventually lead to better ways to assess blood pressure and manage hypertension.

We also recently finished a study of cardiovascular physiology in patients during open heart surgery to understand the role of the central large arteries in determining the level of central blood pressure. We need to know this information in order to appropriately target treatment. The results suggest an entirely new explanation than traditional textbook descriptions.

**Medical Science 2 update**

Construction of Medical Science 2 continues to progress well and remains ahead of the scheduled program. Levels one – six of the building are completed and were handed over to UTAS and Menzies in late 2012. Staff and students have moved in to the new facility. The main ‘tower’ building is now complete, however additional site and sundry works will continue over the coming months.

Works to refurbish MS1 level three, to accommodate the new Clinical Research Facility that was previously located behind the main reception area on level one, were completed and handed over to Menzies in January 2013. The new space will enable

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**What is the biggest challenge in your area of research?**

Breaking through established scientific belief systems is a major and persistent challenge, particularly when we are using new methods that may find results suggesting some kind of change or update is required – either of ideas or conventional approaches to medicine.

**What is the most interesting aspect about your work?**

Being a researcher is a fascinating career with relentless sources of interest. The most exciting and interesting aspect is discovery and finding a hypothesis coming true after years of work, knowing the whole time that it might not pay off. Only a few weeks ago, a colleague was heard whooping and hollering after a big success – that’s a great part of the work.

**What do you enjoy doing in your spare time?**

I have a very physically active family and we take a lot of pleasure in many outdoor pursuits. Surfing is probably the most fun thing we do, and it’s particularly enjoyable seeing our young daughter out on the waves with us (making sure we are well rubberised against the glacial Tassie waters of course). In the last year, I’ve taken to mountain bike riding (with scars to prove it) which is a terrific way to keep fit, have a great time with friends and explore the outdoors.
Supporting our next generation of researchers

Menzies provides a learning and teaching environment of excellence for postgraduate students who will become the next generation of great medical researchers. As well as ensuring the development of scientific knowledge and skills for the future, students play a vital role at the Institute, working alongside our senior researchers undertaking hands-on research and making significant discoveries.

If Menzies is to retain bright Tasmanian students and attract interstate and overseas students, a successful scholarships program is fundamental. For Menzies to be able to provide the required number of scholarships to our research students, community support is critical in addition to the support provided from the University.

Groom Kennedy Lawyers recently decided to show their support for Menzies by creating an annual Honours scholarship.

Menzies is very pleased to award Honours student, Tim Fielder, the Groom Kennedy Scholarship for 2013. Tim will undertake his studies in motor neurone disease this year under the leadership of Associate Professor Tracey Dickson.

Groom Kennedy Director, James Groom, said that his firm was thrilled to be supporting Tim in his research.

“If our scholarship can in some small way encourage Tim to pursue a career in medical research then that alone is a good thing. If it can contribute to the Menzies’ team developing a better understanding of motor neurone disease then even better.”

“Groom Kennedy is very proud to be a corporate supporter of Menzies. Menzies is an iconic Tasmanian institution that has a truly international reputation for its research. It deserves the support of the broader Tasmanian business community, and individuals in the community, and I would strongly encourage others to include Menzies in their corporate giving programs.”

If you or your organisation is interested in finding out about supporting our scholarship program please contact Larissa Bartlett on 03 6226 7782.
The research team concluded that there was a trend towards showing a reduction in cardiovascular related-deaths by 20 per cent, and respiratory related-deaths by 28 per cent,” Dr Johnston said.

Dr Derek Findlay
Mr Josh & Mrs Felicity Ey
Miss June Doering
Ms Moya Deigan
Mrs Anita Clarkson
Ms Raelene Brooks
Ms Kathleen Brient
Anonymous (26)

Anonymous (2)
Mrs Valma Therese Anning
Mrs Audrey Button
Mr John Chiswell
Mrs Nancy Crew
Mrs Rosanne Davidson
Mrs Beryl Dewis
Mrs Elaine Dobie
Mr Peter Dunford
Mr Robert Evans
Mrs Nellie Guy
Mr Rex Frederick Henry
Mrs Anita Higginson
Mr Marian Januszewski
Mr Neil Knack
Mr George Watson Lahl
Mr Lambert &
Mrs Anna Knoop
Mr Roy Perry
Mr Tasman (Tas) Pfitman
Mr John Sluce
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More than Flowers

In Memoriam
November 2012 – January 2013

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Thank you for your support.

Thank you!

Society for the Future

One sentence in your Will can fund life-saving medical research.
Remember Menzies Research Institute Tasmania in your Will.

If you would like more information please contact Larissa Bartlett on 03 6226 7782 or email Larissa.Bartlett@utas.edu.au

Bequests save lives by funding research