

## New hope for people with MS



Sean O'Moore (front) has been living with MS for six years

Researchers have associated low vitamin D with the onset of multiple sclerosis (MS) for some time now.

However, a new Menzies' study has shown for the first time that higher levels of vitamin D are also associated with a lower relapse risk in people with MS.

There are more people with MS per capita in Tasmania than in any other state in Australia.

MS is a chronic degenerative and unpredictable condition that randomly attacks the brain and spinal cord. The symptoms of MS vary greatly from person to person. This is what makes it such a devastating disease.

There is currently no cure, but treatments are available to modify the course of the disease and ease some of the symptoms. Relapses add to the level of disability experienced by someone with MS.

The Southern Tasmanian Multiple Sclerosis Longitudinal Study was a population-based cohort study involving 145 participants with MS from 2002 to 2005.

Menzies' Dr Ingrid van der Mei says that by observing people with MS over a two and a half year period, they found that people had a lower likelihood of a relapse if they had higher levels of vitamin D.

The study demonstrates that for each 10nmol/l increase in vitamin D there was up to a 12 per cent reduction in the likelihood of a relapse.

"Based on what was found, it is possible that people with MS would roughly halve their risk of relapses if they increased their vitamin D level by 50nmol/l."

"This effect is on a par with the current immunotherapy treatments available. Vitamin D supplementation is, however, much cheaper and has less potential side effects," she said.

"It is now critical to test in a randomised controlled trial whether vitamin D treatment indeed reduces relapses and how much vitamin D provides the optimal effect," Dr van der Mei said.

Sean O'Moore has been living with MS for six years. He lives in Hobart with his wife Jill and their three young boys, Darragh, Rory and Lorcan.

Three of Sean's sisters also have MS, and his mother was diagnosed with MS when he was just six years old.

"This is very encouraging news. No one wants to suffer a relapse. You never get back to where you were before a relapse," Sean said.

Menzies' Associate Professor Bruce Taylor says the research has worldwide implications.

"Currently our treatments for MS which are effective are hugely expensive," Associate Professor Taylor said.

"They are drugs that cost the Pharmaceutical Benefit Scheme \$25,000 a year: vitamin D is about \$300 per year."

The study was published in the internationally renowned journal *Annals of Neurology*. PhD student Steve Simpson Jr was first author of the publication.

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# Director's message



Professor Simon Foote, Director

Menzies recently participated actively in the national "Discoveries Need Dollars" campaign against a possible 20 per cent cut to the National Health and Medical Research Council (NHMRC) Budget per year over the next three years as part of the Federal Government's cost cutting strategy. Tasmania punched above its weight in the national campaign. We are extremely proud of the campaign's success and further details can be found on page 2 of the *Bulletin*.

I would like to take this opportunity on behalf of Menzies to thank everyone who added their voice to this campaign. The campaign simply would not have gained the momentum and had the impact it did without you. This cut, had it transpired, would have been extremely serious for the Institute.

Once again, thank you again for your invaluable support and I hope you enjoy reading our latest edition of the *Bulletin*.

Professor Simon Foote

## Medical research funding saved

It was a day of celebrations at the Menzies Research Institute Tasmania as news unfolded that the Australian government had spared medical research funding from federal budget cuts.

Eight weeks of overwhelming community opposition to planned government cuts to health and medical research saw the Australian Government protect medical research funding in the 2011-12 budget.

Cabinet leaks in early March suggested that the government had planned to cut \$400 million over three years from the National Health and Medical Research Council (NHMRC), which funds the bulk of Australia's medical research.

Community support for medical research and the benefits it brings to human health became evident with more than 12,000 Australians taking to the streets during April in Rallies for Research protesting planned cuts to medical research. The government received hundreds of letters in favour of medical research and a petition carrying more than 12,000 signatures in support of research was presented for tabling in Parliament.

Professor Simon Foote said he was delighted by the news that the Australian Government had protected medical research funding in the budget.



"It is a great to see that the government recognises the importance of medical research for Australians and for the economy."

"We would especially like to thank the Tasmanian community for expressing their concern on this issue. The Tasmanian community showed full support for the campaign."

"Had the cuts gone ahead, research into life-threatening diseases affecting Tasmanians would have been halved and the interruption and loss of vital medical research findings and expertise from the State would have been devastating."

"Our researchers have worked long and hard to establish an internationally renowned medical research institute in this State."

"Basically we (Menzies) can now go on and do what we've been doing for the last 22 years and that's producing quality research that's going to service the needs of Tasmanians going into the future."

## New national centre of research excellence

In a first for Tasmania, Menzies has been awarded a \$2.5 million NHMRC national Centre of Research Excellence (CRE) grant to increase research capacity in chronic respiratory disease and lung ageing.

The Breathe Well CRE will be based at Menzies, headed-up by Professor Haydn Walters and Dr Richard Wood-Baker as Co-Directors.

Partnering with Dr David Reid from the Queensland Institute of Medical Research, the Centre is a collaboration between Menzies, UTAS School of Pharmacy, UTAS School of Nursing, the Royal Hobart Hospital and The University of Melbourne Department of Public Health.

The focus of the Centre will be on better understanding and management of diseases such as asthma, chronic obstructive pulmonary disease and cystic fibrosis.

Professor Haydn Walters says the Centre will investigate how to maintain optimal respiratory health, through innovative approaches to early detection, improved therapy and adherence.



Dr David Reid, Professor Haydn Walters and Dr Richard Wood-Baker will lead the Breathe Well CRC team

"We have a strong multi-disciplinary team of collaborators and we will build capacity through appointing funded post-doctoral fellowships and PhD students to improve our structural balance and optimise translational and practical clinical outputs for the community," Professor Walters said.

"Our team's primary focus is on better understanding and management of common chronic airway diseases but we are also interested generally in preserving respiratory health in the community from youth to old age, including a new initiative in lung fibrosis in more elderly people."

The Breathe Well CRE will be officially launched on July 15, 2011 with a mini-symposium for strategic supporters of the former Respiratory Research Group at Menzies, which now becomes the core part of the new national CRE.

## Research vital in the fight against cancer

Several Menzies' researchers were recently awarded generous scholarships and grants from the Cancer Council Tasmania for their outstanding research into cancer.

Cancer Council Tasmania CEO Darren Carr said supporting both researchers and medical professionals was an important role of the organisation.

"Thanks to research, we are now able to diagnose some cancers earlier, treatment is less invasive and the five year survival rate has improved dramatically," he said.

"Research is vital when it comes to the fight against cancer."

Dr Stuart Ferguson, from UTAS School of Pharmacy and Honorary Fellow, Menzies, is the Cancer Council Tasmania Research Fellow for 2011. He was awarded \$184,930 for investigating support interventions to improve the quitting rates of smokers.

"It is a great honour to receive this award," Dr Ferguson said.

Dr Ferguson said smoking rates were high in Tasmania and the research project aims to better target treatments to improve quitting rates.

"Most quit attempts fail early, in the first two weeks. Smoking is a major cause of mortality, cancer and other health problems and it is a major public health issue."



Dr Stuart Ferguson, UTAS School of Pharmacy and Menzies' Honorary Fellow, with Cancer Council Tasmania CEO Darren Carr

### Other Menzies Recipients Awarded:

#### Early Career Researcher Small Grants

- Professor Richard Turner, Menzies' Honorary Associate received \$12,000 for the Tasmanian Women's Anal Neoplasia study.
- Dr Jac Charlesworth received \$14,000 for investigating the epigenomics of

familial prostate cancer.

### Cancer Council Tasmanian NHMRC Reviewed Grants

- Associate Professor Greg Woods received \$70,000 for the evaluation of the ability of Vitamin D and metallothionein to protect against UV radiation induced skin cancer.
- Dr Jo Dickinson received \$10,000 for investigating prostate cancer risk variants in integrin (receptor) genes and their role in prostate tumour development and \$10,000 for investigating the epigenetic regulation of the integrin (receptor) ITGA2 in tumour development.

### David Collins Leukaemia Foundation Research Grants

- Dr Nicholas Casey received \$6,500 for gene therapy in human cells mediated by integrase (an enzyme) from a yeast retrotransposon.
- Dr Adele Holloway received \$49,500 for looking at regulation of the leukaemia inhibitory factor receptor by a factor called RUNX1, which is often altered in leukaemic cells.

Lauren Howsen won the Cancer Council Tasmania Honours Scholarship, valued at \$10,000, to study the Tasmanian devil facial tumour disease.

## Linking childhood obesity and mental disorder

Obesity has emerged as a major public health problem in Australia. It is estimated that the prevalence of obesity in children has doubled in the past decade. There are many known long-term health and social side effects of childhood obesity, but very little is known about whether overweight and obese children have long term risk for mental health problems.

A Menzies study has shed some light on this matter and shown a direct link between overweight and obesity in children and diagnosed depression in later life.

The study examined the association between overweight and obesity in childhood and mental disorders in young adulthood. Data was collected from 1135 girls and 1108 boys in 1985, and again 20 years later.

Researchers found that overweight children may have an increased risk for mood disorder in adulthood. However overweight

and obese girls were found to have an even higher risk than boys for developing mood disorders when the obesity continued on into adulthood.

"We found overweight girls who don't shed the extra kilos as they grow up double their risk of suffering depression as adults," Dr Kristy Sanderson, lead investigator for the study said.

"Overweight or obese girls who did not become obese as an adult didn't have an increased risk of depression," she said.

"It was only overweight girls who became obese women ... they had twice the risk of depression, so it was quite a strong effect.

"Why women but not men were vulnerable to mental health effects of persistent weight problems is not clear, but may be due to psychological reactions to weight such as negative self-image and low self-esteem.

"The impetus is even stronger to try and help children who are overweight to lose



that weight before they progress to adulthood, particularly for girls."

Legislation, healthier eating and increased activity, and more awareness are key factors in helping to reducing the obesity epidemic amongst our children. The future mental health of our children relies on it.

## New research into early cessation of breastfeeding



Despite numerous policy initiatives and health promotion activities breastfeeding rates remain static in Australia. Many mothers stop breastfeeding well before their babies are six months old. Termed early cessation of breastfeeding, this phenomenon is particularly prevalent in Tasmania.

Menzies' researcher Jennifer Ayton leads a project team which is running several studies focused on breastfeeding cessation. These projects are preliminary steps in the project team's aim to attract national level competitive funding to develop and trial an intervention to reduce early breastfeeding cessation in Tasmania.

One of these projects is 'Investigating the breastfeeding experiences, attitudes and knowledge of Tasmanian mothers with infants aged from 0-24 months'. This qualitative research study received \$34,311 funding from the Early Years Foundation and is due to begin data collection by mid-2011.

This study will engage a cross section of mothers from the broader Tasmanian community through focus group participation. Researchers are hoping to gain a better understanding of the complexities surrounding infant feeding and in particular, breastfeeding cessation. Mothers will have a chance to voice their views and experiences including those mothers who are socially and or geographically isolated. At least half of the focus group will include mothers living in rural areas or in areas classified as disadvantaged.

By learning first-hand what is important to mothers with young infants, we hope to develop more appropriate methods to prevent early cessation of breastfeeding, how to better support mothers during breastfeeding and monitor progress.

## Thank you to our valued supporters

Thank you to all of our donors for your ongoing financial support and commitment to Menzies.

Listed below are new individual and community supporters of Menzies for February 2011 to April 2011:

### Individual donors

Anonymous (2)

Ms Karina Duggan  
Mrs Maggie Harris  
Mrs Bet Mansfield  
Mr Peter McClure  
Mr Garry Sault  
Mrs Carol Wood

### Menzies healthy community fund

Corporate Express Office Equipment

### Family tree

Mr Clive Pearce

*Listed below are our Everyday Angels – our monthly supporters who make regular gifts to Menzies.*

### Everyday angels

Anonymous (17)

Mr Tim Albion  
Mr Bill Avery  
Mrs Kathleen Bevis  
Mrs Pamela Blunt  
Dr David Boadle  
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Mrs Margaret Williams

*The Menzies Research Institute Tasmania is deeply indebted to ALL our generous supporters who have kindly donated in 2011. Thank you.*

## Art of Christmas 2011

Each year a selection of talented Tasmanian artists donate their unique artwork to Menzies to raise funds for medical research. The artwork is sold and auctioned at the *Art of Christmas* event held in October each year. Please mark the date in your diary:

### Art of Christmas Event 2011

Wednesday 12 October 2011,  
6pm – 8pm Long Gallery, Salamanca



Peter and me – Louise Bloomfield

# Menzies hosts top biomedical experts from China and Australia

World-leading biomedical researchers from China and Australia gathered in Hobart to share their research findings and exchange new ideas as part of the third Australia-China Biomedical Research Conference (ACBRC) during April.

The satellite meeting, Inflammation and Chronic Diseases hosted by Menzies Research Institute Tasmania, attracted over 70 delegates, bringing together academics, clinicians, scientists, young researchers and postgraduate students, to review recent progress on hot topics in the world of medical research.

Associate Professor Changhai Ding, Chairman of the Organising Committee, said the meeting will help to build potential collaborations between Chinese leading institutions and Menzies. It had brought over 30 Chinese academic leaders including Professor Xuejun Zhang, President of the Chinese Society of Dermatology, and Professor Zhanguo Li, President of the Chinese Rheumatology Association, to Tasmania.

Menzies' Director, Professor Foote said recent genetic, biomedical and immunological breakthroughs had provided new insights into the pathogenesis (the mechanism by which a disease is caused) and therapies for inflammatory disorders.

"It is well known that inflammatory mechanisms are involved in many chronic diseases, such as rheumatic, cardiovascular, respiratory, neurological and metabolic diseases, as well as cancer," Professor Foote said.



Researchers from China and Australia at the ACBRC satellite meeting, Inflammation and Chronic Diseases, Hobart

"There is a constant need not only to keep abreast of and develop new scientific approaches, but also to identify adequate and effective clinical strategies for the prevention and treatment of chronic inflammation.

Among the key international speakers at the meeting was Professor Graeme Jones from Menzies, who spoke on the evidence suggesting interleukin 6 (IL-6), a protein produced in the body, as a key target for the treatment of rheumatoid arthritis.

"There is now sufficient evidence through key clinical trials to recommend targeted drug therapies involving the blockade of IL-6 in the treatment of rheumatoid arthritis and other musculoskeletal diseases," Professor Jones said.

The Australia-China Biomedical Research Conference was organised by the Australia Chinese Association for Biomedical Sciences (ACABS) – a not-for-profit, non-political and independent body aiming to promote international collaborations between Australia and China.

## Digging up generosity



Right to left: Tom Finney, State Manager, John Holland Pty Ltd, Professor Simon Foote, Director, Menzies Research Institute Tasmania and Peter Killick, Director, John Holland Fairbrother Joint Venture.

Menzies, UTAS and contractors John Holland and Fairbrother have donated \$10,000 to the Queensland Premier's Flood Relief Fund.

Redundant electrical cabling recovered during enabling works on the Medical Science Stage 2 Project was stripped back to bare copper.

The copper raised \$5,000 and joint venture partners John Holland and Fairbrother matched the donation.

UTAS Associate Director Major Projects, Jim Ovens, said all parties involved in the MS2 project wanted to find a way to productively contribute to the Queensland Premier's Flood Relief Appeal.

"Salvaging materials from the project and finding ways to reuse it, not only helped to raise funds needed by Queensland flood victims but is also a sustainable way to conduct our business," he said.

"The floods in Queensland earlier this year devastated many families and businesses, the project team got into the spirit of helping those affected by the floods," said David Moran, General Manager of John Holland's Southern Region business.

"We hope the contribution goes some way to assist with the recovery efforts in Queensland," he said.

John Holland Fairbrother Joint Venture Project Manager, Todd Marsden, said that workers on the project wanted to contribute in a positive way toward helping their northern neighbours.

"We would like to thank electrical subcontractor PSG Russell-Smith in providing labour to strip the electrical cables back to copper in order to raise the funds," he said.

## Would you like to receive the Bulletin via email?

If you would be happy to receive the quarterly Bulletin newsletter via email rather than in hardcopy, please let us know by confirming your details with Phoebe via email at [phoebe.sargent@menzies.utas.edu.au](mailto:phoebe.sargent@menzies.utas.edu.au) or by phone on 6226 7707. Not only will it help us reduce our costs, it is the most environmentally friendly option.

## A very special birthday gift

It is not every day that you celebrate your 60th birthday and this year Pastor Bronwyn Morton decided to make the occasion extra special.

Bronwyn held not one, but two birthday parties, both to raise money for Menzies' Alzheimer's research.

Bronwyn works at Queenborough Rise in Sandy Bay and held one birthday party fundraiser with the residents and staff and another with her friends and family privately.

"At work we have birthday celebrations for residents and I thought it would be lovely to celebrate my birthday with them; the residents are very important to me," Bronwyn said.

The events were extremely successful, raising over \$1,000 for Menzies' Alzheimer's research.

Bronwyn chose for the money to go to Alzheimer's disease research because it is something that is close to her heart.

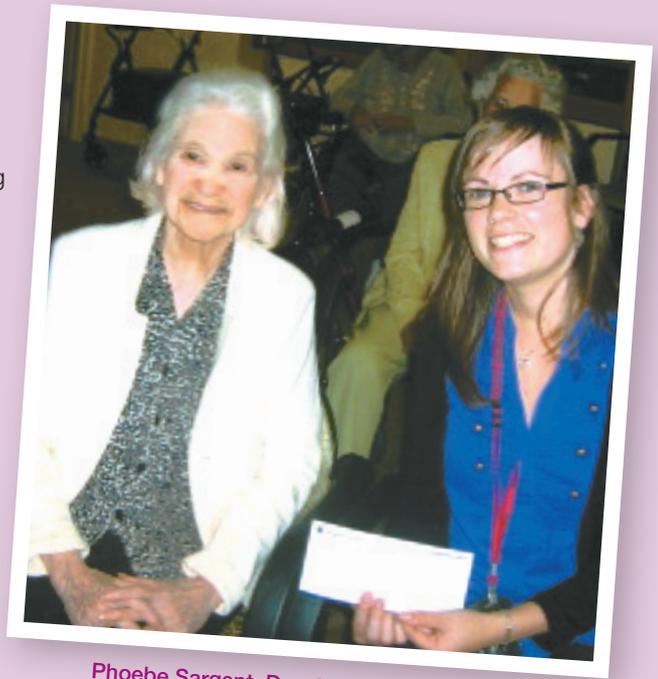
"I did it for the people who have Alzheimers disease. I wanted to share something with others and give something back to benefit people who are struggling.

"I believe that Menzies is the best place to direct the money. The research is so important," Bronwyn said.

The money raised will help assist Menzies researchers to develop therapeutic methods of treating and preventing Alzheimer's disease.

If you would like more information about holding a community fundraiser, please contact:

Development Officer, Phoebe Sargent on (03) 6226 7707 or email [phoebe.sargent@menzies.utas.edu.au](mailto:phoebe.sargent@menzies.utas.edu.au)



Phoebe Sargent, Development Officer, Menzies with residents of Queenborough Rise

## Researcher profile: Dr Brendan McMorran



Dr Brendan McMorran

### What is the current focus of your research?

I work on the infectious disease, malaria. I am investigating how people normally protect themselves during a malarial infection. We know of several protective processes, some that reduce the ability of the malaria parasite to grow inside red blood cells, and some that prevent the most serious symptoms of the disease from developing. Malaria has been a major problem for humans for thousands of years, and as a result of selection,

people originating from affected regions frequently possess these protective mechanisms. I would like to uncover other mechanisms of host protection that may be developed into anti-malarial therapies.

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

I helped contribute to a surprising discovery two years ago that the platelets in our blood are able to kill the parasite that causes malaria, and that without platelets, malaria infection is much more severe. Since then I've been focussing on exactly how the platelets kill malaria parasites. Work from my group is beginning to understand how the platelets interact with the parasite-infected red blood cells, and the molecules produced by the platelets that are toxic to the parasite.

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

Many drugs have been developed to combat malaria infection, but unfortunately most of these are no longer effective due to drug resistance. Historically, drugs like chloroquine were very effective treatments for 40-50 years, but are now virtually useless in much of Africa where malaria is the most prevalent. Unfortunately, the most recently

developed anti-malarial drugs are now showing signs of drug resistance after only 10 years of use. Enormous effort is placed on developing vaccines for malaria, but the unique and complex properties of the parasite are making this a long and challenging quest. We desperately need new drugs and treatment approaches if we are to ever ease the burden of infection and eliminate this disease.

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

Our discovery about platelets in malaria has added to the growing realisation that these very 'simple' cells are in fact doing several important things in our body. We've known for a long time that platelets function to form clots and prevent bleeding. But we now know that as well as playing a protective role during a malarial infection, they are important in a range of viral and bacterial infections, as well as inflammatory conditions like arthritis.

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

I enjoy outings with my family (kids sports, camping, bush-walking), road cycling, mountain biking and diving.

# More than Flowers



In Memoriam  
February 2011  
to May 2011

We gratefully acknowledge gifts made  
in honour of:

Anonymous (2)	Mr Gustav Bjorklund
Mrs Beryl Salika Barratt	Mr Herbert Steele
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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 Sam East on 03 6226 7782

Bequests save lives by funding research.

*Thank you!*



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I would like to make a one-off donation of \$ \_\_\_\_\_

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**Thank you for your support.**

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