



NEXT



THE OFFICIAL NEWSLETTER OF MULTIPLE SCLEROSIS RESEARCH AUSTRALIA

\$1.8 million in funding awarded for MS research in 2016

In January, MS Research Australia announced the recipients of new research funding for 2016. This year, MS Research Australia awarded a further \$1.834 million in research funding across a range of projects, travel awards and people support grants, such as scholarships and fellowships.

This round received our largest ever number of applications and we are proud that the 24 successful projects cover a range of scientific and allied health disciplines to investigate MS from all angles, bringing the total number of investigator-led projects to 47 grants for 2016.

Project grants are awarded to researchers to cover costs towards a specific research project and this year's recipients will be investigating a number of exciting avenues in MS research.

Professor Bruce Taylor from the Menzies Institute for Medical Research in Tasmania, will be comparing the long term outcomes of people with MS in Australia and New Zealand. Due to government restrictions, many people with MS in New Zealand have not been treated for their MS, while in Australia over 95% of eligible patients with relapsing remitting MS receive treatment. Comparing the two groups will allow Professor Taylor to determine the long term outcomes of treatment for people with MS.

Dr Litza Kiroopoulos from the University of Melbourne, is running a clinical trial into cognitive behavioural therapy (CBT) for treating depression in people with MS. Dr Kiroopoulos has developed a specific intervention that aims to help people newly diagnosed with MS.

Lower levels of exposure to parasites, especially helminth worms, has been proposed as one reason why the number of people with autoimmune conditions such as MS is increasing. Dr Sheila Donnelly from the University of Technology in Sydney, was awarded a project grant to investigate the mechanisms that underlie this phenomenon at a molecular level, with the view to potentially one day using 'worm therapy' to prevent MS.

Professor Alan Baxter from James Cook University in Queensland and Professor Steve Wilton from Murdoch University in Western Australia both received project grants for research into the genetics of MS. Professor Baxter will be looking at the role that gene networks are playing in the risk of developing MS, while Professor Wilton will be continuing his work using a novel method to block specific genes as a treatment option for MS. The MS Society of WA has provided funding support for Professor Wilton's project.

Dr Steven Petratos, from Monash University in Victoria, will continue his internationally recognised work into progressive MS. Dr Petratos uses a novel method to block particular molecules that are thought to be involved in nerve fibre damage in the progressive phase of MS. By blocking these molecules it is hoped that damage will be reduced and people with progressive MS will have better clinical outcomes. Dr Petratos' project has received full funding support from the Trish MS Research Foundation.

For an overview of the new research
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A word from our Chief Executive Officer

MS Research Australia is a mission-driven organisation which is dedicated to MS. We are fast-tracking MS research in Australia and participating in national and global collaborations to ensure MS researchers and clinical specialists are tackling the toughest challenges to find better treatments, prevention and ultimately a cure for MS.

This year MS Research Australia has committed a further \$1.834 million in funding to 24 new research projects, bringing the total number of investigator led projects being funded in 2016 to 47. This is part of our forecast \$4.2 million to MS research this financial year which will be a staggering 36% increase from the last financial year; which itself was a record. Competitive Australian government funding of MS research over a similar timeframe is \$3.1 million meaning a combined support level of just over \$7 million to MS research. More important than just these “outputs” is what impact the research has had. Please ensure you visit our website to find out more. Our 2004-2014 Research Audit is an easy to read document to see exactly what has been achieved. Our Resource Map highlights what we now urgently need to concentrate on and where the “gaps” are. Both documents can be found on our website.

The recent grants awarded range from vacation scholarships of a one month duration which gives promising young undergraduates an opportunity to gain experience in a laboratory, to major Fellowships of three to four years, which enable MS researchers to stay focused on their research speciality.

In this issue of NEXT we have provided an overview of all of the new grants being funded and we introduce you to several of the MS researchers who are dedicated to unlocking the mysteries of MS. In the next issue we will focus on providing you with a detailed and updated analysis of exactly how we are funded, and the fundraising cost ratio. ■ **Dr Matthew Miles**

Continued from page 1

grants for 2016 please see the research Snapshot on page 3 and the MS Research Australia website www.msra.org.au/projects-we-fund-starting-2016

MS Research Australia is delighted with the new crop of successful grants this year. Dr Matthew Miles, MS Research

Australia Chief Executive Officer said ‘We very much look forward to the outcomes of this year’s exemplary research projects and would like to congratulate all recipients on their awards. We would also like to thank all our partners and supporters, who make possible our ongoing commitment to fund the best Australian MS research’. ■

Experienced fundraising executive joins team

MS Research Australia is thrilled to be able to welcome experienced executive, Mr Len Russell, to the team. Len joins as the Head of Fundraising and brings an extensive mixture of experience ranging from income generation, donor stewardship, marketing and governance from both the corporate and not-for-profit sectors.

Prior to joining MS Research Australia, Len was a senior executive team member in fundraising at Neuroscience Research Australia (NeuRA) in Sydney. NeuRA is a very well-known medical research institute (MRI), with a focus on diseases and injuries of the brain and nervous system, including MS.

‘I feel that I have been blessed to have held such an interesting mix of fundraising, sales and marketing positions within a number of organisations in both the corporate and not-for-profit sectors. The corporate organisations I have worked in have included legal publishing and telecommunications. The corporate work experience, along with my ongoing involvement as a non-executive director within a not-for-profit disability organisation, has definitely given me the skills to add value to the fundraising for MS Research Australia’, said Len.

‘Making the transition to work within the not-for-profit sector has been challenging but also very rewarding. Having some of

my own family members involved in the wider health care industry has been an encouragement for me to move my skills in support of medical research. I am excited to be involved with MS Research Australia as I firmly believe that medical research will deliver the ground breaking and innovative new treatments and therapies to eliminate the devastating impact of MS and ultimately find a cure.’

‘Since moving into the not-for-profit sector, I have also actively become involved with the Fundraising Institute of Australia (FIA), the national peak body representing professional fundraising within Australia. I am currently on the FIA’s Executive Committee for NSW and am committed to the ethical practice of fundraising.’ ■



Head of Fundraising Len Russell.



RESEARCH AUSTRALIA

SNAPSHOT

PROJECTS STARTED IN 2016 FUNDED BY MS RESEARCH AUSTRALIA

NEUROBIOLOGY

IDENTIFYING THE TRIGGERS FOR MS

The Walter and Eliza Hall Institute of Medical Research, VIC

Mr Adam Girardin will profile the immune response and potential infectious agents in the brain tissue of people with MS.

DEVELOPING BETTER TREATMENTS

Menzies Institute for Medical Research, TAS

Dr Carlie Cullen is investigating the use of transcranial magnetic stimulation therapy as a treatment option for MS.

University of Melbourne, VIC

Associate Professor Richard (Tony) Hughes is developing a novel treatment option for MS using peptides that promote myelin growth.

A CURE FOR MS VIA REPAIR OR REGENERATION OF CELLS

Monash University, VIC

Dr Steven Petratos is investigating nerve fibre damage at a molecular level in progressive MS.

University of Melbourne, VIC

Dr David Gonsalvez is targeting the Wnt molecular signalling pathway to promote myelin repair in MS.

GENETICS

Florey Institute of Neuroscience and Mental Health, VIC

Dr Andrew Fox is designing a mathematical method to accurately identify genetic methylation signals in blood samples.

University of Melbourne, VIC

Ms Hannah Vuong will determine the way that low vitamin D levels contribute to MS risk through genetic effects on the immune system.

Murdoch University, WA

Professor Steve Wilton will use a new method to suppress target genes as a treatment option for MS.

James Cook University, QLD

Professor Alan Baxter is looking at role of immune gene networks in MS.

University of Newcastle, NSW

Ms Rebecca Seeto will compare the epigenetic patterns seen in brain tissue and blood from people with MS.



EPIDEMIOLOGY

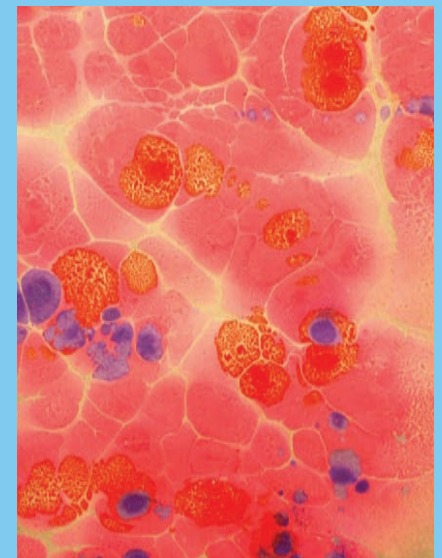
Curtin University, WA

Dr Lucinda Black will travel to Kaiser Permanente in California, USA, to compare the role of vitamin D in MS across different races and ethnicities.

Menzies Institute for Medical Research, TAS

Professor Bruce Taylor is investigating the long term outcomes of treating MS.

Dr Prudence Tettey is evaluating the effect of having illnesses in addition to MS on the risk and progression of MS.



IMMUNOLOGY

Menzies Institute for Medical Research, TAS

Professor Heinrich Körner is researching the effect of vitamin D MS risk genes on the function of the immune system.

The Westmead Institute for Medical Research, NSW

Mr Jarem Edwards will investigate the way vitamin D controls gene activity in immune cells.

University of Technology Sydney, NSW

Dr Sheilah Donnelly is researching the mechanisms by which parasite worms may prevent MS.

Murdoch University, WA

Dr Rakesh Veedu will be developing a new method for drug delivery to improve side effect profiles of MS treatments.

SOCIAL & APPLIED RESEARCH

University of Tasmania, TAS

Dr Cynthia Honan is examining the relationship between cognitive fatigue, everyday functioning and a potential new biomarker for MS.

University of Sydney, NSW

Ms Georgia Chaseling is determining whether regulation of body temperature during exercise is different in people with MS.

University of Melbourne, VIC

Dr Litzia Kiroopoulos is running a clinical trial into cognitive behavioural therapy for depression in MS.

University of Sydney, NSW

Dr David Kennedy is determining effectiveness of a whole-body vibration exercise to improve walking and risk of falls.

University of Queensland, QLD

Dr Hannah Gullo will travel to the Kessler Foundation in New Jersey, USA to discuss cognitive training in MS and conduct a clinical trial.



KEY



INCUBATOR GRANT



FELLOWSHIP



SCHOLARSHIP



PROJECT GRANT



TRAVEL AWARD



Undergraduate student, Mr Adam Girardin.

Studying MS lesions in brain tissue gives clues into genes

Although many risk factors for MS have been identified, the exact causes and triggers for the disease are not yet known. A great deal of research has been dedicated to understanding the mechanisms of lesion formation and the potential external triggers that may underlie MS onset.

Undergraduate student Mr Adam Girardin recently received a MS Research Australia Vacation Scholarship to undertake a ten-week laboratory internship under the supervision of Dr Simon Willis at the Walter and Eliza Hall Institute of Medical Research in Melbourne, to further study the interaction

between gene expression and MS lesions.

In the first phase of this project, Mr Girardin aims to study the early changes in gene activity that are associated with MS lesion formation. He will be using post-mortem brain tissue donated to the Multiple Sclerosis Society Tissue Bank at Imperial College London in the UK. During his scholarship Mr Girardin will be completing a series of experiments, looking to follow-up on earlier work in Dr Willis' laboratory that identified changes in the way genes are decoded by cells in the brain that may trigger the formation of lesions. The second aim of Mr Girardin's project is to identify whether any infectious agents are present in the brain tissue samples that may be contributing to MS onset or MS risk, and if so, to better understand how the immune system responds and how this may affect the brain.

Vacation scholarships allow promising young students to kick start their training in research and starts them on a pathway to join the growing ranks of researchers working on the problems of MS. This particular type of research that Mr Girardin will be undertaking, helps to enhance our understanding of MS disease development and could identify genes that may be useful targets for developing new treatments. This type of work is not possible without the generosity of people with MS who have donated their brain to MS Brain Banks around the world.

To find out more about the MS Research Australia Brain Bank, phone 1300 672 265 or visit www.msbrainbank.org.au/register ■



Mr Prudence Tettey, Menzies Institute for Medical Research.

Research fellow to study how other diseases affect MS severity

Many people with MS also experience other chronic physical or mental illnesses. Since it is sometimes difficult to tease out which disease is having a particular effect in individuals with more than one disease, people with diseases in addition to their MS are often not included in research studies and clinical trials. Multiple diseases occurring in one person are known as 'comorbid illnesses'.

Mr Prudence Tettey from the Menzies Institute for Medical Research was recently awarded a three year MS Research Australia Postdoctoral Fellowship that will begin in July 2016, to study comorbid illnesses in greater detail. During this Fellowship Prudence will investigate people with MS who also have at least one other chronic disorder, such as a physical, mental, autoimmune, cardiovascular, or musculoskeletal condition, and in

Travel awards help to forge new research directions

This year, the Ian Ballard Travel Awards were awarded to two promising researchers in Queensland and Western Australia. The Ian Ballard Award is intended to enable grant recipients to undertake international travel with the aim of extending on their MS research specialty and collaborating with international experts. The award is named after Ian Ballard, the founder of MS Research Australia's grassroots fundraising campaign Foundation 5 Million.

Dr Hannah Gullo, from the School of Health and Rehabilitation Sciences at the University of Queensland, has been awarded an Ian Ballard Travel Award for 2016 to spend four weeks at the Kessler Foundation in the USA, working with Professor John De Luca and his colleagues.

Professor De Luca is internationally renowned for his work in memory and information processing, and recently presented a Research Update webinar (available at www.msra.org.au) speaking about why taking part in mentally challenging activities may have benefits for people with MS by helping to prevent or slow the accumulation of cognitive difficulties over time.

Dr Gullo is currently conducting a randomised controlled trial to assess the use of memory techniques using Smartwatch technology, and this trip will enable her to consult with international

experts in the field of cognitive training in MS and other disorders, and combine her expertise with researchers from the Kessler Foundation. Dr Gullo aims to test a range of novel methods to improve memory and thinking skills in people with MS.

The second Ian Ballard Award was to Dr Lucinda Black from Curtin University in Perth. Although vitamin D is an established risk factor for MS, it is not yet clear which components of the vitamin D pathway are the most important, and whether these are also influenced by skin tone or ethnicity.

Dr Black has received an Ian Ballard Award with support from the MS Society of Western Australia, to assist her work investigating which vitamin D metabolites (produced when vitamin D is broken down) are the most useful to measure

vitamin D levels in relation to MS risk.

With this grant, Dr Black will travel to the laboratories of Dr Annette Langer-Gould at Kaiser Permanente in California, USA, to undertake a two week training to analyse vitamin D in samples from the US based MS Sunshine Study and the Australian Ausimmune study. She will also discuss her work on the Ausimmune data with experts at Kaiser Permanente in order to determine the most appropriate vitamin D metabolites for measurement in the MS Sunshine Study.

Dr Langer-Gould recently visited Australia as one of the invited keynote speakers at the MS Research Australia Progress in MS Research Conference October 2015, to speak about her work studying vitamin D in multi-ethnic MS cohorts.

These grants are a valuable opportunity for researchers to forge new directions and strengthen Australia's place in the international MS research field. We look forward to excellent collaborative outcomes arising from these travel experiences. ■



particular look at whether the presence of another illness has any effect on the onset and progression of MS. Over his three-year Fellowship, Prudence will also investigate the role that these conditions play in health-related quality of life, the effectiveness of MS treatments and the medical cost of MS to these people.

The first step towards understanding the effect of comorbidities was to quantify the proportion of people with MS who experience additional illnesses. Prudence and his colleagues in Tasmania and Melbourne undertook a study to measure the frequency of comorbid diseases in a group of 198 people with MS compared to the general Australian population.

Published in January 2016 in the journal *Neuroepidemiology*, this study found that rates of hypertension (high blood pressure), asthma, abnormal fat levels in the blood (dyslipidaemia), psoriasis, eczema, and anaemia, were all higher in people with MS compared to the general population. People with MS who were overweight or obese experienced more severe MS symptoms on average. People with MS who also had rheumatoid arthritis or anaemia had a two to three fold increase in the number of MS relapses compared to those without comorbidities.

Prudence and his supervisor Associate Professor Ingrid van

der Mei have previously published studies showing that people with MS experience a slightly increased occurrence of both cardiovascular disease and type I diabetes compared to the general population.

Ultimately, Prudence's Fellowship aims to develop guidelines that will not only enable future clinical trials to include people who have MS and comorbid conditions, but also to assist clinicians to provide these patients with better informed and more tailored treatment options. Understanding more about how comorbid illnesses affect disease course will provide new avenues for enhancing MS disease management. ■



Robust grant funding process identifies the best Australian MS research

Following an extensive grant review process undertaken by the MS Research Australia Research Management Council in late 2015, MS Research Australia has been able to announce \$1.834 million in funding for 24 grants starting in 2016.

The Research Management Council (RMC) is a multi-disciplinary team of 15 independent clinicians and researchers

with extensive expertise in a variety of fields relevant to MS research. The Council is responsible for overseeing the rigorous review of grant applications and for recommending funding allocations. This comprehensive practice has enabled the MS Research Australia grants to be considered 'Category 1' in competitive funding awards, the most prestigious class of the Australian Competitive Grants

Register, in line with major government research grants.

A key feature of the MS Research Australia grant process is the assessment of applications by international researchers known as 'peer reviewers'. All applications for project grants and fellowships are reviewed by at least two international experts in the relevant field. The RMC then debates each project in detail, taking these recommendations into account. A key factor being considered is not only the scientific quality of the project, but the relevance and potential impact of the research to make a real difference for people with MS.

The standard of applications received in 2015 was extremely high, making the assessment process even harder. However, the robust debate ensured the finer details of each project were brought to light and have resulted in 24 excellent projects selected to receive funding commencing in 2016.

The MS Research Australia Research Grants Coordinator Heather Cato (see below) coordinates the grants review and assessment process, providing vital administrative assistance to the RMC Chair and members and liaising with the grant applicants. ■

Overseeing the research grants process

Heather Cato has been a critical member of the research team at MS Research Australia since 2008. Heather oversees the MS Research Australia grants assessment and funding process, providing vital support to the researchers who apply for MS Research Australia funding, and to the experts who donate their time and expertise to assess these applications.

Prior to joining MS Research Australia, Heather's career concentrated on technology. She held the role of a senior corporate executive, leading technology transformation programmes in the UK. 'Clearly transformation can only occur with the vision, talent and dedication of many people working together towards the one goal', said Heather. 'One of my colleagues was diagnosed with MS early in the year and by the year end required a wheelchair and her health was failing. I realised that I wanted to step back, give back and to

work where I could add value.'

'I joined MS Research Australia as the Research Grants Coordinator. My system design and process experience has assisted in providing an enhanced level of structure to the grants process. This is best evidenced by the engagement of world experts to assess our applications for funding. It is so rewarding to work within the MS Research Australia research team. I administratively support the brilliant Australian scientists and clinicians who generously provide their expertise to ensure that only the best applications are selected for MS research funding. It is a great privilege to support the profoundly talented researchers who are working so hard to provide a cure and to improve the management of MS.'

'I am excited to see the progress being made in the MS research field, scientifically, clinically and in rehabilitation. During my time with MS Research



Research Grants Coordinator Heather Cato.

Australia, the treatment landscape has changed markedly. The outcomes for people with MS are increasingly positive. I am excited for what future research into MS may bring.' ■



Keeping the strategy contemporary and relevant

In keeping with the MS Research Australia three year Strategic Plan, an independent Leadership Council has been established. The Leadership Council will be consulted to ensure that the strategy is kept contemporary and relevant. This small group of national leaders based in Australia and internationally represent a variety of backgrounds and will lend immense support and guidance to the MS Research Australia team. They will help to identify trends and influences

in the Australian and international corporate, political and philanthropic markets.

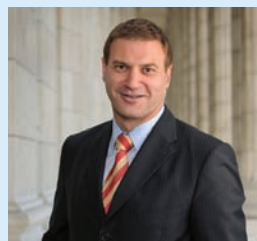
All members bring unique business knowledge and experience, together with an affinity for the non-for-profit sector and MS, which complement the knowledge and skills of the board members and the MS Research Australia executive team.

A small sub-group of our international based members, including Lisa Pettigrew, Chris Benschler and

Cassandra Kelly have already been incredibly supportive with our global work via the International Progressive MS Alliance: offering advice, overseas networks and giving their time by attending important events. These members also assisted with the global roll out of the Kiss Goodbye to MS initiative which was launched in January this year. The Australian founded campaign raising funds for MS research, has been taken up by nine other countries so far including the United States.

We are extremely privileged and grateful to be able to work with the Leadership Council who have all committed to supporting us in achieving the goals of MS Research Australia. ■

Current membership of the Leadership Council



Chris Benschler
Manager Global Government Relations, Haliburton. Based in Washington DC.



Gordon Cairns AO
Chairman of Woolworths Ltd and Origin Energy, Director of Macquarie Group Limited. Based in Sydney.



Dr Jim Fox
Chairman of Genmark Diagnostics Inc, Independent lead director at Biota Pharmaceuticals Inc and Director of TTP Group plc (UK). Based in Melbourne and USA.



Dr Laurie Hammond
Founder and Director of iQ Capital Management Pty Ltd. Based on the Gold Coast.



Cassandra Kelly
Co-founder and global Chair at Pottinger, International Speaker and Corporate Advisor. Based in New York.



Robert Maher AM
Senior Advisor UBS AG and Director of Brooker Consulting Company. Based in Sydney.



Lisa Pettigrew
General Manager Global Healthcare, Director of NeuRA and Deputy Chair of the NSW Health Ministerial Advisory Committee. Based in Washington DC.



David Pumphrey
Partner Emeritus with Heidrick & Struggles. Based in Sydney.



Vicki Thomson
Chief Executive of the Group of Eight (Go8) comprises of Australia's eight leading research Universities. Based in Adelaide and Canberra.



Vanessa Wallace
Managing Director MF Advisory, Director of Wesfarmers Ltd and a member of the Chief Executive Women (CEW) network. Based in Tokyo and Sydney.



Be proud of an Australian founded campaign and get involved

Kiss Goodbye to MS is MS Research Australia's national fundraising initiative, raising money for research into MS. In 2015 our Kiss Goodbye to MS community came together to raise over \$1 million, and in 2016 we are aiming even higher.

Kiss Goodbye to MS empowers the community to raise funds and awareness for MS, and calls on people to get involved however they like! Whether fundraising with an event or organising a workplace morning tea, you are able to choose how you support the campaign. Some of our community get sponsored to wear red lipstick, or anything red, throughout May, and others set a personal challenge and ask for donations. How you get involved with Kiss Goodbye to MS really is up

to you, and you can participate from anywhere around the world.

In 2016 Kiss Goodbye to MS, an Australian founded initiative, has taken on new heights, with nine countries around the world adopting the campaign. Since January, France, Sweden, the USA, Mexico, Greece, Argentina and Ireland have been doing their part to increase funding available for MS research, introducing Kiss Goodbye to MS in their own countries. Ireland adopted the Kiss Goodbye to MS initiative this year holding an early morning dance party, while the USA asked their community to donate and share a picture of why they want to Kiss Goodbye to MS.

In May Denmark and New Zealand will launch their Kiss Goodbye to MS campaign alongside our Australian campaign, in

alignment with World MS Day.

The world is coming together to increase the funding available for research globally. As Kiss Goodbye to MS grows, the awareness for MS continues to build, with thousands of people showing their support on social media.

What will you do to Kiss Goodbye to MS in 2016?

Whether you are able to hold a big event, host a small get-together, or raise a few dollars through an online fundraising page, every dollar really does make a difference for research into MS.

Join us this May in raising funds and awareness for Kiss Goodbye to MS. The world is watching...

To register, or for more information head to our website www.kissgoodbyetoms.org

Help MS Research Australia find a cure for MS

Donate (Donations over \$2 are tax deductible)

To support MS Research Australia's vital work I would like to:

- Make a one off donation of: \$
- Make a monthly donation of: \$
- Learn more about leaving a bequest in my Will
- I have already made a bequest to MS Research Australia in my Will

Contact details

Title: First name:

Surname:

Address:

Suburb: State: Postcode:

Phone: Mobile:

Email:

Payment method:

- Cheque (made payable to MS Research Australia)
- Direct Debit Request (copy of service agreement can be provided on request)

Financial institution:

BSB number:

Account number:

Account holder's name:

- Credit Card

Mastercard Visa Amex

Credit card number:

Exp: CVV:

Name on card:

Signature:

