

SEPTEMBER 2024

A portrait of Associate Professor Des Graham, a man with glasses and a beard, wearing a dark suit and a red tie. He has an MS Australia pin on his lapel and a name tag that says 'Parliament of Australia MS 50th Anniversary'.

MS AUSTRALIA CHAIR ASSOCIATE PROFESSOR DES GRAHAM ANNOUNCES RETIREMENT

Associate Professor Des Graham has brought forward his previously announced intention to retire at the end of 2025 and will now conclude his term as Chair at the MS Australia Board Meeting on 28 November 2024.

Des shares why he brought his retirement forward, reflects on his proudest achievements, and expresses heartfelt gratitude to the incredible people in the MS community.

It is with a heavy heart, enormous pride in our achievements to date, and extreme optimism about the future of MS Australia and the MS community we serve, that I have announced my intention to end my term as Chair of MS Australia in November this year.

Over the last six months my MS has become increasingly unstable and less predictable, impacting on the high standards I set myself in performing my role as MS Australia Chair and

providing me a wake-up call that I attend to my own health needs and participate fully in, and with, my own wonderful family.

For this reason, I have made the difficult and personally, very sad decision to bring forward my previously announced intention to retire at the end of 2025.

With the love and support of my family, I need to prioritise both a focus on my own health and well-being, and equally; quality time with those I hold dearest.

This is the second time my MS has forced my hand to resign. The first from an incredibly fulfilling clinical and executive career within the Australian health and human services sector. And now, from what has been, both professionally and personally an enriching advocacy and leadership role serving the Australian MS Community.

I am resigning from all my current MS roles, including my position as Board Member of

MS Plus and my role on the Menzies Institute for Medical Research MS Research Flagship Consumer and Community Reference Committee.

I am enormously proud of my record of achievement and the contribution I have made in service to all Australians living with MS including:

The merger of MS Research Australia and MS Australia and subsequent highly successful strategic transformation.

The ongoing stewardship of, and investment into MS Research by MS Australia, and the significant Commonwealth funding secured for the sector.

The establishment of an ambitious Advocacy program that increases our impact, our visibility and our standing in the MS community.

And investing in international collaborations and partnerships: including Platypus (UK), Primary prevention (Canada), Pathways to Cures (US), the International

FROM THE CEO

ROHAN
GREENLAND

20
YEARS OF EXCELLENCE
IN MS RESEARCH



20 YEARS OF MS AUSTRALIA'S NATIONAL MS RESEARCH PROGRAM

This year marks the 20th anniversary of MS Australia's national MS research program, a program that has helped supercharge Australian research and boosted collaboration across the sector.

And it's timely to reflect on achievements and challenges, not least because the hard-working members of our Research Management Council convened on 30 August to assess applications for this year's competitive research grant round.

Thanks to the great generosity of the MS community, the Australian public and our high performing Member Organisations – MS Plus, MSWA, MSQ and MS SA/NT – we are able to invest around \$6m every year to fuel world-class Australian research.

But we do more than that. Our advocacy has, for example, unlocked \$18m in Medical Research Future Fund (MRFF) Epstein-Barr virus grant opportunities.

Our research platforms support the MS Australia Brain Bank, the Australian MS Longitudinal Survey and others covering areas such as genetics, Vitamin D studies and adaptive clinical trials.

And, working with MSWA and the UK MS Society's OCTOPUS program, we are running a world-leading multi-arm, multi-stage clinical trial – PLATYPUS – in a bid to find effective treatments for progressive forms of MS.

Elusive treatments for progressive MS is also the focus for the International Progressive MS

Alliance, of which MS Australia is a managing member and financial contributor.

Looking to the future, we are now working with MS Canada to develop another global research collaboration, seeking to find ways to drive ultra early detection and intervention to try and stop MS almost before it starts.

We know that research benefits when it is internationally linked and aligned. That's why we work with key partners – such as the US, UK, Canadian and Italian MS societies – to name a few – through the exciting Pathways to Cures international research roadmap.

While much has been achieved over the past two decades, we face significant challenges. Yes, more, high efficacy disease modifying therapies are available than ever before. But prevalence of MS is on the rise. Research is increasingly costly. We don't have effective treatments for progressive forms of MS. And we still can't stop MS or reverse damage already done.

We are, therefore, absolutely determined to redouble our efforts, review our current approaches, and strengthen our work to achieve our ultimate goal, a world free from MS. This is our rock-solid commitment to each of the 33,335 people living with MS in Australia, their families, friends and carers.

Rohan Greenland
CEO, MS Australia



FIND OUT MORE

MS AUSTRALIA CHAIR ASSOCIATE PROFESSOR DES GRAHAM ANNOUNCES RETIREMENT

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Progressive MS Alliance and leading the argument for stronger governance of the MS International Federation.

Together with bold Australian and International research partnerships and collaborations that will get us closer to a cure or cures for MS.

Our Advocacy efforts for a better NDIS for people living with MS saw us secure a voice within the National Disability Insurance Agency – a neurological advisory panel that will ensure neurological conditions including MS, and the needs of that community are better served.

But with wholesale and generational reform of both the disability and aged care sectors underway – the opportunities, and challenges – for MS Australia to ensure better support and services for people living with MS, must remain a major focus.

MS Australia's leadership of, and investment in the Neurological Alliance Australia (NAA) remains enormously significant. MS Australia represents over 33,000 Australians together with their families, friends and carers. Through our leadership of the NAA, we represent millions of Australians – conservatively one in six – granting us a larger voice and even greater influence.

It is with great personal sadness that I will watch these exciting future achievements from the sidelines and not the pitch.

During my tenure as the inaugural Chair of the consolidated MS Australia, and working with the MS Australia Board, and Chair Elect, Deputy Chair George Pampacos, we built, and continue to drive, MS Australia's strategic direction.

Being the Chair of MS Australia has been both an honour and a privilege.

I wish to thank the many researchers, community members, advocates and government officials who have assisted me and ensured the Board and MS Australia are recognised, not only nationally, but internationally as well; as a leader in MS research as well as assertive and effective advocacy for improved and more sustainable services for people living with MS.

Thank you as well to the MS Australia members and those respective member Boards who have played such an important role in securing MSA's leadership role and consumer focused vision.

My thanks to The MSA Executive and in particular Rohan Greenland, who as the inaugural CEO of the consolidated MSA created a shared vision between the Board and staff, and who has always demonstrated not only a high level of professionalism and commitment to the MSA Vision but a level of energy that is reflected in the breadth and depth of MSA's success.

I wish to thank the MS Australia Board members past and present and make special mention of the Board

members who supported the necessary MS Australia/MS Research Australia reforms; in particular Deputy Chair, George Pampacos, who has not only provided enormous support, advice and courage, but who in addition to his counsel, has become a dear lifelong friend.

Together, George and the Board share with me, not only the vision, but also a deep passion, personal commitment and depth of experience.

Under the Chair Elect's leadership, MS Australia remains perfectly positioned to deliver against our mission to accelerate Australian MS research toward the prevention, better treatments and a cure for MS.

In closing, I want to express and extend my sincere appreciation and thanks to the entire team at MS Australia and the wider MS community for welcoming me and allowing me the privilege to contribute to this cause, and to give back to a community I have been so proud and thankful to serve.



**Associate Professor
Des Graham**
Chair, MS Australia

PROMISING NEW TREATMENT IN THE PIPELINE FOR REMYELINATION IN MS

In MS, the protective coating of nerve cells, known as myelin, is damaged. While the body can naturally repair some of this damage through a process called remyelination, this ability diminishes over time.

Current treatments primarily modify the immune system, which can help to manage symptoms and slow disease progression. However, they don't effectively enhance the body's repair mechanisms.

Recognising this gap, the researchers focused on finding ways to boost remyelination. They identified the M1 muscarinic acetylcholine receptor (M1R), a special type of brain receptor involved in communication between nerve cells, as a potential obstacle in the myelin repair process.

By targeting and blocking this receptor, they hoped to promote better healing of the damaged nerve coverings in individuals with MS.

What Did the Researchers Do?

The researchers developed a highly selective small molecule called PIPE-307, designed to specifically block the M1R receptor in the brain. They conducted a series of laboratory experiments to test the effectiveness of PIPE-307. This included examining human brain tissue from people with MS, and using laboratory models that mimic the disease.

Their goal was to determine if inhibiting M1R could enhance the remyelination process. The researchers also used an innovative method by attaching a special fluorescent marker to a peptide that binds to the M1R receptor, which allowed them to accurately identify the location of the M1R receptor in the brain, helping them to better understand its role in myelin repair.

What Did the Researchers Find?

The study, published in PNAS, revealed that PIPE-307 effectively blocked the M1R receptor, leading to improved myelin repair. When tested in models of MS, PIPE-307 significantly reduced disease severity.

These positive results were confirmed through physical ability tests, detailed examinations of brain tissue, and nerve function. Furthermore, the study highlighted that PIPE-307 was well-tolerated in a human Phase I trial (a study that tests the safety and dosage of a new treatment), and found no negative effects on cognitive function at doses that occupied a large number of target sites reached high in the brain.

These results suggest that PIPE-307 not only promotes the growth of new myelin but also holds promise for restoring nerve function that can be impaired in MS.

What Does This Mean for People with MS?

These findings offer a hopeful avenue for MS treatment by highlighting a method to enhance the body's natural repair mechanisms.

Such treatments would aim not just to manage symptoms but also to actively repair nerve damage, potentially improving quality of life and slowing disease progression for those living with MS.

PIPE-307 will not be developed as a stand-alone treatment for relapsing-remitting MS. Instead, it will be used alongside immunomodulatory disease-modifying therapies (DMTs). Together, they could work to prevent relapses and further damage, whilst also repairing the areas already affected by demyelination.

A Phase II, randomised, double-blind study of PIPE-307 is currently underway with the results expected towards the end of 2025.



EXPLORING REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) AS A POTENTIAL TREATMENT FOR MS

Repetitive transcranial magnetic stimulation (rTMS) is a non-invasive procedure that uses magnetic pulses to stimulate oligodendrocytes; a type of cell in the brain. In laboratory models, this procedure has shown promise in increasing the number of new oligodendrocytes that can repair the nerve damage observed in MS.

A recent study, published in the Multiple Sclerosis Journal (Experimental, Translational, and Clinical), aimed to determine if rTMS is safe and well-tolerated for people with MS. It also looked at how feasible the treatment is, how well participants could be kept unaware of whether they were receiving real or sham (pretend) treatment, and whether there were any changes in brain scans (MRI), self-reported symptoms, and cognitive or motor abilities.

What Did the Researchers Do?

Researchers funded by MS Australia conducted a small trial with 20 participants with MS. The participants were randomly assigned to receive either real rTMS (13 people) or a sham version of the treatment (7 people). Over 4-5 weeks, each participant underwent 20 sessions of rTMS, with each session involving 600 magnetic pulses to each side of the brain. The primary goal of the study was to evaluate the safety and tolerability of rTMS, with clinical outcomes being a secondary focus.

What Did the Researchers Find?

Around 85% of participants completed the sessions as planned, indicating good compliance. No significant changes were observed in MRI brain scans, self-reported symptoms, or cognitive and motor abilities during the study period. The study found that five participants experienced adverse events, including one serious event, but none of these were related to the rTMS treatment.

What Does This Mean for People with MS?

The findings suggest that rTMS is a safe and well-tolerated treatment option for people with MS. Although this study did not show improvements in brain scans, symptoms, or cognitive and motor abilities, it did demonstrate that rTMS can be administered successfully and safely. The high compliance also indicated that this procedure is feasible for people with MS to adhere to. This study marks an important first step in exploring new treatment options for MS.

As the research continues, we hope to see more definitive evidence on the effectiveness of rTMS in promoting brain repair and improving symptoms for people living with MS.

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THE UNIVERSITY OF
SYDNEY

Brain and
Mind Centre

SYD • 29.11.2024

PREVENT • DETECT • MANAGE

MS Australia's inaugural research symposium, held in partnership with The University of Sydney's Brain and Mind Centre, will be dedicated to advancing our collective commitment to the Pathways to Cures research strategy to accelerate cures for MS.

The Pathways to Cures strategy focuses on primary prevention to stop MS before it starts by reducing exposure to risk factors and secondary prevention to detect MS early, aiming to delay or halt its progression.

Alongside this, we will explore tertiary prevention encompassing symptom management for enhancing the lives of those living with MS.

Join us for a day of insightful presentations, engaging discussions, and networking opportunities with leading experts in MS research.

REGISTER



29 November 2024, 9am-4pm

Susan Wakil Health Building, The University of Sydney

Registration: FREE



**THE
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MEET THE RESEARCHER

DR XIN LIN

MENZIES INSTITUTE FOR MEDICAL RESEARCH
THE UNIVERSITY OF TASMANIA



TELL US AN INTERESTING FACT ABOUT YOURSELF?

I enjoy being outdoors, and I love to draw in my spare time.

WHAT INSPIRED YOU TO GET INVOLVED IN MS RESEARCH?

The lived experiences of people affected by MS have drawn me to MS research, and I want to make a difference by applying my research skills to facilitate better treatment and management strategies for MS.

WHAT DO YOU THINK HAS BEEN THE MOST EXCITING DEVELOPMENT IN MS RESEARCH?

I am excited about the discovery of genetic risk factors for MS and our progress in understanding how they might contribute to MS through different biological mechanisms.

TELL US ABOUT YOUR CURRENT RESEARCH PROJECT

My research is focused on finding biological markers of MS for better diagnosis and treatment. The grant will support a pilot study in which my team and I are measuring and evaluating thousands of proteins as potential

biological markers of MS. This could help identify new targets for MS diagnostic and therapeutic innovations.

WHY IS YOUR RESEARCH IMPORTANT AND HOW WILL IT INFLUENCE THE UNDERSTANDING AND TREATMENT OF MS?

Outputs from this work could help identify novel markers of disease (known as biomarkers) as targets for translational research and clinical trials, which may contribute to developing better diagnostics to detect MS earlier as well as increasing precision in disease monitoring and treatments for MS.

WHAT DO YOU ENJOY MOST ABOUT WORKING IN THE LAB AND WHAT ARE SOME OF THE CHALLENGES YOU FACE?

Research can be challenging in that it takes patience and resilience to make a breakthrough discovery. However, I do enjoy the challenge and the problem-solving aspect of research, and working with brilliant colleagues and collaborators who share the same passion for research.



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