

Media Release

Macular Disease Foundation Australia awards \$600,000 in research grants

This World Sight Day (12 October), Macular Disease Foundation Australia will announce its fourth round of funding to the Australian macular degeneration research community. The latest round of funding will bring the Foundation's total commitment to \$3.6 million in research grants since our program was launched in 2011.

The Foundation's Research Grant Program funds some of Australia's leading research into age-related macular degeneration (AMD). The ultimate goal of the investment is to reduce the incidence and impact of the disease, which is Australia's leading cause of low vision and blindness.

"Our latest round of grants are supporting exciting and innovative projects that will contribute to the body of evidence produced by Australian research to support the macular disease community", said Macular Disease Foundation Australia CEO, Julie Heraghty.

"The Foundation is investing in the possibility of developing a new model for testing dry AMD utilising human retinal cells derived from stem cells. We're continuing funding into disease causation in the hope of developing a diagnostic blood test that will identify those at greatest risk for disease progression and a possible new avenue for treatment of dry AMD. And, for the first time, we are funding genetic work into the rare macular degeneration condition of Stargardt's disease that affects younger Australians."

Highlighting the need for macular degeneration to be a national funding priority for research investment, Heraghty has kicked started the pledge to discover a cure. "The Foundation has a target of raising \$10 million in ten years to invest in macular degeneration research. We are only a third of the way towards achieving this target. Research is a journey of discovery, with the ultimate destination being a place where we can save sight. We all understand that research costs a lot of money and the journey is slow, but the consequence of not investing is the loss of vision for too many Australians".

Over 1.2 million people have evidence of this disease with thousands of older Australians having lost vision. Macular degeneration affects central vision and impacts the ability to drive, to read, to see the faces of those you love. The emotional, social and financial cost of this disease on the individual, their family, carers and government is enormous.

The Australian Government has outlined its investment into medical research in the Research Future Fund. Given the high prevalence of this disease, Macular Disease Foundation Australia wants to see Age-related macular degeneration elevated to priority level for research funding. It is essential that Australian researchers have access to the funds needed to find better diagnostics, prevention and one day, a cure for this disease that affects so many older Australians.

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Grant recipient details

Research recipient	Research project summary
<p>Associate Professor Alice Pébay Centre for Eye Research Australia, Melbourne</p>	<p>Project title: Modelling geographic atrophy using human pluripotent stem cells</p> <p>This project aims to better understand the mechanisms causing dry AMD by developing a laboratory model using human retinal cells produced from induced pluripotent stem cells from 150 people with dry AMD, and comparing these to retinal cells produced from people without dry AMD. The cells from AMD patients will include a wide range of the genetic variations that have been linked to an increased risk of disease. It is hoped that this approach will help us to better understand the processes that cause disease and identify relevant new targets for treatments in a way that has not been possible with the inadequate animal models used to date.</p>
<p>Professor Erica Fletcher The University of Melbourne</p>	<p>Project title: Targeting monocyte phagocytosis to reduce progression of age-related macular degeneration</p> <p>This project builds on Prof Fletcher's previous research funded by the Foundation which showed that the failure of certain immune cells (monocytes) to remove the accumulation of waste products (drusen) under the retina in a process called phagocytosis may be a major contributor to the development of early and dry AMD.</p> <p>Professor Fletcher will firstly examine whether measuring the phagocytic function of these cells can be used as a diagnostic blood test to identify people at greatest risk of disease progression. Secondly, she will test a number of new proteins to see if they can improve the ability of monocytes to remove the waste products, as potential treatments to slow or stop disease development.</p>
<p>Dr Fred Chen Lions Eye Institute The University of Western Australia</p>	<p>Project title: Stargardt macular degeneration: finding new genetic mutations and preparing patients for clinical trials</p> <p>Stargardt's disease is a form of macular degeneration that occurs in children and young adults, which is caused by many different mutations of a specific gene. Although less common than AMD, it has a profound, lifetime impact on the person and their family. There is a need to improve the speed and accuracy of genetic diagnosis within Australia and to identify a group of people who will be suitable to participate in clinical trials of new treatments that are in late stage development.</p> <p>This grant will provide initial funding to investigate the varied presentation and natural history of Stargardt's in Australia, to help early diagnosis, as well as develop techniques and infrastructure to discover mechanisms of new mutations in the Stargardt's gene.</p>

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Macular Disease Foundation Australia Research Grants Program

The Macular Disease Foundation Australia Research Grants Program was launched in 2011 to fulfil the Foundation's objective to support research to reduce the incidence and impact of macular degeneration and ultimately to find a cure for this chronic disease. Since the program launch, over \$3.6million has been committed to world leading Australian researchers.

The Foundation's grants and fellowships make significant contributions to Australian medical, psychosocial and nutritional research into macular degeneration. They are awarded following rigorous evaluation, based largely on the National Health and Medical Research Council (NHMRC) process, along with international peer review, to ensure that the successful applicants meet the highest standards.

About macular degeneration

Macular degeneration is the leading cause of blindness and severe vision loss in Australia. All Australians over the age of 50 years should have an eye test and make sure their macula is checked. The macula is the central part of the retina, the light-sensitive tissue at the back of the eye. The macula processes all central visual images, allows a person to drive, see colours clearly, read and recognise faces. Macular degeneration causes damage to the macula, resulting in central vision loss.

Costs of vision loss in Australia - Social and Emotional Impact

Research has shown that the impact of vision loss due to AMD on a patient's quality of life and psychological well-being is comparable to that of cancer or coronary heart disease, increasing the risk of depression and suicide⁵. People with vision loss are more likely to suffer from social isolation and are three times more likely to experience depression compared to the general population; however studies have shown that the inclusion of low vision care services helps to reduce the negative impact of the AMD diagnosis.

Economic cost of AMD

In 2010, the total cost of vision loss associated with age-related macular degeneration was estimated to be \$5.15 billion. The largest proportion (85%) of the economic cost results from the loss of quality of life associated with visual impairment.

About the Macular Disease Foundation Australia

Macular Disease Foundation Australia's vision is to reduce the incidence and impact of macular disease in Australia through education, awareness, research, support services and representation.

The Foundation is a national charity providing information, guidance and support on prevention, early detection, treatment and rehabilitation. The Foundation is the voice of the macular disease community, building healthy communities through the development of effective public policy, a sound knowledge base and strong relationships and partnerships. The Foundation's work encompasses macular degeneration, diabetic retinopathy, retinal vein occlusions and a range of other macular diseases.

For more information contact the Macular Disease Foundation Australia on 1800 111 709 or visit www.mdfoundation.com.au