

EYECURE.

NEWS FROM THE QUEENSLAND EYE INSTITUTE FOUNDATION
ISSUE 14 | MARCH 2021

WELCOME

Welcome to Eyecure, the biannual newsletter of the Queensland Eye Institute Foundation.

In this issue, you can read about upcoming clinical trials, a research project involving silk cocoons, a collaboration to produce a rare eye cancer registry and much more!

We would also like to take this opportunity to introduce you to the QEIF Board and provide an update on how we are helping to prevent the spread of COVID-19 in our facilities.

Thank you for your ongoing support, Mark Radford, CEO.



 **The QEIF Board**
Read more on page 2

INVESTIGATING NEW ANTIOXIDANTS FOR VISION RESTORATION

Could silk cocoons be the key to restoring lost sight? QEI scientists have been researching the role of proteins found in silk cocoons in slowing or stopping damaging oxidative stress in the eye. This research has the potential to be life changing for those affected by major degenerative eye diseases such as age-related macular degeneration (AMD), glaucoma and diabetic retinopathy.

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ALL ABOUT GLAUCOMA

This year, March 7 to 13 is World Glaucoma Week- an awareness initiative by the World Glaucoma Association (WGA). QEI Clinic's Dr Mark Chiang recently answered some commonly asked questions on glaucoma. Read all about the risk factors, treatment options and more.

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MEET OUR BOARD

Since its establishment in 1965, the QEIF Board of Directors has played a very important role in overseeing the governance of the Foundation, and its strategic and operational activities. Today, the Board brings together a diverse group of respected leaders, with significant experience in health, medicine, business, finance and law. Each director provides a specific skill set and unique perspective, which combined, allows the Foundation to fulfil its purpose of saving sight and eliminating preventable blindness.



MARK SHERIDAN: Chairman

"I joined a Board that had big aspirations, but limited resources. Since then, we have built a fantastic network of researchers, educators, clinicians, nursing staff, and administrators. We have maintained state of the art research and clinical premises. This all ultimately has resulted in better outcomes for thousands of patients. And the future? The belief that we can prevent blindness, and improve lives and the community, draws us forward to do more together."



PROFESSOR MARK RADFORD: CEO and Executive Director

"I have been the CEO and Executive Director of QEIF since 2010 and am extremely proud of our progress towards saving sight over the years. With about 80% of blindness being preventable QEIF plays an important role in the health of our community, a role in which we can make a difference. Our purpose is simple - to save sight. It is something that all our staff, whether they be clinicians, researchers, or support staff, work tirelessly towards."



JEMMA ELDER: Director

"Unfortunately, more than 450,000 Australians live without sight or with impaired vision- this is something we can change. I am privileged to be involved with a foundation that strives to deliver excellence and innovation. The 2019 Last Seen Exhibition to Save Sight was a highlight for me and I am looking forward to helping deliver the exhibition again in the near future. For more details: lastseen.com.au"



JOHN LOWES: Director

"My association with the Queensland Eye Institute Foundation goes back over 20 years. Professor Lawrie Hirst's enthusiasm for the body- then known as Prevent Blindness Foundation- was infectious! I have two nephews who each have significant but completely unrelated vision issues, so I am only too happy to give back in some way to a not for profit organization that strives 110% for its mission - research, education and clinical care."



MARIO PENNISI, AM: Director

"I see a future where diagnosis and treatment of eye disease will be done in new ways, using cutting edge technologies that we haven't even been able to imagine yet- importantly, it will be a future that QEIF's investment in research will be integral to. COVID-19 tested everyone! Although not easy, we were able to be flexible and approached the challenge with a determination to ensure that the well-being of the team and of the patients we care for, was always at the forefront of the way we delivered our services."

If you would like to read more about the QEIF Board, please head to our website:



qei.org.au/qei-foundation/our-people/our-board

NEW CLINICAL TRIALS

The QEI Clinical Trials team have been busy preparing for this year's upcoming studies. One of the new trials aims to determine the safety and efficacy of an oral treatment for Retinitis Pigmentosa (RP) associated with Usher Syndrome. Current treatment options for RP are extremely limited, so if this trial is successful, it has potential to change the way the condition is managed in select patients.

Another trial will investigate a new treatment for evaporative dry eye disease- an extremely common condition, particularly for those in the older demographics or those with existing eye conditions. In a majority of patients, evaporative dry eye is a result of dysfunctional meibomian glands. The condition



QEI Clinical Trials Coordinators Brett Caldwell (left) and Bojana Djokovic (right)

can be extremely uncomfortable and discovering a safe and effective new treatment option is very important. The QEI Clinical Trials team will aim to evaluate the safety and tolerability of an ointment in patients with meibomian gland dysfunction and evaporative dry eye disease.

Clinical Trials Coordinators Bojana Djokovic and Brett Caldwell will this year be working with various QEI Clinic ophthalmologists on investigating these proposed treatment options. If you would like to read more on clinical trials at QEI, please see our website.



COVID-19 UPDATE

For many of us, it might be hard to remember what life was like before COVID-19 turned the world upside down! From temporary lockdowns to virtual events and adopting masks as a part of our daily wardrobes- the past year has been full of changes. We'd like to take this chance to give our patients and supporters an update on how the QEI Clinics are taking steps to prevent the spread of the pandemic in our community.

In accordance with Queensland Health guidelines, we are continuing to temperature test all visitors to the building- made easier with our new contact free machines. For contact tracing purposes, all visitors are asked to sign in using a QR code or with the help of our friendly front desk team. Waiting areas, elevators and other common spaces are regularly being sanitized throughout the day. Our management team are closely following current government guidelines and adapting swiftly to any changes, in order to keep our patients and staff safe.

Thank you to all patients, carers and visitors for working with us to combat the spread of COVID-19.

COULD SILK COCOONS HELP TO RESTORE LOST SIGHT?

QEI researchers are currently investigating the role of a protein called sericin (taken from silk cocoons), as an antioxidant agent to hinder the harmful activity of unstable molecules in the eye.

QEI Chief Scientist Professor Traian Chirila, Senior Research Officer Dr Shuko Suzuki and Research Assistant Dr Onur Sakiragaoglu are a part of the first team of researchers to assess and report on the biological and clinical responses of various cells of the eye to the two proteins that make up the silk thread (fibroin and sericin). After much investigation, the researchers demonstrated that sericin is a more effective surface for the growth of the corneal and retinal cells.



Free radicals are unstable molecules that are extremely reactive and have the ability to chemically damage other molecules in the body. They are produced during the normal metabolism of cells in our body, however can be generated in excess due to exposure to harmful factors or when the body is suffering from disease.

A balance between free radicals and antioxidants is essential for a normal, healthy life. When the balance is disrupted, a condition called "oxidative stress" occurs, and the body can no longer control the damaging effects of the free radicals. Oxidative stress and the presence of free radical molecules have been associated with major degenerative eye diseases such as age-related macular degeneration (AMD), glaucoma and diabetic retinopathy.

AMD is one of the leading causes of blindness in the developed world. In Australia alone, one in seven people over the age of 50 show signs of early macular degeneration. Current treatments

are aimed at slowing vision loss. However, there is no treatment available to reverse the toxic effects caused by oxidative stress on the retina and photoreceptor cells, and no current treatments are able to restore their function. Retinal cell transplants have thus far proven to be of limited value to patients, as the healthy cells are eventually exposed to the same high levels of oxidative stress once they are transplanted.



QEIF researchers discovered that solutions of sericin isolated from silk cocoons and added to cells grown in the laboratory had a significant antioxidative effect.

With this evidence, the QEIF research team are able to continue investigations using sericin produced by a mutant silkworm, created by Japanese scientists. The mutant silkworm produces cocoons that contain only sericin, which means no extraction or purification steps are needed.

Currently, work is in progress to further monitor and assess the antioxidative effect of these membranes on the growth of retinal photoreceptor cells.



WORLD FIRST INTERNATIONAL EYE LYMPHOMA REGISTRY

Did you know that all profits from QEIF's partner organisation, the South Bank Day Hospital (SBDH) are invested directly into our research to save sight? Whilst a significant amount of this research is conducted in the South Brisbane facilities, QEIF also invests in external research partnerships that aim to improve understanding and best treatments for various eye diseases and conditions.

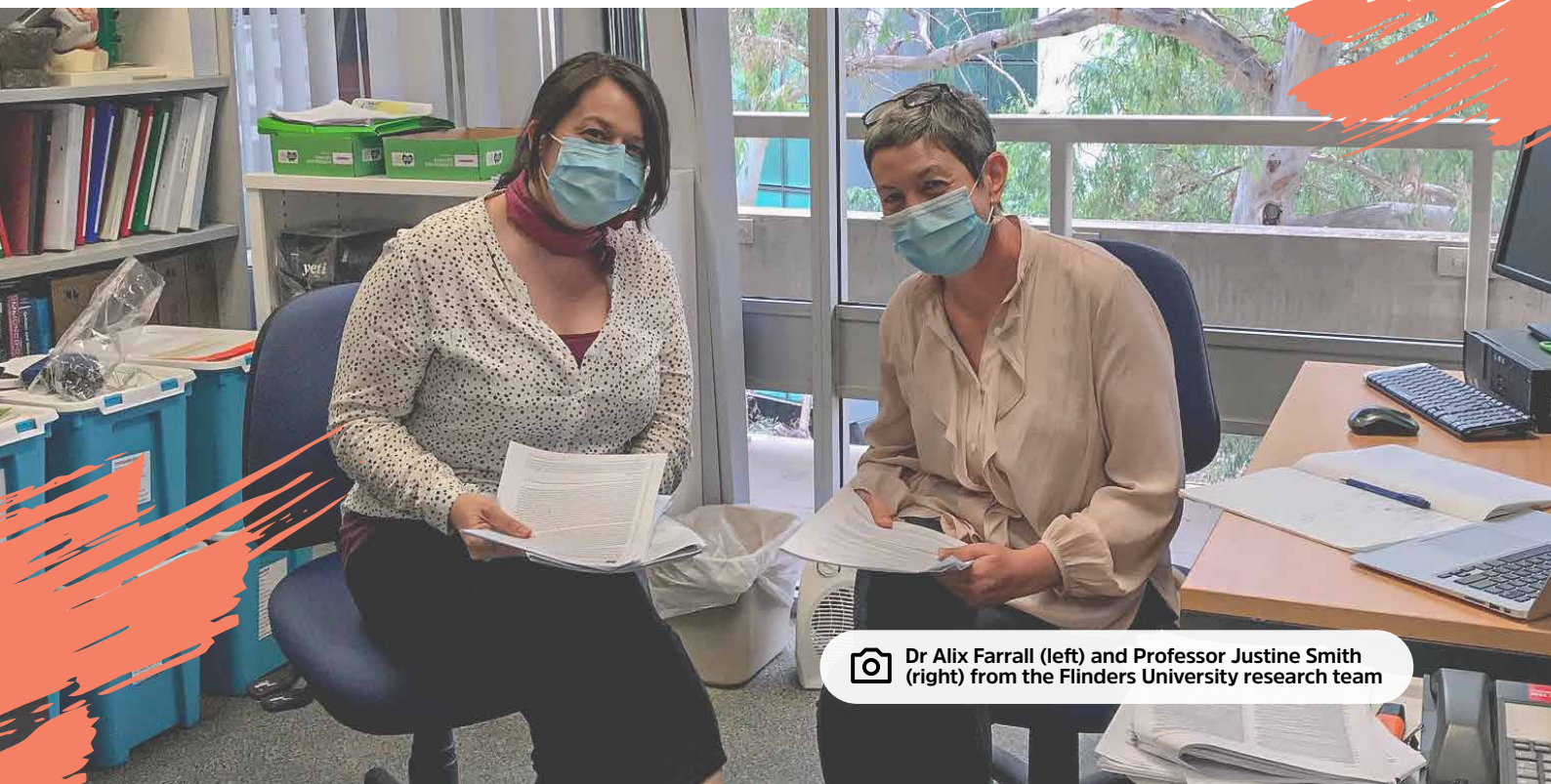
Recently, a partnership was established between the Flinders University research team led by Professor Justine Smith and QEIF CEO Professor Mark Radford to create a registry for an unusual eye cancer. Funding for the project has been made possible by financial support from SBDH and an Innovation Connections Grant funded by the Department of Industry, Science, Energy and Resources. This will be the first international registry aimed at better understanding the effectiveness of various treatments for lymphoma inside the eye.

Lymphoma is a blood cancer. Rarely this cancer can occur inside the eye, involving the retina and other tissues at the back of the eye that are critical for vision. "Lymphoma of the eye causes distressing symptoms, including loss of vision and severe floaters. Sadly, the largest problem for almost all patients is that this cancer

usually progresses to involve the brain." says Professor Smith. Currently, treatments include chemotherapy, radiotherapy and even bone marrow transplantation. Once the brain is affected, most patients cannot be cured with today's treatments. The latest data from the Australian Cancer Database tells us that only one-third of patients with lymphoma of the eye live for five years once the cancer spreads to the brain.

Unfortunately it is not possible to run clinical trials to identify the best treatments, as lymphoma of the eye is rare (roughly one case per million Australians). In this situation, an alternative approach to collecting medical information and improving treatments is a registry. This involves entering information about the cancer into a secure database. The information can then be used to perform statistical testing to show general trends in outcomes of different treatments. Unlike clinical trials, the registry approach also provides information about medical practice in the real world.

It is hoped that the registry will assist doctors and researchers to better understand the most effective treatments for lymphoma of the eye and provide better outcomes for patients.



 Dr Alix Farrall (left) and Professor Justine Smith (right) from the Flinders University research team

ALL ABOUT GLAUCOMA WITH DR MARK CHIANG



This year, World Glaucoma Week runs from March 7 to 13. In recognition of this awareness initiative, QEI Clinic's Dr Mark Chiang has answered some commonly asked questions about the disease that affects approximately 78 million people globally[^]. Dr Chiang is an experienced specialist in glaucoma, cataracts and diseases of the retina. Outside of his clinical practice, Dr Chiang is actively involved in glaucoma research as a member of the Childhood Glaucoma Research Network and the international Lindberg Society.

How does glaucoma affect vision?

Glaucoma affects vision by causing irreversible damage to the optic nerve, the cable linking the eye to the brain. This damage is usually related to elevated intraocular pressure (IOP). However, people can have high pressure without glaucoma (ocular hypertension), or normal eye pressure but with glaucoma (normal tension glaucoma).

Glaucoma generally affects the peripheral field of vision initially so there are minimal symptoms. With progressive damage, the field loss becomes more extensive and ultimately affects the central vision, leading to irreversible blindness.

Who is most at risk of developing glaucoma?

Other than elevated IOP, the risk of glaucoma increases with age—especially for those over 50. Those with a family history of glaucoma are also at higher risk, even more so when a first-degree relative has been diagnosed. There are other more specific risk factors which may increase the risk towards certain types of glaucoma. Some of these may include long sightedness (hyperopia), short sightedness (myopia), ethnicity such as Asian or African and previous eye trauma.

How is glaucoma treated?

Generally speaking, glaucoma is treated in a stepwise manner. Patients usually start either with drops or laser treatment (Selective Laser Trabeculoplasty – SLT). If the glaucoma is still inadequately controlled, additional drops or SLT may be added.

Surgical treatment usually comes after failure of topical treatment (drops) or laser. There are two major categories – traditional incisional surgery and the more modern micro-invasive glaucoma surgery (MIGS or stents as commonly referred to in Australia). Both types

of surgeries have their place in the treatment ladder with unique pros and cons, and is very much patient dependent. Just like many other fields in medicine, glaucoma treatment should be individualised and tailored to each patient.

Do you have any advice for those who have been recently diagnosed with glaucoma?

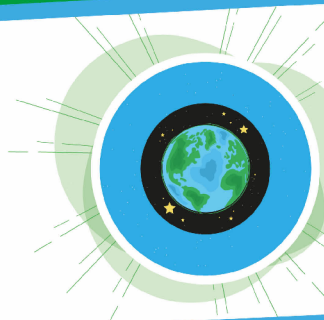
Being told you have glaucoma can be overwhelming. I often get asked “Am I going to go blind?” or “How long do I have?”

Even though inadequately treated or untreated glaucoma can lead to irreversible blindness, the majority of glaucoma patients go on with good vision and continue to enjoy their lives with no or minimal limitation. It's also advisable to obtain information from reliable sources because there are many inaccurate facts on the internet. A good place to start would be Glaucoma Australia (www.glaucoma.org.au) who have a vast amount of information and can point patients to various support groups. Even more important, please discuss your concerns and questions with your ophthalmologist!

[^] Source: World Glaucoma Association (WGA), 2021



World Glaucoma Week
March 7 - 13, 2021



**THE WORLD
IS BRIGHT,
SAVE YOUR
SIGHT**



 Oscar recently presented the proceeds from his art sales to QEIF CEO Professor Mark Radford.



ART FOR A CAUSE

Our youngest QEIF Ambassador, Oscar Eckersley has been busy in the studio, painting and drawing to save sight! Oscar became a patient of QEI Clinic's Dr Mark Chiang after being diagnosed with congenital glaucoma at an early age- enduring over 15 surgeries by the time he turned five.

More recently, Oscar was told he could not swim over the Christmas holidays, for fears he could hurt his eye and worsen his condition. Instead of letting

this bring him down, Oscar decided to use his free time to pursue his passion for art. With the help of his Mum, Melissa, Oscar has sold a number of his incredible artworks and donated a portion of the proceeds to QEIF. A huge thank you to Oscar and everyone who purchased a painting! Check out his Facebook page 'Oscar's Art' if you would like to secure an original artwork of your own!

THANK YOU FOR SUPPORTING THE QEIF CHRISTMAS APPEAL

The 2020 Christmas Appeal featured the story of Abigail Dawit, a 34 year old PhD student and patient of QEI Clinic's Dr Mark Chiang. Abigail has battled with vision impairment since she was a young child. For Abigail, what began as a retinal detachment has resulted in cataracts, a dislocated lens, dry eye and worst of all, glaucoma.

Vision loss has impacted almost every aspect of Abigail's life, despite her young age and promising career in plant biology. However, advances in research and modern medicine give Abigail hope for future treatments and cures for vision loss;

"I sometimes think that if better treatment options had been available when I was younger, I wouldn't have these issues now... This is why research is so important to help the next generation of those affected by eye disease."

Thank you for supporting QEIF's research to save sight by reading Abigail's story and donating to our Christmas Appeal.

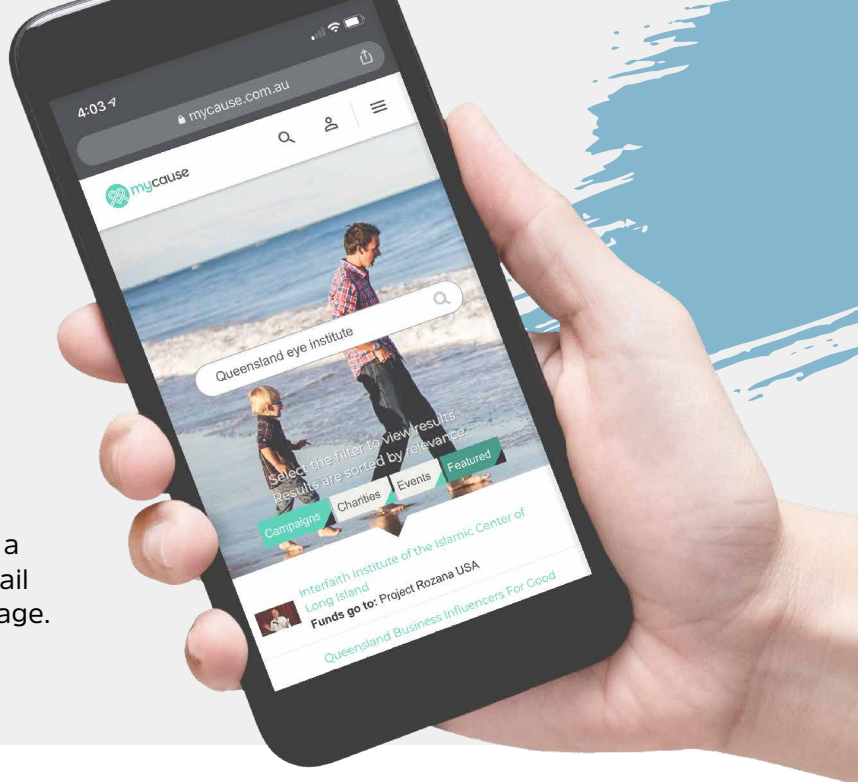


CREATE YOUR OWN FUNDRAISER

Do you have a special birthday or occasion coming up? It is now easier than ever to create your very own fundraiser for QEIF's research to save sight!

Simply visit **mycause.com.au** and search for "Queensland Eye Institute Foundation" and you can create your own fundraising page.

All donations are tax deductible and go towards a great cause. Let our team know via phone or email if you require any assistance in setting up your page.



Your donation is gratefully appreciated. Help us save money by donating online. Visit qei.org.au or call 07 3239 5050.

Your donation today will help the QEI Foundation save sight through its research, education and clinical care.

Yes, I want to help the QEI Foundation.

Enclosed is my donation of: \$15 \$25 \$50 Own choice (please specify amount):

Please find enclosed a: cheque money order (made payable to Queensland Eye Institute Foundation).

Please debit my card: Visa Mastercard Amex

Card Number: Expiry: /

Name on card:

Signature:

Please send me information on leaving a gift in my will

I intend on leaving a gift to the QEI Foundation in my will

Please send me information on joining 'SightFund', QEI's monthly giving program

Please send me information on joining QEI's Workplace Giving Program for immediate pre-tax donations via payroll

Thank you! Your gift of \$2 or more is tax deductible. Please complete this form and return it in the reply paid envelope. Please help us keep our records up to date by making any changes below:

Phone: Mobile: Email:

I would prefer to receive all future updates and campaigns from the QEI Foundation via email

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