



World Sight Day

Glaucoma Australia to fund promising vitamin B3 trial



Glaucoma Australia and its Patron, the Governor-General of Australia, His Excellency the Honourable David Hurley, are delighted to announce the 2020 recipient of the 'Quinlivan' Research Grants Program. This year's glaucoma research grant is awarded to Dr Flora Hui, Research Fellow at the Centre for Eye Research Australia (CERA).

In a world-first clinical trial led by the Centre for Eye Research Australia (CERA) and supported by Glaucoma Australia, Dr Flora Hui

will investigate whether daily doses of vitamin B3 (nicotinamide) could provide long-term protection against nerve cell damage and prevent blindness in glaucoma.

Dr Flora Hui led the earlier study that was first to show that vitamin B3 led to early and significant improvements in visual function in people with glaucoma. Now, in partnership with Glaucoma Australia and international researchers, Dr Flora Hui and Professor Keith Martin will conduct a 2-year study to

From the CEO



Dear friends and supporters,

I hope you have been keeping well over the winter months and ready to actively enjoy this beautiful spring weather.

September has been an exciting month for Glaucoma Australia as we have just launched our new website! I am delighted by the ease of its navigation and the quality of its patient friendly content. Sincere thanks to the collaborative efforts of our generous clinical committees and team for creating this valuable resource for our community. For those who are able, please visit www.glaucoma.org.au and let me know your feedback.

We were thrilled to receive 10 strong applications for our 2020–2021 Quinlivan Research Grant in areas including genetics, vitamins, AI, virtual reality and wound healing. We are delighted that His Excellency the Governor General will be announcing this year's recipients on World Sight Day (8 October). Thank you for the ongoing support many of you give to this sight saving initiative. You bring hope to so many.

While we have taken most of our support groups online during COVID19, it's wonderful to see our Perth Support Group will hold its first face to face meeting in November – see page 10 for details. Please reach out to Glaucoma Australia if you need more education, information or support at this time, we are here to help.

Finally, I encourage those of you who may have missed any eye appointments during the pandemic to reach out to your Ophthalmologist, Optometrist and Pharmacist and re-establish routines which will give you confidence in your eye health.

Annie Gibbins
CEO

Volunteer Profile

Madeleine Jones

Maddie is a therapeutically endorsed optometrist working in regional Victoria. We recently asked her why volunteering for Glaucoma Australia is important to her.



“Having diagnosed glaucoma first-hand, I can appreciate how overwhelming it can be to be told you have glaucoma. One of the many aspects I enjoy about volunteering for Glaucoma Australia is hearing and answering all the wonderful questions that our community have about their eyes.”

“Glaucoma Australia plays a pivotal role in ensuring individuals are empowered to make informed choices about their eye health. I hope the support and wealth of information offered by them will enhance the experiences of glaucoma sufferers and lessen glaucoma related visual loss in Australia.”

Maddie has contributed to GA by creating and editing informative videos that explore several aspects of glaucoma treatment. She also assists with support calls and follow up calls to patients, with the former aimed at educating patients with understanding their diagnosis; and the latter discussing the importance of treatment adherence and follow up appointments.

Maddie encourages patients to follow the advice given to them by their eye care health professionals which in turn helps them save their vision from glaucoma.

If you are interested in volunteering for Glaucoma Australia, visit: www.glaucoma.org.au/how-you-can-help/volunteer OR call us on 1800 500 880

Glaucoma Australia to fund promising vitamin B3 trial continued

conclusively determine whether vitamin B3 can delay disease progression and thus be taken by patients on an ongoing basis. Independent of lowering eye pressure, vitamin B3 could be the first treatment that protects nerve cells in glaucoma, changing the way we treat and manage the disease.

Professor Allison McKendrick, Chair of the Glaucoma Australia Independent Research Panel said “The submissions to the ‘Quinlivan’ Research Grant scheme in 2020 were all of very high quality. It was wonderful to see such strong interest from the research community in pursuit of new knowledge designed to improve the lives of those with glaucoma.”

“Over the last 10 - 15 years there has been a shift from looking at the “why” and “how” of glaucoma, which is still important, towards research that is focused on having a direct impact on patient care. There is a lot of interest amongst glaucoma researchers, in medicines that might help protect the optic nerve from eye pressure-related glaucoma damage. Vitamin B3 is an example of this, and certainly there is much research value in exploring its potential benefits and uses,” added Glaucoma Australia President, Associate Professor Simon Skalicky.

Glaucoma Australia will fund \$200,000 over 2 years, to support Dr Hui’s TAMING Glaucoma trial (TARgeting Metabolic INsufficiency in Glaucoma with Nicotinamide) which could lead to the first therapy that promotes retinal ganglion cell health and survival in glaucoma.

Dr Hui explains “many high-risk glaucoma patients do not respond to intraocular pressure (IOP)-lowering treatments and can continue to progress to blindness despite well-controlled IOP. In these patients, retinal ganglion cells are predicted to have increased vulnerability to risk

factors such as mitochondrial dysfunction. Neuroprotective treatments (mechanisms and strategies that aim to protect the nervous system from injury and damage), that directly enhance retinal ganglion cell survival and function, will transform patient management and are of great therapeutic need.”

“Nicotinamide, a form of vitamin B3, has the potential to be a safe and effective complementary therapy to current glaucoma treatments and delay glaucoma progression in the longer term. The trial will involve 150 participants, diagnosed and treated for primary open angle glaucoma and is expected to run for three years” said Glaucoma Australia Research Committee Chair James Christensen.

The Glaucoma Australia ‘Quinlivan’ Research Grants are awarded following rigorous evaluation, based largely on the National Health and Medical Research Council (NHMRC) process, along with peer review, to ensure that the successful applicants meet the highest standards. Submissions are reviewed by the Glaucoma Australia Independent Research Panel consisting of internationally recognised experts in glaucoma research including the fields of Ophthalmology, Optometry and Pharmacy.

Congratulations also goes to the 2019 ‘Quinlivan’ Research Grant recipients Dr George Kong of the Royal Victorian Eye and Ear Hospital, and Professor Jamie Craig of Flinders University who will receive their second year of funding from Glaucoma Australia for the continuation of their respective glaucoma research works.

A heartfelt thank you must go to Glaucoma Australia’s supporters whose ongoing generosity makes glaucoma research projects like these possible. ●

Combined glaucoma and cataract surgery could be successful in treating Primary Angle-Closure Glaucoma



Glaucoma is the leading cause of irreversible blindness worldwide. Intraocular pressure (IOP) control is the most important factor in preventing glaucoma progression. In patients with mild to moderate glaucoma, minimally invasive glaucoma surgery (MIGS) has emerged as a promising new treatment option.

A small medical device inserted into the eye to increase the amount of fluid drainage to lower eye pressures. Research has been conducted to determine if cataract surgery, in combination with glaucoma surgery, could be more successful in lowering eye pressures in people with Primary Angle-Closure Glaucoma than having cataracts surgery alone.

Drainage angles are narrow in Primary Angle-Closure Glaucoma which results in less fluid being able to leave the eye resulting in higher eye pressures. By removing the cataract which widens the drainage angles, and by placing a drainage device in the eye to allow more fluid to leave the eye, a greater reduction in eye pressure can be achieved.

The study concluded, implantation in combination with cataract surgery resulted in significantly higher rates of complete success compared with cataracts surgery alone - with a higher proportion of angle closure eyes not requiring glaucoma medications after the surgery.

In view of the potentially sight-threatening complications, most surgeons are reluctant to perform combined surgeries in patients with medically controlled glaucoma. However, the study showed that combined cataracts surgery and MIGS has a favourable safety profile, and the incidence of complications was comparable with cataracts surgery alone; and no sight-threatening complications were reported. ●

References

Chen D. Z et al. 2020, Phacoemulsification vs phacoemulsification with micro-bypass stent implantation in primary angle closure and primary angle closure glaucoma: A randomized single-masked clinical study, Clinical and Experimental Ophthalmology, Volume 48, Issue 4, pp. 450-461, RANZCO

Effects of caffeine consumption on intraocular pressure during low-intensity endurance exercise

Indisputably, the only proven factor to prevent worsening and treatment of glaucoma is the reduction and stabilisation of intraocular pressure (IOP). Eye care health professionals and patients alike, are focused on determining strategies to reduce IOP levels and minimise fluctuations. The projected number of individuals suffering from glaucoma is 79.6 million worldwide.

Intraocular pressure (IOP) is sensitive to caffeine intake and physical exercise. However, the combined effect of caffeine intake and physical exercise prior to this study was unknown. Previous research has supported the positive effects of low-intensity physical activities (cycling, jogging, and swimming) for the management of glaucoma, since it induces a reduction in IOP values.

Within the field of sports and nutrition, the consumption of caffeine prior to exercise is a long implemented practice to enhance physical and cognitive performance.

This recent study conducted by the University of Granada and published by the Royal Australian and New Zealand College of Ophthalmologists (RANZCO), aimed to assess the effects of caffeine consumption before exercise on the IOP behaviour during low-intensity endurance exercise.

For the research, participants performed 30 minutes of cycling 30 minutes after ingesting 4mg of caffeine. The placebo group did not consume any caffeine. This was done over 2 different days. Eye pressure was measured at baseline (before caffeine/placebo ingestion), after 5 minutes of warm-up, during cycling (6, 12, 18, 24 and 30 minutes) and recovery (5 and 10 minutes) by rebound tonometry.

Participants that ingested caffeine prior to exercise, showed consistent increases in IOP values at 12, 18, 24 and 30 minutes of cycling in comparison to the placebo condition. The



ingestion of caffeine 30 minutes before performing low-intensity endurance exercise showed to counteract the IOP-lowering effect of low-intensity exercise.

It is believed that the study has illustrated conclusive evidence that the intake of caffeine before a low-intensity endurance exercise should be discouraged when the physical activity has been specifically prescribed to reduce a patient's IOP levels.

Overall the consumption of caffeine leads to an acute IOP rise in both those with glaucoma, and healthy populations. Caffeine intake should therefore be limited or avoided by individuals at high risk of glaucoma onset or progression. ●

References

Vera, J, Redondo, B, Bardón, A, Pérez-Castilla, A, García-Ramos, A, Jiménez, R. *Effects of caffeine consumption on intraocular pressure during low-intensity endurance exercise: A placebo-controlled, double-blind, balanced crossover study. Clin Experiment Ophthalmol.* 2020; 48: 602– 609

Driving and glaucoma

Written by Natalia Kelly

The National Transport Commission and Austroads have identified glaucoma as a health condition that can affect our capacity to drive safely. Therefore, it is important to be aware of how glaucoma can influence our ability to remain safe on the road.

Glaucoma can affect our vision and ability to drive in the following ways:

Visual Field Loss

Glaucoma can cause peripheral visual field loss resulting in reduced awareness of objects and people in our side vision. Central vision is often unaffected in the early stages of glaucoma, so our ability to see clearly is unchanged. Initial changes in the visual field are subtle but can be detrimental to our safety on the road.

When small areas of vision disappear, the brain fills in the image to create an inaccurate but believable scene called the “filling-in-effect”

Often, when small areas of vision disappear, the brain fills in the image to create an inaccurate but believable scene in the part of the visual field that is diminished. This is called the “filling-in-effect” (Images 1 & 2).

The filling-in-effect influences our visual perception when driving and impairs our ability

to see hazards on the road such as pedestrians, bike riders, other vehicles, road debris or potholes.

Glaucomatous visual field loss can also enlarge our blind spot when driving and impede our ability to safely merge into traffic or change lanes.

Dark Adaptation

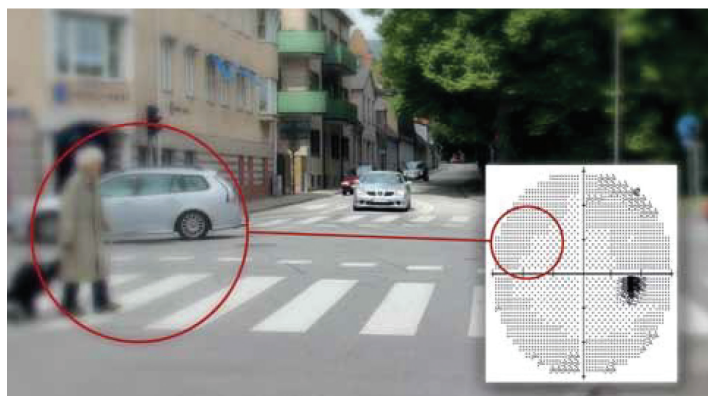
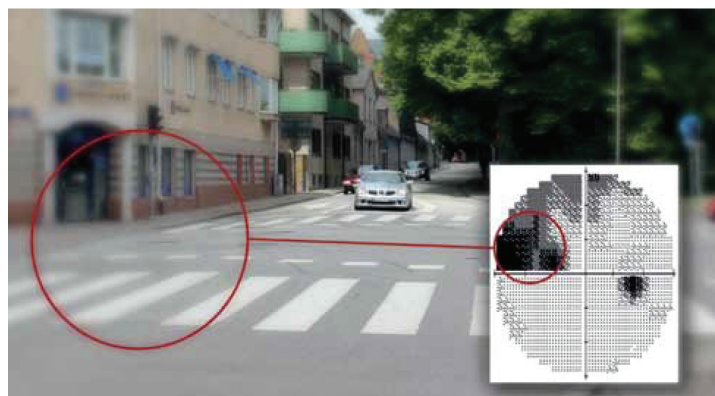
Our visual field plays an important role in being able to adjust to changes in lighting conditions and manage glare. Reduced peripheral vision can hinder our ability to rapidly adapt to dynamic variations in lighting, such as when we are driving through a series of shadows cast on the road.

Difficulty to adapt to dim or dark environments can also impair our ability to manage glare from oncoming traffic at night or judge distances of surrounding cars.

Research has reported that people with glaucoma commonly choose to avoid driving at night or in poor lighting conditions due to difficulty with dark adaptation.

Decrease in Contrast Sensitivity

Contrast is our ability to see how faded an image is before it becomes indistinguishable. Glaucomatous loss can cause subtle and unconscious changes in our contrast vision. Good contrast sensitivity is important to be able to see hazards in poor lighting conditions, in overcast and on rainy days.



Reduced Depth Perception

Depth perception is likely to become affected when there are asymmetrical changes in the eyes. Reduced depth perception can impair our ability to judge distances of moving and stationary hazards. Loss of depth perception can affect our ability to judge the distance of surrounding cars, knowing when to reduce our speed or stop, safely change lanes or merge into traffic.

Drivers with glaucoma can seek advice from their ophthalmologist, general practitioner, orthoptist or optometrist to understand their glaucomatous vision loss and the potential impact on their driving.

Assessing Vision for Driving

When you apply for or renew a licence, you will be required to pass an eyesight test. Licensing requirements vary between states, but generally an eye care practitioner will assess your visual acuity and visual field to establish your fitness to drive.

Each State and Territory licensing authority will review the information reported by an optometrist or ophthalmologist who have assessed vision according to the national fitness to drive standards. ●

References

Image: Heijl, A., Patella, V. M., & Bengtsson, B. (2020). Effective Perimetry (4th ed.) [E-book]. Carl Zeiss Meditec, Inc.

Austroads. (2020). Assessing Fitness to Drive. <https://austroads.com.au/publications/assessing-fitness-to-drive/ap-g56/vision-and-eye-disorders/medical-standards-for-licensing-11>

*Tam, A. L., Trope, G. E., Buys, Y. M., Yang, Y., Shen, C., & Jin, Y. P. (2018). Self-perceived Impact of glaucomatous visual field loss and visual disabilities on driving difficulty and cessation. *Journal of glaucoma*, 27(11), 981-986.*

Education

Glaucoma Australia unveils new website

Glaucoma Australia is proud to launch its newly redesigned website www.glaucoma.org.au. The new site features improved accessibility, a fresh, modern design, streamlined navigation and easy to find information aligned to the Glaucoma Australia patient support journey.

The new comprehensive website brings together content written and reviewed by Glaucoma Australia's ophthalmology, optometry and pharmacy committees which provides patients with a trustworthy and credible source of information to help them understand glaucoma and take an active role in their glaucoma management plan.

"We are thrilled to unveil our new website to the patients whom we support, their families and health care providers," said Annie Gibbins, Glaucoma Australia CEO.

The site also includes information for health professionals including continuing medical education, access to research grants and scholarships and a quick and easy patient referral form at www.glaucoma.org.au/i-treat-glaucoma/refer-a-patient

"Our mission is to prevent sight loss by increasing early detection and improving treatment adherence, so I invite health professionals to refer their patients to Glaucoma Australia for free education and support via the new online referral form," Annie Gibbins added.

Glaucoma Australia's new website will be updated on a regular basis with the latest news, research and lifestyle information for people living with glaucoma. Visitors are encouraged to explore the website and join the Glaucoma Australia community for tailored education and support at www.glaucoma.org.au/get-support ●

Wilma's story



Hello my name is Wilma and I am 90 years old.

I have had glaucoma for 8 years and suffer from sensitive eyes. I am unable to go outside in the bright sunlight, unless I have someone to assist and guide me. I have changed all light globes in my home to LED tubes, as the dull light makes it easier to see.

I have a small amount of distant sight, and use an hourly drop for dry eye; however, I cannot use an eye drop with preservatives. ●

If you wish to share your glaucoma journey go to:
www.glaucoma.org.au/share-your-story
OR email your story and a photo (optional) to glaucoma@glaucoma.org.au

Joy's story

My journey with glaucoma began in 1997. It was my first visit to an ophthalmologist who was in fact taking care of my mother whom had already lost sight in one eye due to glaucoma.

I was surprised to hear that the IOP reading were so high, that I needed laser treatment. My glaucoma was controlled in the following years until 2003 when I required a cataract removal, then in 2005 the other eye needed cataract surgery also.

My doctor performed phacotrabeculectomies at the same time, and now my glaucoma remains controlled. I only use a lubricant four times daily, but no more glaucoma drops are necessary for at this time.

I have one brother with glaucoma who is now coming up to his 90th birthday, and unfortunately he has macular degeneration and has lost his sight in one eye.

I feel very blessed that my glaucoma is under control, thanks to a very clever ophthalmologist. My eye sight is still good, and my eyes are healthy, and I also still drive a vehicle on an unrestricted licence. ●



TRABECULAR NEGOTIATIONS by The Glaucomic Poet

A bleb to enhance filtration? Yes, that would be nice

But could it possibly be done without ocular splice?

I certainly trust you. Don't misunderstand.

I know that you're cautious and have a steady hand,

But my eye is such a sensitive part of my anatomy.

To have my eyeball cut into would so surely shatter me.

There's something about the eye – not sure what it is,

But even a prod would send it into a tizz.

If my eye caught sight of your surgical punch,
It would instruct my stomach to heave up its lunch.

For my eyeball is truly so squeamish, so squirmish,

It refuses to take part in any surgical skirmish.

So I can only agree to this suggested operation
If the route is open to some negotiation.

Could you slide your instruments up through a nostril?

Go in via the spine? You could start at the coxyl.

There must be some body part you could cut into instead?

My inner ear? Brain? Some other part of my head?

Folk often tell me my mouth is quite huge
And able to accommodate a six-seater luge.
I've tested it. It holds two litres of drool.

No doubt it could accommodate the odd optic tool.

You surgeons are nimble. I'm psychologically fluid.

Just don't let my eyeball know it's being skewered!

There must be some more suitable body part?
My arm? My leg? Perhaps my heart?

I offer you my organs on a silver platter

If you'll just circumvent my ocular matter,

For my eyeball is squirming almost out of its socket,

Trying to exit the clinic like a high octane rocket!

My eyes are so precious, oh crikey, oh heck!

Any chance of you putting the bleb into my neck.

You could enter through my liver, my spleen or my kidney,

But not my eye. It just took the last train out of Sydney.

It can barely tolerate a tonometry inspection,
So it's not going to like that Mit C injection.

If you look again in your ophthalmic marginalia,
You might find a route through my genitalia.

It's not that genital surgery is something to be sought,

But when it comes to surgery, it's the second last resort.

I'm trying to have courage but I so doggedly despise

The thought of someone cutting into my poor eyes! ●

Upcoming Events

Perth Glaucoma Support Group Meeting



Topic: Glaucoma and its Impact on other Eye Conditions

Guest Speaker: Dr Jane Khan

Date: Saturday 28th November, 2020

Time: 2:00pm – 4:00pm

Location: Harry Perkins Building: QQ Block, QEII Campus, Nedlands (Behind southern side of Lion Eye Institute).

Paid parking near Perkins Building or Free parking cnr Smyth Road and Verdun Street (on Bowling/Hockey Club grass verge).

Entry: \$5.00 per person, includes afternoon tea and raffle ticket.

RSVP: You can book online here:

www.glaucoma.org.au/events OR

Contact Gaela on 0416 074 415 or email: gaela12@hotmail.com

Please note: Extra precautions and hygiene standards will be put in place, including social distancing.

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- Perth Eye Hospital
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In Memoriam

We acknowledge with gratitude gifts, from family and friends, in loving memory of:

Ms Marjie Moore

Mr Giuseppe Skrezenek

Mr John Manfield

Bequests

The Estate of the late Lily Irene

The Estate of the Late Dr David Douglas

Giving HOPE

A gift in your will can help eliminate glaucoma blindness.

If you would like more information about leaving a gift in your will please contact Glaucoma Australia on 02 9411 7722 or email ceo@glaucoma.org.au

How can we help?

Glaucoma Australia offers FREE education and support to people living with glaucoma.

If you or someone you care for has been diagnosed with glaucoma we recommend you join our community to access free resources, guidance and support.

Join our community online

www.glaucoma.org.au/get-support

Call our free support line

1800 500 880

Contact details

PO Box 420

Crows Nest NSW 1585

Suite 3.02

44 Hampden Road Artarmon 2064

T: 02 9411 7722

T: 1800 500 880 (Freecall)

F: 02 9413 4466

E: glaucoma@glaucoma.org.au

W: www.glaucoma.org.au

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Your Questions Answered

Q&A

with Dr Bronwen Scott Orientation & Mobility Specialist

Bronwen Scott, Ed., COMS; ROMSA, owns and operates Independent Pathways in Melbourne, Victoria. Which provides O&M services for people who have blindness or low vision; including those who also have an acquired brain injury, a cognitive disability, a physical disability, or a learning disability.

Q What is orientation & mobility (O&M)?

A Orientation refers to knowing one's position in relation to other objects, people, and places in one's surroundings. Keeping track of how those positions and relationships change as one moves through the environment.

Being able to answer: Where am I? Where am I going? How am I going to get there?

Mobility is the physical act of moving safely and efficiently from one place to another. For those with congenital vision loss, it is ensuring children learn the concepts and skills necessary to get from one place to another safely and efficiently.

For those with adventitious vision loss, assessing the individual's knowledge and experience so that O&M can be implemented; usually involving a functional assessment of travel within the home, local community, study or workplace.

Q What mobility skills are often applied?

A Guiding; body protection techniques; establishing one's position in the environment; and the use of mobility aids such as canes, miniguides and guide dogs.

Not everyone who has O&M training uses a cane:

a miniguide is an electronic mobility device that detects obstacles in front of you. Guide dogs are usually an option for someone who is blind or has very low vision.

Q What orientation skills are important?

A Understanding the body and its position in space; directionality, distance and spatial concepts; problem solving skills and decision making.

In children, these skills will involve specific instruction as these are concepts usually learnt through the observation of others.

Knowledge of indoor and outdoor numbering systems; measurement and compass directions; ability to access a range of maps – tactile, audio, large print, GPS; development of self-familiarisation skills and strategies; and knowing when to ask for assistance.

Q How are O&M practices applied to those with low vision?

A This is done by teaching the person to use their residual vision to travel safely and identify landmarks and clues in the environment, and by improving their functional use of vision.

Low vision aids allow an individual to use vision more

effectively by improving posture and confidence. Structured visual motor skills such as, tracing, tracking and scanning teach an individual to scan for a series of visual landmarks and targets.

Low vision can refer to central vision loss, peripheral loss, as well as overall loss. Each of these have their own causes, effects, and requirements.

Q How do I find an O&M Specialist?

A OMAA website has a list of registered O&M specialists – they must have COMS, active professional membership and ongoing professional development.

The COVID-19 pandemic has impacted home visits but initial information and some support can be provided via online platforms in those areas still impacted by restrictions.

Q I live in a regional area – can I get O&M?

A There is a shortage of O&M specialists in Australia, so people in regional areas may find they have to wait longer for services. The major agencies such as Guide Dogs and Vision Australia have offices in some regional areas of Australia. There are also an increasing number of private O&M specialists who might be servicing regional Australia. ●