

On the road to better vision



On the road again ... Sharon Brown at the wheel of the Lions Outback Vision Van

Mechanic, electrician, internet technician, engineer. Sharon Brown is calling on a multitude of skills keeping the Lions Outback Vision Van on the road.

Add to that her nursing and driving prowess and you have the all-rounder needed to take on the very special job of ferrying the van and its sight-saving cargo to the doorstep of some of Western Australia's most remote communities.

The Lions Outback Vision Van (LOVV) was launched in March this year – the result of a multi-million dollar investment by

the State and Commonwealth governments, Lotterywest and the Lions Eye Institute (LEI).

Fitted with state-of-the-art medical equipment and staffed by highly skilled professionals, the LOVV provides high-quality eye care to people living in regional, remote and indigenous communities throughout Western Australia.

Sharon is the van's coordinator and driver and already has two tours of duty – stretching from Kununurra in the north to Albany in the south – under her belt.

"I am responsible for the general upkeep of the prime mover,

generator, refrigerators, internet server and very high-tech trailer," Sharon said.

"In my nursing role I am responsible for the greeting, data entry, visual acuity, intraocular pressure testing and dilation of patients' eyes.

"Advocating for my patients can range from education to a kindly chat to hand holding!"

The LOVV has treatment/consulting rooms, an imaging room, waiting area, reception, a sleeping bunk in the prime mover, a kitchen and bathroom in the trailer, and at 19.2 metres long and weighing 20 tonnes, makes a statement wherever it goes.

"The arrival of the distinctly coloured decal generally causes quite a stir amongst the general population and hospital employees alike," Sharon said.

"The specialised equipment and immediacy of treatment prevents the transfer of patients to Perth and all of the budgetary demands that entails.

"There have also been several cases of acute trauma and with an ophthalmologist on board we

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McCusker Director, Lions Outback Vision, Dr Angus Turner treats a patient on board the LOVV

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have been 'in the right place at the right time'."

The LOVV has the capacity to treat upwards of 200 patients per week for a wide range of eye conditions – from diabetic retinopathy to cataracts and glaucoma.

Sharon has already witnessed how the LOVV is having a positive impact on the communities it has visited, blending with Outreach Surgical Services to improve overall eye health and boost access to comprehensive treatment.

On a personal level, Sharon loves the challenges and diversity of her role.

"Being the only nurse on the LOVV is an amazing experience both professionally and personally. I am very proud to be a member of the LEI and to be involved in a project that is addressing the unique challenges of rural and remote eye health," she said.

"The use of tele-ophthalmology, Visiting optometry scheme (VOS), local optometrists and Indigenous health workers is combined to provide a focused service delivery.

"Being able to work one on one with skilled doctors has provided me with an inimitable insight into rural ophthalmology.

"I would not swap my job for anything and just in case you are wondering – as many of my 'friends' are – I do not get sick so there is no need to replace me!"



The Lions Outback Vision Van

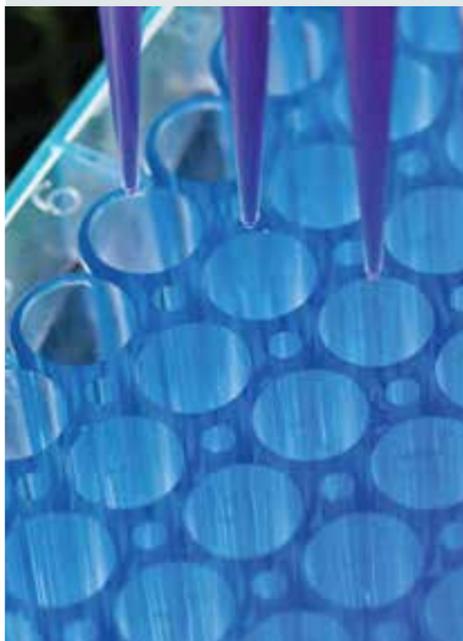
Clinical Trials at the cutting edge of treatment

The LEI is uniquely placed to develop laboratory-generated ideas into real-world treatments for people suffering from some of the most common blinding eye conditions in the world.

LEI scientists and clinicians work in close association and the Clinical Trials Team can offer patients access to some of the most advanced treatments available anywhere in the world.

In many cases, patients with specific eye disorders are given access to new treatments before they are available to the general public.

If you would like to know more about the LEI's Clinical Trials or view our current trials, visit www.lei.org.au/research/clinical-trials or call **9381 0750**.



Role of RNA in human evolution the focus of 2016 Ian Constable Lecture

Professor John Mattick, regarded as one of the world's most influential scientific thinkers, will deliver this year's Ian Constable Lecture at The University of Western Australia.

Professor Mattick is the Executive Director of RNA Biology and Plasticity at the Garvan Institute of Medical Research.

According to The RNA Society, ribonucleic acid, or RNA, is one of the three major biological macromolecules essential for all known forms of life. A key tenet of molecular biology says the flow of genetic information in a cell is from DNA through RNA to proteins.

Professor Mattick's lecture, The central role of RNA in human evolution and development, will examine the role of noncoding RNA's in human development, as well as in cancer and other complex diseases.

Professor Mattick has spent much of his career at the University of Queensland, where he was Foundation Director of the Institute for Molecular Bioscience and the Australian Genome Research



Professor John Mattick

Facility, Director of two ARC Special Research Centres, ARC Federation Fellow and NHMRC Australia Fellow. He has published over 280 papers, which have been cited more than 27,000 times, and has won many prestigious international awards.

He was recently named by the National Health and Medical Research Council as one of the all-time high achievers in Australian health and medical research, and by Thomson Reuters as one of the world's most influential scientific minds.

The 17th annual Ian Constable Lecture will be held on Wednesday, November 30 from 6pm at The University Club of Western Australia. Tickets are free and available via www.ias.uwa.edu.au/lectures/mattick

Centenary celebrations for Lions

Lions Clubs International will celebrate its 100th anniversary in 2017 with a campaign reflecting a century of service to the community.

The Centennial Service Challenge aims to serve 100 million people through youth activities, vision programs, hunger initiatives and environmental projects.

Lions has been associated with vision programs for most of its 100 years after famous humanitarian Helen Keller asked delegates to the 1925 Lions convention in Ohio to become "Knights of the Blind in this crusade against darkness" with the ultimate aim of eradicating preventable blindness.

Western Australian Lions Clubs took up her call and in 1970, at its annual convention in Albany, the Lions Save-Sight Foundation (LSSF) was formed, with Lions Governor Dr Jack Hoffman appointed inaugural chair.

The LSSF helped facilitate screening programs for glaucoma, amblyopia and diabetic retinopathy all over the State.

Over its lifetime, the screening program measured the intraocular pressure of an estimated 300,000 Western Australians and saved the eyesight of many people.





Dr Oktariana and Professor Morgan

Affordable glaucoma tube offers hope

Jakarta eye doctor Virna Oktariana and the LEI's Professor Bill Morgan have been collaborating on an affordable tube solution for glaucoma that would help more Indonesians access sight-saving surgery.

Dr Oktariana's association with Western Australia and the LEI began in 2011, when she spent two months at Royal Perth Hospital and the LEI on a fellowship.

Currently completing her PhD under Professor Morgan, she also works with Dr Widya Artini at RSCM Kirana attached to the University of Indonesia.

Professor Morgan said the incidence of glaucoma in Indonesia was like that of 1950s Australia, and with tubes costing between \$800 and \$1000 Australian dollars, surgery was out of financial reach for many Indonesians.

Dr Artini completed a fellowship with Professor Morgan 20 years ago and returned to Indonesia to set up a large five-storey public eye hospital (RSCM Kirana) in Jakarta. It is fully equipped with modern equipment and currently trains 70 young eye doctors. These local Indonesian ophthalmologists are transforming eye care in Indonesia by training many young doctors who can work across the country.

For many years, cataract was the prime focus, but now glaucoma is the second-commonest cause of blindness and in Indonesia, is frequently worse than that seen in Australia.

Many patients need more modern tube/drainage device surgery but access is limited by the high cost.

Dr Oktariana saw the need for a cheaper tube option and together she and Professor Morgan worked to develop a prototype that can be manufactured in Indonesia for around \$100.

Human trials began in August 2015. Early results are very promising and offer hope to the huge number of Indonesians with glaucoma.



Professor Morgan with the team in Jakarta

Join our clinic celebrations

The LEI clinic is undergoing a major refurbishment and expansion to ensure our patient experience remains second-to-none and can cater for growing demand well into the future.

The grand opening of the new clinic will coincide with our annual Open Day and we are inviting everyone to visit us, take a look at what the LEI does behind the scenes and tour our new ground floor clinic area.

This will be a very special day in the history of the LEI so save the date – **Saturday, February 11, 2017** – and join us.

SAVE THE DATE

11 February 2017

Kate's story inspires



Our 2016 Tax Appeal featured the story of nine-year-old LEI patient Kate, who shared her personal battle with glaucoma, induced by congenital cataracts.

Under the care of Professor Bill Morgan, Kate had her first surgery at just nine-weeks-old.

Professor Morgan placed a device called a Molteno Tube into Kate's eye to help regulate her eye pressure.

Kate's story inspired a very generous response, and we thank you.

Your support saves sight.



Professor Yu with one of our Visionaries

Visionaries celebrate the gift of sight

The Visionaries Luncheon is an opportunity for the LEI to say thank you to our "Visionaries" – our generous supporters who share our vision to prevent and cure blindness and eye disease.

This year's Visionaries Luncheon was held at UWA's University Club on Monday, April 18.

LEI Managing Director Professor David Mackey opened proceedings by updating our Visionaries with LEI's current activities and latest research.

Chairman Stephen Pearce thanked guests for their generosity and updated them on LEI's achievements.

Guest speaker Professor Dao-Yi Yu, Director of the Physiology and Pharmacology research group, outlined the work of his team, on a new surgical implant for the treatment of high intraocular pressure in glaucoma.

As a not-for-profit organisation, the LEI relies on community support to continue its quest to save sight.

To find out more about joining the 'Visionaries' call Sue McLennan, Development Officer, on her direct line **9381 0738** for a confidential discussion.





What I would miss most if I didn't have the gift of sight – the beauty of nature. From the Baldvis Lions Club.

Lions Eye Bank celebrates 30 years of saving sight

Almost 4500 Western Australians had special reason to celebrate the Lions Eye Bank's 30th anniversary in July.

They have been the recipients of sight-saving corneal transplants through the Eye Bank – the only facility in Western Australia that collects, processes and distributes eye tissue for transplantation.

The Lions Eye Bank was established in 1986 by the LEI, with support from the Lions Save-Sight Foundation, to help people with conditions that require corneal transplants such as keratoconus.

“For people with a range of usually inherited diseases, a corneal transplant is the only way to save their sight,” Eye Bank Director, Dr Steve Wiffen said.

“Keratoconus usually emerges in people during their teens and 20s, so the emotional, social and economic impact can be devastating.”

The Lions Eye Bank's first Medical Director, Professor Geoffrey Crawford, trained in corneal transplantation in the United States.

Although well-established in the US, there was nothing similar in Western Australia at the time.

“Before 1986, the whole process of collecting donor tissue was extremely difficult,” he said.

“There were no donor registers and no coordinated system of alerting doctors to the availability of donor tissue. Tissue also couldn't be preserved so it had to be used within 24 hours.

“The logistics of getting family permission to take tissue,

transporting it to the hospital, getting access to a theatre and lining up patients and medical staff in that timeline was very challenging.

“The result was that the waiting list for donor corneas was very long with patients waiting up to two years.”

Dr Wiffen said new storage methods and advances in corneal surgery had transformed eye banking since then.

“Back then, only one type of graft – penetrating keratoplasty – was offered, regardless of which part of the cornea was diseased,” he said.

“Thirty years later it is a completely different story with donated tissue able to be stored for up to a month and virtually no waiting times for surgery.

“State-of-the-art surgical techniques have evolved so only the diseased portion of the cornea is replaced, shortening the recovery period and improving visual outcomes for the patient.”

The Lions Eye Bank's 30th celebrations included an engaging social media campaign that encouraged donor recipients, their family members and former and current Eye Bank staff to take a selfie and share what they would miss most if they lost their eyesight.



Helping the Lions Eye Institute safe sight

This morning I opened two gifts...

Lions Eye Bank of WA
Supported by the Lions Save-Sight Foundation

Does university make you myopic?



This intriguing question will be analysed by Professor David Mackey and Dr Seyhan Yazar at a UWA Research Week event on September 5.

The “epidemic” of myopia or short-sightedness has grabbed headlines over the last year. There is an increasing rate of myopia in the cities of East Asia, now affecting more than 80 per cent of school leavers.

A higher level of education is a well-defined risk for the development of myopia.

The interactive discussion will examine:

- What is myopia?
- What causes myopia?
- The link between myopia and education

- The myopia prevalence in young Western Australians
- How changes in education have affected myopia rates in Australia
- Can we prevent myopia without giving up our education?
- The lecture is on September 5 at UWA's Blakers Lecture Theatre (Room G18, Maths Building) from 11am to 12pm.

For more information or to register your interest in attending, visit www.researchweek.uwa.edu.au/events/does-university-make-you-myopic/

Retina Australia supports research into rare condition

Retina Australia, which raises funds for research into the detection, prevention, treatment and cure of inherited retinal dystrophies, is supporting research into a rare condition called achromatopsia.

Achromatopsia affects about one in every 33,000 people and is characterised by decreased vision, light sensitivity and the absence of colour vision.

LEI researcher Dr Livia Carvahlo, Dr Fred Chen and Dr Wayne Davies are studying cone photoreceptor development and cell death mechanisms during retinal degeneration in mouse models of achromatopsia.

Although a rare condition, it is feasible to generate mouse models to rescue lost cones.

Retina Australia described the research as a sound proposal from a strong team performing at a high level.



New laser treatment for glaucoma needs support



Associate Professor Paula Yu

The LEI's Physiology and Pharmacology group is developing an ever better technique to improve outcomes for patients experiencing high intraocular pressure associated with glaucoma.

They are looking to high energy lasers to cut a new drainage channel or channels to permanently lower the pressure in the eyes of glaucoma patients.

Advantages of this approach include that no implant is required – avoiding potential tissue rejection, the drainage pathway utilises the natural drainage pathways of the eye, the small scale of the channel(s) means that excess drainage of fluid can be avoided and retreatment is possible if required, thus allowing optimum pressure to be attained.

The research team have already completed much of the background work. The challenge now is to optimise the laser and delivery system to allow clinical trials to commence. This will require technical improvements to the equipment to make it robust, portable and suitable for use in a clinical environment.

A successful clinical trial would open up the pathway to commercial development and the introduction of a improved treatment for glaucoma worldwide.

The LEI needs donations to fund the project – specifically employing a skilled laser engineer over a three-year period at a total cost of \$360,000.

For more information, please contact Sue McLennan, Development Officer, on her direct line **9381 0738**.

Yes, I want to save sight

Please accept my donation of: \$.....(Donations over \$2 are tax deductible)

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Please send me information on how I can include the Lions Eye Institute in my Will.

I have already provided for the Lions Eye Institute in my Will.

Your donation saves sight. We recognise the generosity of our donors on our donor recognition board, on our website and in our annual report. Please tick here if you prefer not to be included in such recognition.

Your donation helps eradicate blindness

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Nedlands WA 6009
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