

Excellence

Integrity

Respect

Dedication

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Lions Eye Institute Annual Report 2017



Annual Report 2017





Dr Fred Chen examines a patient with retinitis pigmentosa

**We strive
to achieve
excellence
in all we do**

Our Values



Excellence

We strive to achieve excellence in all we do.



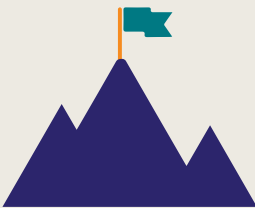
Integrity

Working towards our vision, mission and organisational goals with respect and honesty.



Respect

Recognition of the abilities and diversity of our colleagues, patients and collaborators.



Dedication

Commitment and passion for achieving our vision and mission.

Contents

- 3 Vision & Mission
- 4 2017 at a Glance
- 6 Chairman and Managing Director's Report
- 9 Board of Directors
- 12 Genetics and Population Health
- 14 Experimental Immunology
- 16 Lions Outback Vision
- 18 Molecular Ophthalmology
- 20 Ocular Tissue Engineering Laboratory
- 22 Physiology and Pharmacology
- 24 Retinal Genomics
- 26 Clinical Trials
- 28 Clinical Services
- 30 Publications
- 34 Our Ophthalmologists
- 36 Lions Laser Vision
- 38 Lions Eye Bank
- 40 Community
- 42 Acknowledgments
- 44 Grants
- 46 Financial Statements
- 50 Auditor's Report

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A digital version of this report is available on our website:

www.lei.org.au



Flynn Reid is participating in a clinical trial which is testing whether myopia in children can be slowed down or stopped altogether

Our Vision

To prevent and cure blindness and eye disease

Our Mission

To achieve leadership in scientific research and clinical practice in the prevention of blindness and eye disease

2017 at a Glance



250
corneal transplants



More than **40**
active Clinical Trials



82
research papers



92.4 per cent
patient satisfaction
rating



13 bequests totalling
\$887,000



Launch
of Lions Outback
Vision Food



3297 donations totalling
\$2,496,324



18th annual
Ian Constable Lecture



2,015 patients
seen on the Lions
Outback Vision Van



Six Grateful Patient
events involving
270 guests



Official opening
of the new LEI clinic



35 grants valued at
\$5,657,920



62,350
patient consultations



27 volunteers
in the Concierge Program



1,359
eye examinations
by Lions Optics



Champion of Care
program created



5,269
surgeries



New clinic
opened in Midland



New
YouTube and
Twitter accounts



153
staff (FTE)



**Chairman Peter Forbes
and Managing Director
Professor David Mackey**

Chairman and Managing Director's Report

The Lions Eye Institute (LEI) underwent a significant restructure during 2017 in line with recommendations from the Positioning for the Future review conducted by Mainsheet Capital.

The LEI's culture and values, management structure and capacity to meet the challenges of the future were all under the microscope.

Our staff played a crucial role in the review process and their professional knowledge and input was critical in formulating the final recommendations. We thank them for their contribution and for all their efforts during 2017.

As a result of the review, the executive committee was re-established and a clinic leadership committee and operations management group created to streamline processes and improve communications.

Financial sustainability, patient focus, enhanced research output, increased collaboration, community reach and investment in our people were all identified as key priorities for 2018.

As part of the process, we also identified the values of Excellence, Integrity, Respect and Dedication to guide the LEI's growth over the decades to come.

Reflecting our commitment to Excellence, a number of staff received outstanding professional recognition during 2017, including Professor Elizabeth Rakoczy winning the prestigious Florey Medal and Professor Mariapia Degli-Esposti being named the WA Cancer Council's Cancer Researcher of the Year.

Dr Fred Chen received a Macular Disease Foundation Grant to coincide with World Sight Day to research Stargardt macular degeneration and a Medical Research Future Fund Career Development Fellowship to develop personalised treatment for retinal degeneration.

New research on pterygium and its associated increased risk of skin melanoma and research identifying a new type of immune cell as the body's first responders to viral infection, published in the prestigious journal *Cell*, were two major highlights.



Professor Elizabeth Rakoczy with Gwenda Boulton, a patient who participated in trials of a new gene therapy for age-related macular degeneration. Professor Rakoczy won the prestigious Florey Medal for her scientific research in 2017

2017 was also a landmark year for the Physiology and Pharmacology group led by Professor Dao-Yi Yu, with the microfistula tube for glaucoma receiving Therapeutic Goods Administration registration for use in Australia.

Invented by Professor Yu, and representing 20 years of work at the LEI and by his collaborators in China, the microfistula tube is minimally invasive, allows the patient to recover faster and successfully reduces elevated intraocular pressure, the major risk factor in glaucoma.

The LEI can be very proud that an invention from one of its longstanding research teams is making an international impact on the treatment of glaucoma and that Australian patients will have widespread access to this new treatment from 2018.

Lions Outback Vision McCusker Director Dr Angus Turner produced research demonstrating how the Vision Van is closing the eye health gap for Indigenous patients in both metropolitan and country Western Australia. It found that compared to previous outreach ophthalmology clinics, the Vision Van had boosted patient attendance rates by 18 per cent. Lions Outback Vision telehealth services have also recorded marked growth, with consultations increasing from an average of 11 per month in 2012 to more than 100 per month in 2017.

The LEI continued to play a leadership role in teaching and training throughout 2017, with professional development for practicing ophthalmologists and clinical training of junior doctors medical students and optometrists.

Dr Turner and Dr Chen also co-convened a very successful RANZCO Congress in Perth during the year.

The busy Clinical Trials team worked on the expansion of the WA Atropine for the Treatment of Myopia (ATOM) Study with a focus on childhood myopia.

The LEI remains the home of one of the largest ophthalmological clinical trials research centres in the world, with 11 coordinators supporting 12 of our ophthalmologists involved in more than 40 active studies covering all major eye diseases.

Other highlights from the year included the grand opening of the refurbished clinic, coinciding with our annual Open Day. This was a very successful event with more than 300 visitors.



Dr Hessom Razavi with a patient at the Lions Eye Institute Midland clinic, which opened in 2017

Board of Directors



Chairman Peter Forbes



Richard Alder



Rudolf Brunovs



Dr Margaret Crowley



Diana Forsyth



Tony Joyner



**Professor Ian
McAllister**



Professor David Mackey



To read individual
profiles of LEI Board
members, visit
[www.lei.org.au/about/
board-of-directors](http://www.lei.org.au/about/board-of-directors)

The LEI operates Clinical Services across three sites – Nedlands, Murdoch and now Midland – and during 2017 provided 62,350 patient consultations and 5269 surgeries.

Day Surgery scored high rates of patient satisfaction, with 98.4 per cent of patients saying they would recommend the service – a 5.7 per cent improvement on the 2016 results. The overall patient experience across all Clinical Services increased one per cent to attain a 92.4 per cent result.

The clinic at Midland – the result of a partnership between St John of God and the LEI – opened its doors in 2017 offering free eye health services to users of the Midland hospital, with a focus on Aboriginal eye health and surgery.

The Board saw two new appointments – management consultant Diana Forsyth and securities specialist Richard Alder.

Our financial performance for the year was disappointing, as we recorded a loss of \$851,000 for 2017. Donations and bequests were down on the previous year, while cost pressures continued, especially for the provision of world class research facilities to our scientists. The Board, our clinicians and management are working together diligently to return the Institute to surplus.

Key personnel changes included Chief Financial Officer Chris Whitelock taking on a broader Chief Operating Officer role and the appointment of Hakeem Khan to the key position of Clinical Services Practice Manager.

We recognised our wonderful volunteers for their important contribution to the smooth running of the LEI with a training refresher and lunch in May.

The Lions Save-Sight Foundation again made a fabulous contribution throughout the year, including financial support of a number of ongoing programs, and we thank them for their support.

The LEI mourned the loss of John Fawcett, who made a huge contribution to saving sight in his adopted home of Bali. The John Fawcett Foundation set up the Bali Eye project in 1991 with the assistance of LEI founder Professor Ian Constable.

Another great friend of the LEI, ophthalmologist Dr Peter Graham, also passed away in 2017. Peter was well-known for his teaching of students and his work in remote WA and in Indonesia, particularly with the John Fawcett Foundation.

Peter Forbes
Chairman

Professor David Mackey
Managing Director



Research Group Highlights

**Saving Sight
is our Vision**

Researchers discover pterygium of the eye is a red flag for skin cancer

In 2017, the LEI's Genetics and Population Health group published research in the British Journal of Ophthalmology that showed pterygium is an indicator of an increased risk of developing skin cancer.

The researchers, led by Professor David Mackey, identified that 23,625 people - more than 60 per cent of whom were male - were treated for pterygia in Western Australian hospitals between 1979 and 2014.

They matched cases by age, sex and residential postcode to a control group with no known history of pterygium and both cohorts were linked to the WA Cancer Registry and WA Deaths Registry.

Pterygia treated each year peaked at 56 per 100,000 head of population in 1981 and declined over the following seven years to a low of 19 per 100,000 in 1988. After that, hospital diagnosis/treatment for pterygia remained relatively stable at 0.04 per cent or 39 per 100,000 annually.

The median age at the time of pterygium treatment was 49 years and the rate of pterygium surgery in young people (less than 25 years) declined from 111 per year in 1979 to approximately 39 per year from 2010-2014.

The average age of pterygium treatment correspondingly increased from 43 years in 1979 to 56 years in 2013.

Regarding melanoma - or skin cancer - the researchers found males were twice as likely to be affected than females. Overall, the research showed 24 per cent more skin cancer cases in the pterygium cohort compared to the control cohort.

Professor Mackey's team concluded that the presence of a pterygium indicated a significantly increased risk of developing skin cancer and recommended that eye care providers advise patients with developing pterygia of the increased risk and urge regular skin checks.

Knowing the link between the two provides a possible tool for early detection or prevention of melanoma as the pterygium may develop many years before the melanoma.

In this study, 66 per cent of melanomas were diagnosed after pterygium surgery.

Generally, the researchers concluded, early cancer detection leads to better health outcomes and improved patient survival.

The Genetics and Population Health group is involved in a large number of research projects, including translation of genetic eye research, the Raine Eye Health Study, Western Australian Eye Protection Study, Busselton Healthy Aging Study, Kidskin Eye Study, Skin to Eye Cell study, Targeting at-risk relatives of glaucoma patients for early diagnosis and treatment (TARRGET) and children's myopia research (WA ATOM study).

To read more about the research work of the Genetics and Population Health group, visit www.lei.org.au/research/genetics-and-epidemiology



Example of a pterygium

Pterygium and melanoma – key facts

Pterygium is a fleshy growth on the surface of the eye caused by excessive exposure to sun, wind or dust.

Pterygia are common in young to middle-aged adults in Western Australia.

Individuals with a pterygium are 24 per cent more likely to develop skin cancer (malignant melanoma).

Australia has one of the highest rates of melanoma in the world.

Melanoma is the third most common cancer in Australian men and women.

Melanoma rates are increasing all over the world and approximately 15 per cent are fatal.

Early identification of melanoma is likely to result in a complete cure.

Flow chart of pterygium cases and controls

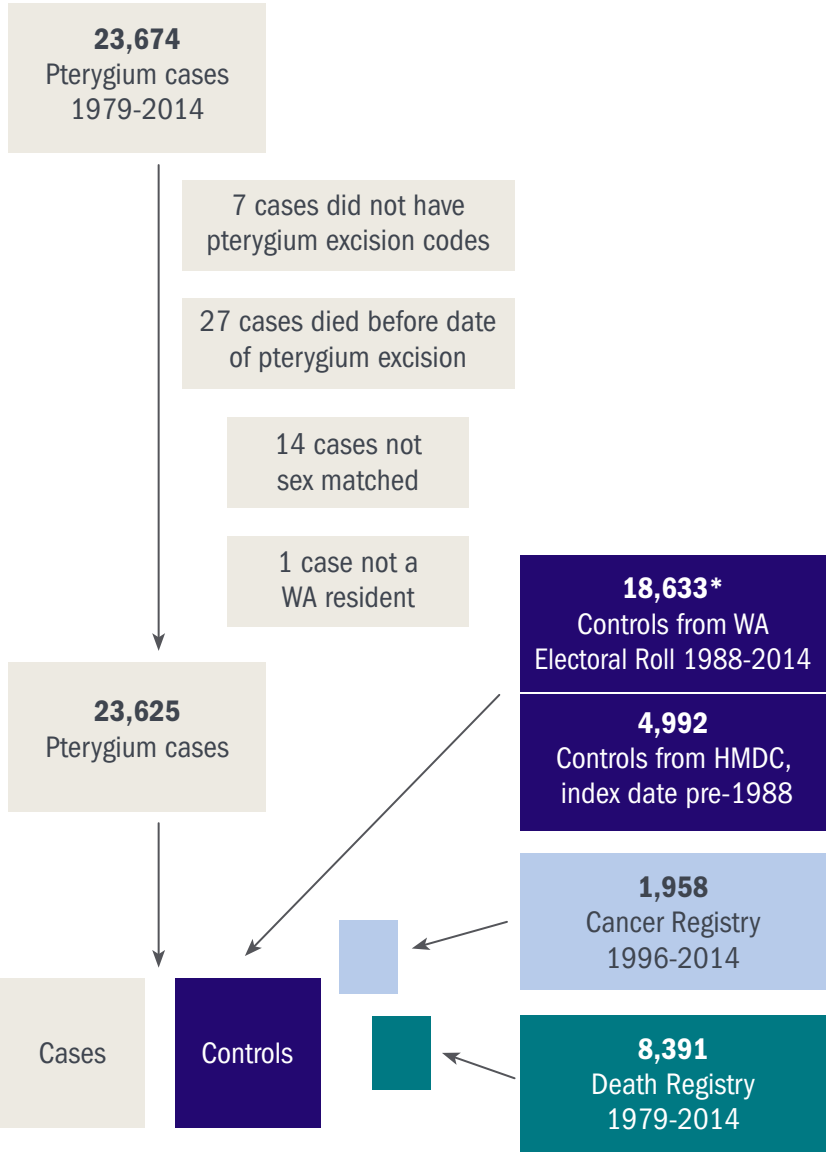
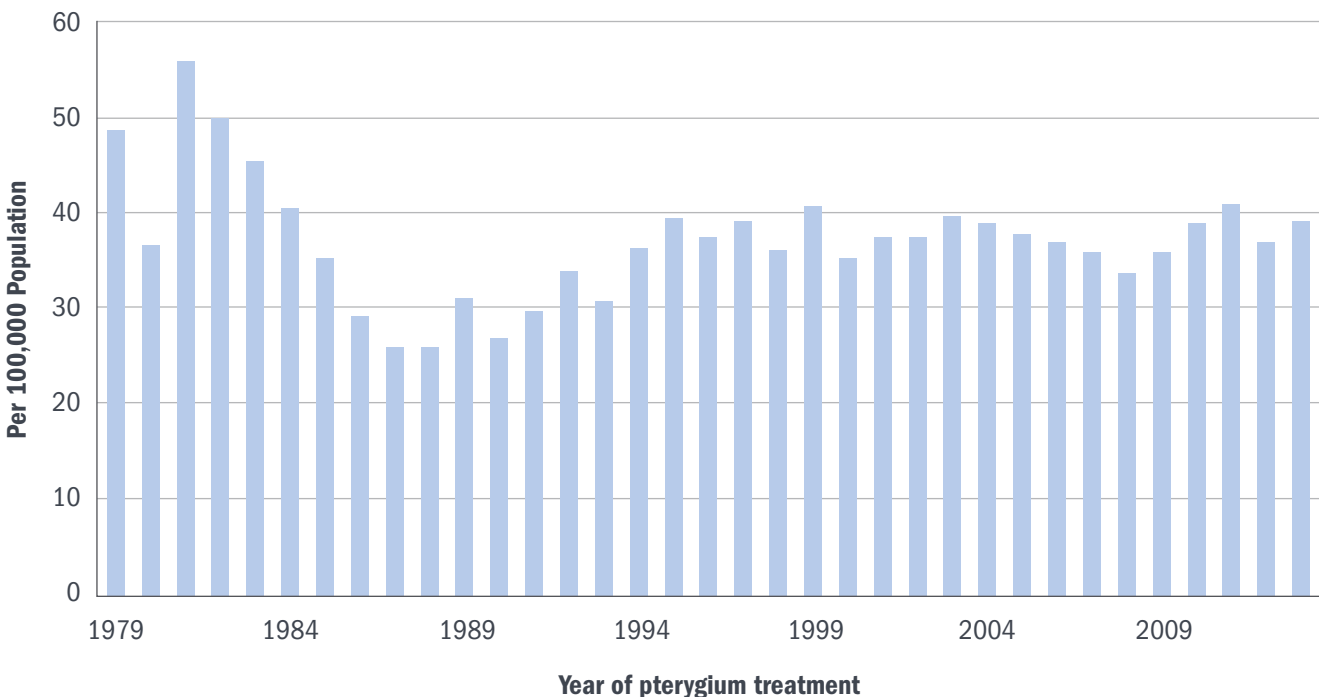


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Experimental Immunology



Dr Iona Schuster

Researchers identify how new type of immune cells are first line of defence in body's fight against viral infection

Pioneering research has shown how a recently identified sub-set of immune cells act as the body's first responders to viral infection.

In collaboration with Memorial Sloan Kettering Cancer Center in New York, the LEI's Experimental Immunology research group led by Professor Mariapia Degli-Esposti, found that tissue-resident type 1 innate lymphoid cells (ILC1s) serve an essential early role in fighting infection through rapid production of an important anti-viral protein.

The findings, published in 2017 in the highly-prestigious journal *Cell*, challenge the belief that the body's immune response to viral infection

is primarily dealt with by other well described immune cells.

ILC1s have only been identified and described in the last few years and their role in the immune response to viral infection had not been well understood until this new research.

The paper, co-authored by Immunology's Dr Iona Schuster, reveal that ILC1s play an important role in the early response to viral infection.

ICL1s act like foot soldiers, present in a tissue for immediate surveillance and when a virus enters - following activation signals from other cells in the tissue - they respond extremely quickly and execute a previously unappreciated protective function.

They help control viruses before other more powerful immune lymphocytes known as natural killer cells and T cells are recruited to completely eliminate the infection.

Researchers believe a better understanding of ILC1s could lead to improved management of viral infection in future.

Ongoing studies are examining the role of this new cell population in response to infection at other barrier sites, such as the eye, and are also investigating the role they play in response to malignancy.

For more information on the Immunology group and its current research, visit www.lei.org.au/research/experimental-immunology



Professor Mariapia Degli-Esposti

Cancer Council WA Cancer Researcher of the Year

LEI Director of Research and head of the Experimental Immunology group, Professor Mariapia Degli-Esposti, was named Cancer Council WA Cancer Researcher of the Year at a ceremony in 2017.

Professor Degli-Esposti is an internationally-recognised immunologist whose work has implications for a wide range of diseases. She won the award for her work shedding light on the viral complications that can occur following bone marrow transplantation.

Her research examines how the immune system fights infections and cancers and how viruses and cancers can bypass immune responses.

She has developed the first pre-clinical models to test the use of immunotherapy to control cytomegalovirus infection, which can be a common and life threatening complication following a bone marrow transplant.

Telehealth is improving eye care outcomes in remote Western Australia

The LEI's Lions Outback Vision (LOV) is employing telehealth to make eye health delivery more efficient and accessible in remote parts of Western Australia.

Telehealth allows ophthalmologists, optometrists and other health professionals to use technology – typically real-time videoconferencing – to liaise with each other, screen, diagnose and book remote-area patients in for surgery.

The LOV team is led by McCusker Director, Associate Professor Angus Turner and aims to address the unique challenges of delivering specialist eye health care to regional, remote and Indigenous communities across Western Australia.

LOV has seen growth in telehealth consultations and real engagement with telehealth services, with almost perfect attendance rates and very high patient satisfaction.

In 2012, LOV conducted an average of 11 telehealth consultations each month. In 2017, that number had risen to more than 100 per month.

The evolution of telehealth has enabled the service provided by LOV to move from pilot

studies and novelty projects to an integrated daily service that has an impact by reducing waiting times, providing continuity of care and improving efficiency of outreach ophthalmology trips.

This leads to better outcomes for patients and improved satisfaction with the service.

Local optometrists have been key to the success of the telehealth program, having the cameras and technology for excellent eye imaging as well as clinical skills to provide ocular assessment.

Over time, the nature of referrals to LOV ophthalmologists has changed from acute presentations to surgical referrals.

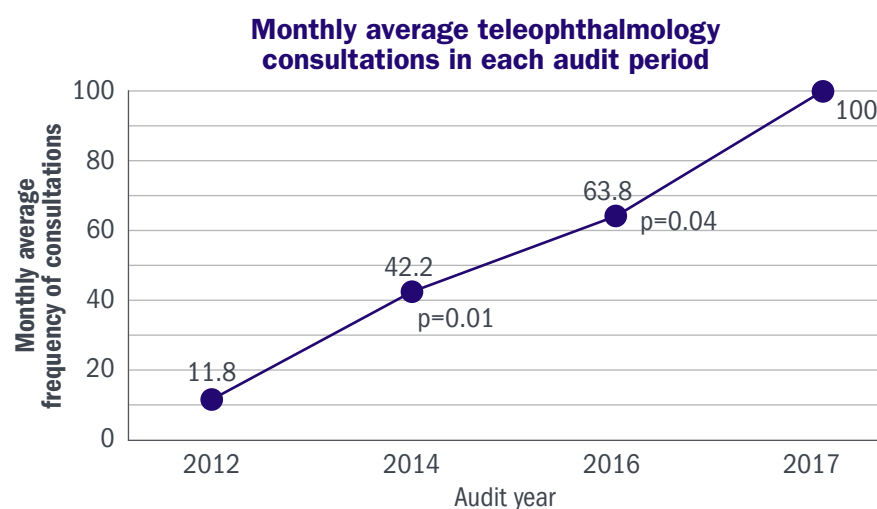
Surgical management has increased since 2012 and 50 per cent of patients are now being directly listed for surgery as a result of

telehealth consultations with three significant benefits:

- Eliminating the “wait for the waiting list” – often a one-year wait for outpatients prior to being placed on the surgery waiting list.
- More surgical management taking place and a corresponding improvement in visual outcomes.
- Distillation of patient pathology. Primary health care is being more appropriately managed by optometry with less duplication of patient assessment.

LOV believes telehealth services will continue to evolve as videoconferencing technology increases, the use of OCT became standard and mobile reception improves.

For more information about LOV, visit www.lei.org.au/services/lions-outback-vision



This graph shows how monthly tele-ophthalmology consultations have increased between 2012 and 2017



LOV optometrist Stephen Copeland supports a Jigalong patient and her carer during a telehealth consult
Photo courtesy of Alan McDonald

National recognition for lifetime scientific achievement

Reflecting the LEI's value of Excellence, the head of the Molecular Ophthalmology research group was awarded one of Australia's top science prizes in 2017.

Professor Elizabeth Rakoczy pioneered the research that led to the development of a new gene therapy for wet age-related macular degeneration (wet AMD).

The research led to the first gene therapy human trial in the world for wet AMD and was named by the National Health and Medical Research Council in its 10 of the best national research projects in 2005.

Recognising her innovative work and significant lifetime achievement in biomedical science, Professor Rakoczy was awarded the prestigious Florey Medal at a gala ceremony in Canberra on December 6, 2017.

The Florey Medal, established by the Australian Institute of Policy and Science, carries a \$50,000 prize supported by CSL Limited.

Wet AMD is the most common cause of blindness in the developed world and causes central vision loss. It is currently treated with invasive monthly eye injections which are expensive, inconvenient for the patient and carry a risk of infection.

The new therapy, which is proving to be safe and well-tolerated in human trials, promises to replace monthly injections with a one-off gene therapy which creates a bio-factory delivering ongoing treatment to the eye.

Professor Rakoczy reported on the gene therapy in the world's most prestigious medical journal – The Lancet – in 2015 and as an internationally recognised gene therapy expert was invited to write a Comment in 2017.

The Comment discussed the potential benefits and disadvantages of subretinal and intravitreal delivery methods of gene therapy into the eye. Professor Rakoczy concluded that regardless of the delivery route, both approaches were very safe and potentially effective for the treatment of wet AMD, making the condition an ideal target to become the first complex disease treated with gene therapy.

The Molecular Ophthalmology group is involved in a number of research projects. To read more about the group's work, visit www.lei.org.au/research/molecular-ophthalmology

Federal Health Minister Greg Hunt presents the Florey Medal to Professor Elizabeth Rakoczy

Personalised treatment using stem cells: the way of the future

In 2017, the Ocular Tissue Engineering Laboratory pursued innovative new research that promises personalised medicine using stem cell technology to tackle some of the most challenging eye diseases.

Led by Dr Fred Chen and Dr Samuel McLenachan, the research is the first of its kind in Western Australia and involves growing skin cells from patients with retinal diseases caused by mistakes in the genetic code.

Patient skin cells are reprogrammed in the laboratory to become stem cells that can then be converted into retinal tissues that carry the patient's genetic mutation.

Scientists are then able to repair the genetic mutations and turn unhealthy retina into healthy retina for comparison.

This provides insight into how these mutations affect the retina and why they cause degeneration of retinal cells.

The researchers believe once they can understand how the mutation leads to disease, the next step

will be to examine possible new therapies tailored specifically to the individual patient.

Because the testing is done on patient retinal tissues grown in the laboratory, ineffective treatments can be eliminated without the need for lengthy and expensive clinical trials in human patients.

Moreover, the likelihood of finding effective drugs is increased by testing on human retinal tissues, rather than animal models that may not fully reflect the human disease.

The Ocular Tissue Engineering Laboratory has formed national and international collaborations to fast track its goal in developing personalised treatment. Together with scientists from Murdoch University, this group has already commenced testing new drugs tailored for the treatment of certain types of inherited retinal diseases, with promising results.

The disease modelling and drug screening projects established by the Ocular Tissue Engineering Laboratory are one aspect of a broader research program initiated by Dr Chen.

With over 450 patients enrolled since 2015, the Western Australia Retinal Degeneration (WARD) Study is the largest cohort study of the natural history of inherited retinal diseases in Australia.

Participants undergo an eye assessment every six months and a once off collection of blood and skin cells from selected patients is done for disease modelling and the development of personalised treatment of retinal degeneration.

With support from the National Health and Medical Research Council, Macular Degeneration Foundation of Australia, Telethon Kids Institute, McCusker Charitable Foundation, Retina Australia, as well as generous donations from the Miocevic and Saleeba families, the WARD study is examining the clinical features and disease progression of patients with retinal disease over a five year period with biomarkers in serum and plasma, DNA analysis and patient-specific stem cell disease modelling.

The Ocular Tissue Engineering Laboratory is involved in a large number of research projects, including the testing of new treatments for age-related macular degeneration, high resolution retinal imaging and monitoring of inherited retinal diseases.

To read more about the group's work, visit www.lei.org.au/research/ocular-tissue-engineering



As part of his research, Dr Samuel McLenachan examines retinal tissue grown from a patient with inherited retinal disease

New treatment for glaucoma goes global



Professor Dao-Yi Yu

The microfistula treatment for glaucoma, invented by Professor Dao-Yi Yu and tested by his Physiology and Pharmacology team and their collaborators in Shanghai, China, has gone global.

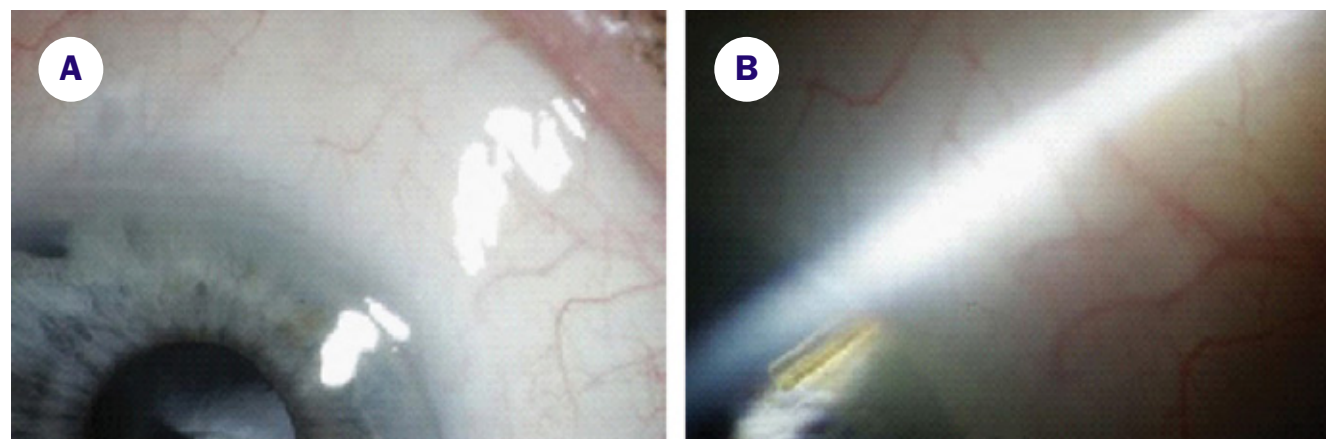
After many years of basic research to prove the concepts behind a new form of minimally invasive surgery and a biocompatible implant for treating glaucoma, the LEI licenced the technology to a US based start-up company Aquesys, which raised US\$94 million in venture capital funding to conduct an international clinical trial and commercialise the technology.

The international pharmaceutical giant, Allergan, subsequently bought out Aquesys.

Allergan markets the microfistula treatment under the name Xen Gel Stent, which is now available worldwide, with more than 10,000 procedures conducted in Europe alone.

The technique involves the implantation of a tiny drainage tube to allow excess fluid to drain from the eye and thereby lower intraocular pressure - the biggest risk factor in glaucoma.

The technique is much less invasive than conventional trabeculectomy, is faster to perform and provides a shorter patient recovery time. The Xen Gel Stent is now available in Australia. The LEI can be very proud that an invention from one of its longstanding research teams is making an international impact on the treatment of glaucoma, the second most common form of blindness in the developed world.



An implanted microfistula tube in the first human eye surgery two years postoperatively. This patient previously had a failed trabeculectomy. In picture A, the microfistula was implanted in the superior nasal quadrant (top right) and is hardly noticeable. In picture B, the conjunctiva shows a shallow bleb and looks healthy, without any surgical trauma



International Glaucoma Research Society President visits LEI

In December 2017, Professor Balwantray Chauhan visited the LEI. He is the President of the highly prestigious Glaucoma Research Society.

Professor Chauhan has collaborative projects with several members of the Physiology and Pharmacology research team. Professor Chauhan previously spent a highly productive sabbatical period with the group and makes regular return visits to maintain links with several ongoing research programs.

Also in 2017, the Physiology and Pharmacology team and collaborating clinicians published 15 papers in the ophthalmic literature.

For more information about Physiology and Pharmacology, research projects and team members, visit www.lei.org.au/research/physiology-and-pharmacology



Retinal Genomics

Researchers target devastating cause of childhood blindness

In 2017, the Retinal Genomics group launched a major collaboration with American research laboratories to develop a gene therapy for a type of Usher syndrome which causes both deafness and blindness in children.

Usher syndrome is an inherited condition that affects both hearing and vision. Type 1 is the most severe, with profound hearing and vision loss during early childhood.

The research project, involving the laboratories of Retinal Genomics' Dr Livia Carvalho, Professor Zubair Ahmed (University of Maryland, Baltimore, USA) and Dr Luk Vandenberghe (Harvard Medical School and Massachusetts Eye and Ear, Boston, USA) is developing an exciting gene therapy strategy to deliver a good copy of the PCDH15 gene (that causes Usher 1F) to photoreceptor cells in the retina.

Using a combination of innovative gene therapy strategies, a novel delivery system and a new mouse model of Usher 1F, researchers hope the treatment therapy will restore vision in the mouse model and could in future be used in clinical trials and benefit patients like six-year-old Harry Feller.

Funding for this work comes from the Usher 1F Collaborative Foundation (USA) and Genetic Cures Australia, which was founded by Harry's parents.

Also in 2017, members of the Retinal Genomics group came together to extend work on a project targeting a distinctive form of cone dystrophy.

Cone dystrophies belong to a group of rare inherited eye disorders that affect the cone cells of the retina and cause lifelong visual loss that includes a significant reduction in visual acuity and in colour vision.

The researchers are examining a particular form of the disorder where very depressed rod and cone activities are seen at normal light levels, as determined by

electroretinogram recordings from the eye, which then flips to an enhanced or supernormal response as the intensity of light is increased.

Emeritus Professor David Hunt, a member of the Retinal Genomics group, has previously demonstrated that mutations in the KCNV2 gene that codes for a component of a key potassium channel through which potassium ions flow as a response to light, is responsible for the disorder.

The researchers now have mouse lines with knock-out (KO) mutations for this gene and a related gene, KCNB1, which codes for another component of the potassium channel.

The researchers believe they have a good model of the human disorder. As the mouse models show only a mild loss of photoreceptors, this indicates that the human disorder may be a good candidate for gene therapy.

For more information about the Retinal Genomics group, visit www.lei.org.au/research/retinal-genomics-therapy

Harry Feller suffers from Usher Syndrome (1F). He was born deaf and will go blind in adolescence with the onset of retinitis pigmentosa. LEI researchers are working to develop a gene therapy to tackle the disease

Clinical Trials

The LEI has a long history of conducting clinical trials and is now home to one of the largest ophthalmological clinical trials research centres in the world.

The team consists of 11 coordinators supporting 12 ophthalmologists involved as clinical trials investigators in more than 40 trials.

We conduct a wide range of clinical trials, including the testing of new drugs or devices, the collection of information from patients to better understand a particular ophthalmic condition and audits of patient medical notes to establish treatment outcomes and ways in which patient outcomes may be improved.

Our approach enables patients with specific eye disorders, or previously untreatable eye conditions, access to new treatments and therapeutic approaches well before they are available to the general public.

All trials run by the group are subject to the approval of a Human Research Ethics Committee and comply with stringent national and international regulations and guidelines.

Clinical Trials are currently undertaking commercially sponsored studies on diabetic retinopathy, various forms of macular degeneration, glaucoma and ocular inflammatory diseases including uveitis. Our ophthalmologists are leading studies on retinal vein occlusion and into therapies for currently non-treatable eye disease such as macular telangiectasia.

The continued success of clinical research at the LEI is only made possible by the study participants who volunteer their time and are happy to take part and the dedication and professionalism of our clinicians, nurses, coordinators and staff.

To enable the LEI ophthalmologist to assess eligibility for a study, a referral from an optometrist, general practitioner or ophthalmologist is required prior to contacting the LEI.

For more information, email clinicalresearch@lei.org.au or phone (08) 9381 0750. For additional information about LEI Clinical Trials, visit www.lei.org.au/research/clinical-trials



Clinical Trials Assistant Amelia Jason and Associate Professor Mei-Ling Tay-Kearney discuss the benefits of Humira for patients with uveitis

Translation of clinical research leads to market approval

Associate Professor Mei-Ling Tay-Kearney and the Clinical Trials team have participated in the adult AbbVie Uveitis clinical trial program for the past eight years.

These trials have supported the clinical development of Humira for the management of uveitis and have contributed to the Therapeutic Goods Administration marketing approval, making this product widely available for prescription by ophthalmologists nationally.

Uveitis is the third leading cause of blindness worldwide. It is a term used to describe a broad number of inflammatory diseases that produce redness and swelling within the eye – ultimately destroying eye tissue.

Clinical Services

The LEI's clinics are located in Nedlands, Murdoch and Midland. Outpatient services include clinics in Retina, Cornea, Glaucoma, Oculoplastic and Inflammatory, General and Paediatric Ophthalmology.

The Nedlands facility also provides Day Surgery, Lasik and state-of-the art Intravitreal injection rooms. Although a lot of ground work was done in 2017 with the Mainsheet Capital report and benchmarking with other clinics, the embedding of efficient practices across clinical services remain.

However, a new clinical leadership structure was implemented in the clinic and a business focused Clinical Services Practice Manager was recruited to lead this critical unit of the LEI.

A major transformation and change of thinking is necessary to implement best practice systems and processes. A lot of efficiencies can be gained by applying the principle of "economies of scale" within clinical services.

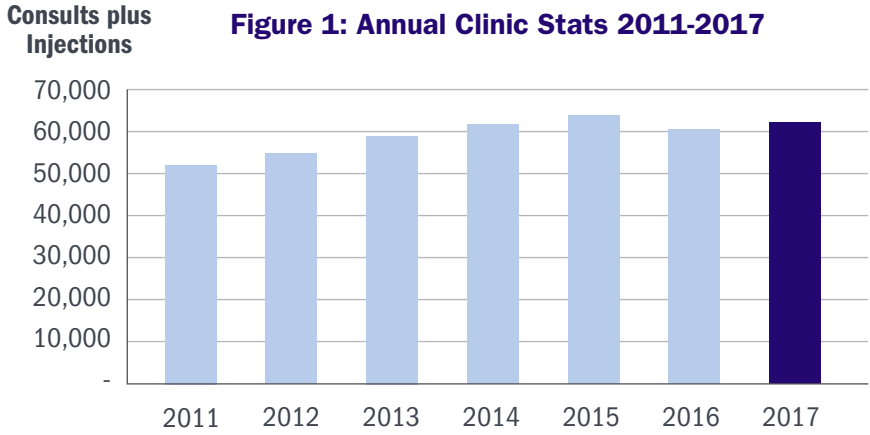
Our major renovation project on levels one and two are on hold whilst we concentrate our energy in laying the foundation for a sustainable future. We are embarking on improving our financial performance and at the same time improving the patient journey in the clinic.

We farewelled Monica Marroccoli, our long serving Quality Manager and welcomed Val Antoff as our new Quality and Safety Manager.

The organisation is taking safety of staff, patients and contractors seriously and strengthening this area to ensure compliance with legislation, acts and applicable laws. The Quality Manager's role also encompasses Occupational Safety and Health. This role is integral to embed the revised Licensing Standards and the second version of National Safety and Quality Health Service (NSQHS) Standards.

The Department of Health consultant commended the quality processes in day hospital during the successful licencing inspection. The clinic underwent its three year ISO 2015 and NSQHS accreditation audit with two areas to improve. We are required to provide further evidence to close out incidents and processes to manage manual and electronic records simultaneously.

Approximately 62,350 patients received consultations in 2017 as shown in Figure 1, and 5269 surgeries were performed at the LEI. These volumes represent a modest increase from 2016.



Our Day Surgery facility scored highly in the patient satisfaction survey and improved on the already high scores from 2016 in almost all parameters tested as shown in Figure 2.

Our team is dedicated to our patients, and this result is a great testament to the teamwork and dedication of all our staff across all clinics and day surgery.

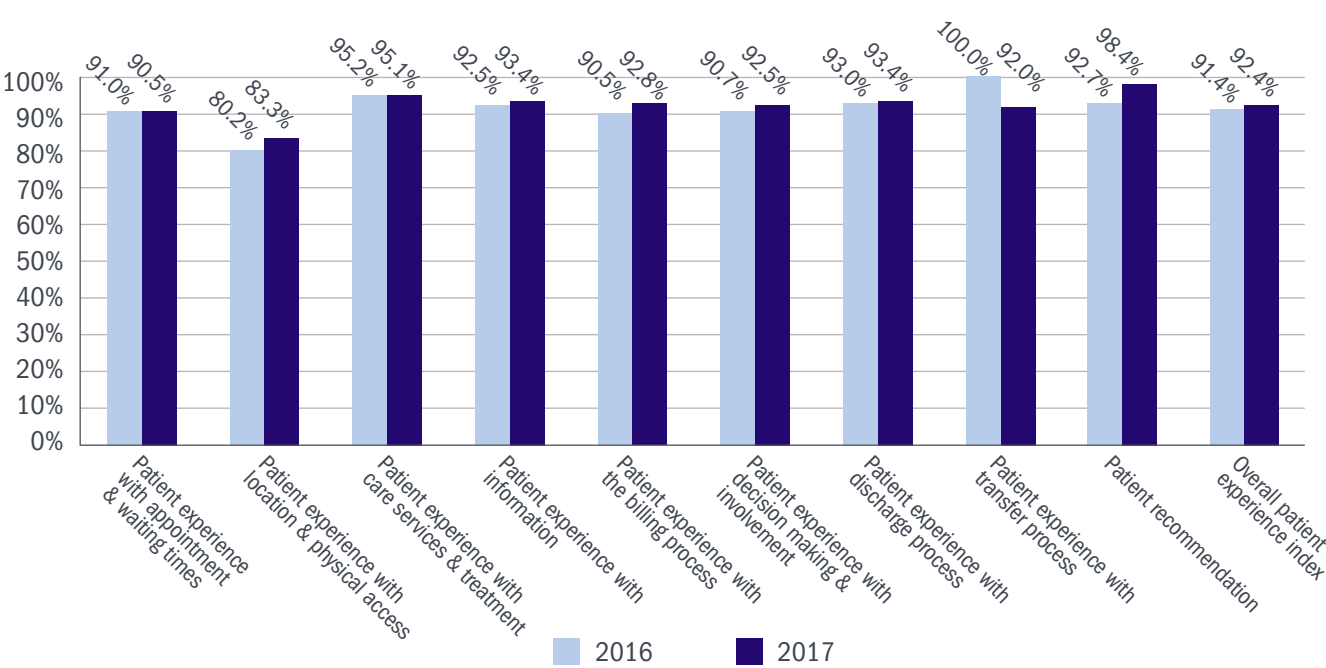
The survey highlighted that 98.4 per cent of patients would recommend the care and services provided by day surgery which is an excellent result and an improvement of 5.7 per cent from 2016 results.

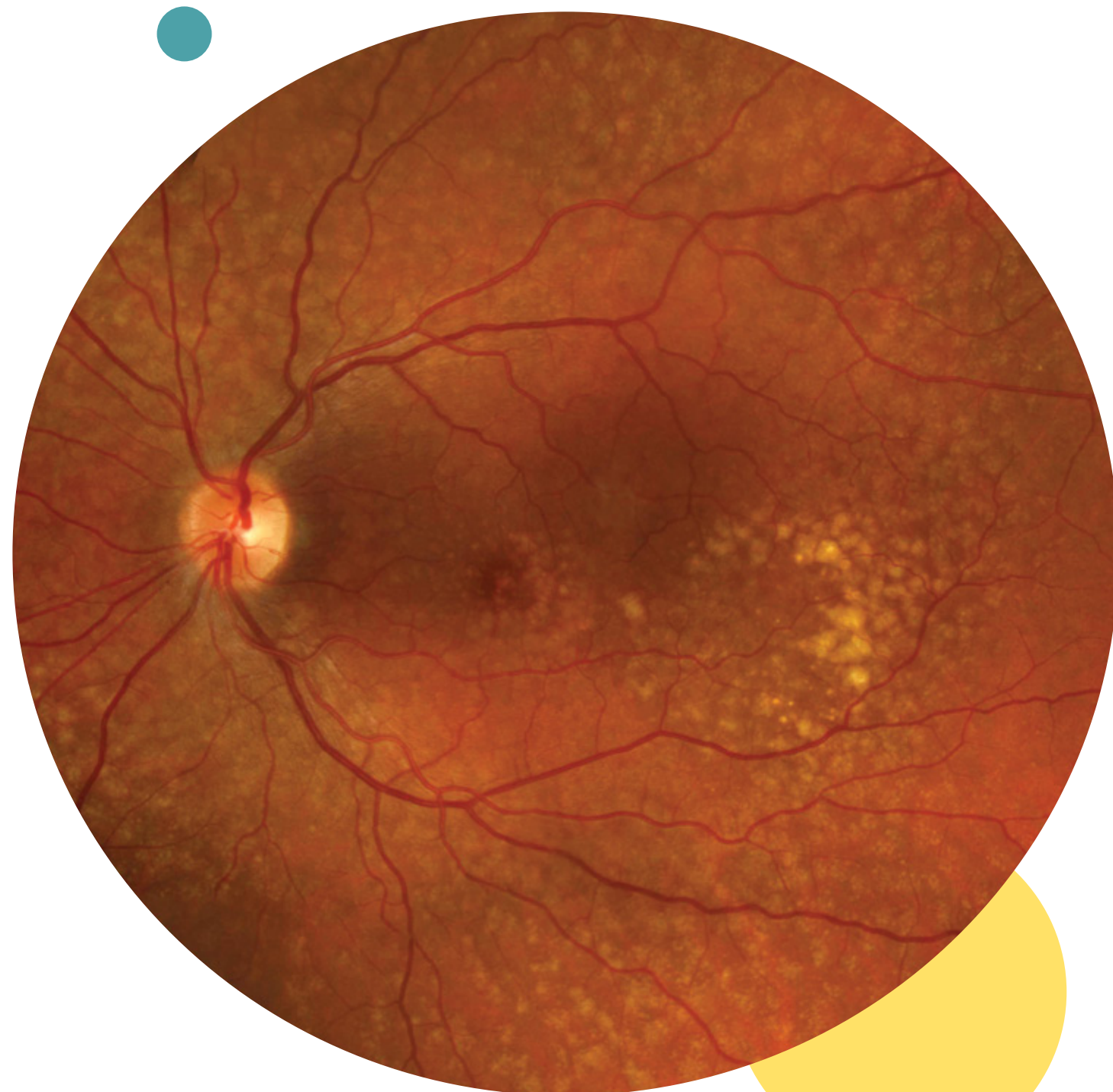
The Overall Patient Experience Index has also improved by one per cent to attain a 92.4 per cent result.

We used results from our survey findings from last year to drive improvements and that is demonstrated across all survey domains with the exception of patient experience with transfer process. This domain is included in our continuous improvement register and strategies are implemented to attain better outcomes in all domains in 2018.

The LEI's clinics provide a large range of eye health services

Figure 2: Patient Satisfaction - LEI Day Surgery 2016 / 2017 comparison





Top publications with a Journal Impact Factor of five or above

Genetics and Population Health

DA Mackey

Thomson BR, Souma T, Tompson SW, Onay T, Kizhatil K, Siggs OM, Feng L, Whisenhunt KN, Yanovitch TL, Kalaydjieva L, Azmanov DN, Finzi S, Tanna CE, Hewitt AW, **Mackey DA**, Bradfield YS, Souzeau E, Javadiyan S, Wiggs JL, Pasutto F, Liu X, John SW, Craig JE, Jin J, Young TL, Quaggin SE. [Angiopoietin-1 is required for Schlemm's canal development in mice and humans](#). J Clin Invest. **2017** Nov 6. pii: 95545. doi: 10.1172/JCI95545. [Epub ahead of print] PMID:29106382 [IF: 12.784]

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Lions Outback Vision

AW Turner

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For a list of all research publications from 2017, visit www.lei.org.au/research/publications/#accordion-2017-sa-1

Our Ophthalmologists



Dr Andrea Ang



**Dr Chandra
Balaratnasingam**



**Professor Graham
Barrett**



Dr Adam Gajdatsy



**Professor Ian
McAllister**



**Professor David
Mackey**



Dr Fred Chen



Dr Antony Clark



Professor Ian Constable AO



Professor Bill Morgan



Dr Hessom Razavi



**Associate Professor
Mei-Ling Tay-Kearney**



**Professor Geoffrey
Crawford**



Dr Jean-Louis deSousa



Dr Antonio Giubilato



**Associate Professor
Angus Turner**



Dr Steven Wiffen



Lions Laser Vision

Lions Laser Vision is the premier centre for laser vision correction in Western Australia.

It was the first to be established and it remains the centre with the most advanced equipment and the most experienced refractive surgeons in WA.

It was here that the first excimer laser PRK (photorefractive keratectomy) surgery in Australia was performed in 1991 and the first LASIK (laser in-situ keratomileusis) in WA in 1996.

Lions Laser Vision was the first and still is the only accredited laser vision correction centre in WA. The centre has achieved accreditation each year since 2006 with ISO9001 – an internationally recognised quality management system indicating standards of excellence.

Lions Laser Vision provides a full range of refractive procedures that can eliminate the need for glasses or contact lenses in patients with short-sightedness, long-sightedness and astigmatism to produce excellent unaided vision.

These include LASIK – the gold standard of all laser refractive procedures, photoreactive keratectomy (laser surface ablation), phakic IOLs (implantable contact lens) and all types of refractive lens surgery.

We also provide a comprehensive service to treat keratoconus (conical cornea), which affects one in 1000 Western Australians.

We perform corneal collagen cross-linking (CXL), insertion of intracorneal ring segments (kerarings) and all forms of corneal transplantation for this condition with the latest equipment.

Lions Laser Vision takes pride in having the most advanced laser equipment – including the world's fastest, safest and most effective excimer laser source, the Schwind AMARIS 1050RS laser.

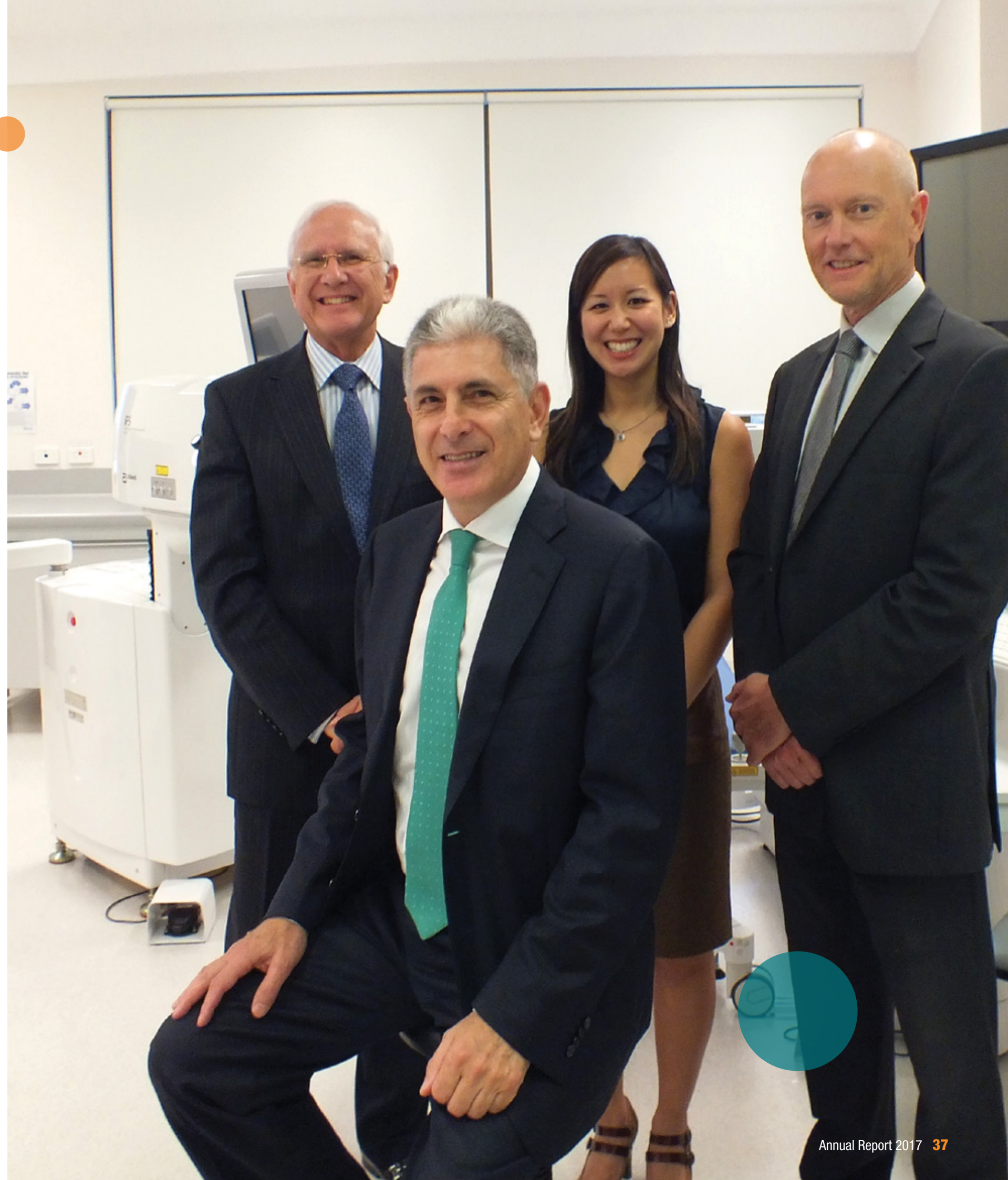
We also provide the “no flap” technique called transepithelial PRK, using the excimer laser.

Lions Laser Vision puts patient safety first and ongoing investment in the latest technology is crucial to meet this goal. Patients can expect the best possible visual outcome after laser vision correction at Lions Laser Vision.

There are four refractive surgeons at Lions Laser Vision: Professor Geoffrey Crawford, Professor Graham Barrett, Associate Professor Steven Wiffen and Dr Andrea Ang – all of whom have had specialist fellowship training in refractive and corneal surgery in the United States. Two of these surgeons were the initial pioneers of laser refractive surgery in WA.

For more information about Lions Laser Vision, visit www.lionslaservision.com.au

Lions Laser Vision refractive surgeons – Professor Geoffrey Crawford, Professor Graham Barrett, Dr Andrea Ang and Associate Professor Steven Wiffen – are the most experienced in Western Australia



Lions Eye Bank



The world's first university qualification for eye banking was introduced in 2017 with Lisa Buckland (right) successfully completing the course. Her colleagues, Eye Bank scientists Natalie Duncalf and Ben Foreman, are enrolled to complete the course in 2018

The Lions Eye Bank was established in 1986 by the LEI and the Lions Save-Sight Foundation.

Prior to its establishment, the collection of donor tissue was extremely difficult, with patients waiting up to two years for corneas.

Back then, only one type of graft, penetrating keratoplasty, was offered - regardless of which part of the cornea was diseased.

Thirty years later, 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. In fact, in 2017, almost 63 per cent of corneas were pre-cut for lamellar use. A total of 250 were transplanted - our best year yet. In total, the Lions Eye Bank has now completed almost 5000 procedures.

Key goals of the Lions Eye Bank are to:

Prevent blindness and improve the outcome of eye disease by providing corneal and sclera tissue for transplantation

Raise the profile of the LEI in the community, both locally and nationally, by educating the public and medical providers about the critical role of the Eye Bank in sight-saving procedures

Continue to remain a sustainable unit within the LEI by generating sufficient proceeds through the provision of eye tissues for transplantation

Technological improvements have also meant donated tissue can be stored for up to a month with virtually no waiting times for surgery.

All donor tissue is used either for transplantation or, if unsuitable, for ethically approved research or surgical training with the consent of the donor's family. This tissue is crucial to advancing research and developing surgical techniques.

During 2017, the Lions Eye Bank completed a restructure of full-time rostered staff to improve efficiencies and streamline processes.

We saw the introduction of the world's first formal university qualification for eye banking as a vocation. The Eye Bank Association of Australia and New Zealand (EBAANZ) established a Specialist Certificate in Eye Banking through the University of Melbourne's School of Medicine.

Lions Eye Bank Manager Lisa Buckland successfully completed this qualification and Eye Bank scientists Natalie Duncalf and Ben Foreman are enrolled to complete it in 2018.

Lisa Buckland also presented at the European Society of Ophthalmology in Barcelona in March. She shared the Eye Bank's expertise in freezing excess or lower quality corneas for tectonic use, ensuring all donated tissue is effectively used.

The Eye Bank also successfully completed an audit by the Therapeutics Goods Administration but noted that the rising costs of compliance may pose funding issues in the future.

A total of 11 surgeons - including LEI clinicians Professor Graham Barrett, Professor Geoffrey Crawford, Dr Andrea Ang and Lions Eye Bank

Director Dr Steven Wiffen - performed corneal grafts for both public and private patients during 2017.

LEI glaucoma surgeons Professor William Morgan, Dr Antonio Giubilato and Dr Antony Clark also use scleral grafts in surgery to reduce intraocular pressure.

As a member of EBAANZ, the Lions Eye Bank works collaboratively with other eye banks to maintain consistently high levels of quality, safety, proficiency and ethics. Excess tissue is shared when appropriate and emergency requests for tissue are always supported.

As an independent organisation, the Lions Eye Bank of Western Australia is self-funded through cost recovery.

Community



Volunteers Christabel Lee and Robin Miller at the Volunteers desk in the LEI foyer



2017 Ian Constable Lecture

Molecular geneticist Professor Simon Foote presented the 2017 Ian Constable Lecture on October 11 at The University of Western Australia. Professor Foote, Director of The John Curtin School of Medical Research at the Australian National University, outlined how Australian researchers were investigating ways to reduce the harm of the malaria parasite on infected people by inhibiting its ability to reproduce. It was the 18th annual Ian Constable Lecture, which honours the LEI's founder and UWA's Lions Foundation Chair of Ophthalmology, Professor Ian Constable.

Jeff thanks the LEI for helping save his sight

LEI patient Jeff Mews – a long-time patient of Professor Geoffrey Crawford – told his story for the 2017 Tax Appeal. Mr Mews has had over 140 visits to LEI, multiple procedures and is very grateful to the LEI for saving his sight. Originally diagnosed with keratoconus, Mr Mews has undergone multiple corneal grants and cataract surgery.

Grateful Patient Events

The 2017 annual Visionaries Luncheon took place in May at the University Club, UWA. As always, this was a very special event enabling us to thank some of the LEI's valued supporters and Visionaries for their commitment to saving sight. Throughout the year several other Grateful Patient Events were held, featuring presentations from Professor David Mackey, Dr Fred Chen, Dr Hessom Razavi and Professor Bill Morgan. These events provided an opportunity for the clinicians to share an insight into some of the incredible work being done at the LEI, with a range of topics covered including: the newly renovated clinic, ongoing Clinical Research Trails, myopia in children, diabetic retinopathy and advances in glaucoma treatments. In 2018 we plan to host more Grateful Patient Events so please contact LionsEyeEvents@lei.org.au if you are interested in attending future events.

Bequests support our sight saving research

The LEI was fortunate to receive a number of significant bequests and donations in 2017. Among those, was a \$282,000 bequest from acclaimed Western Australian artist Miriam Stannage. Born in Northam in 1939, Miriam Stannage was married to fellow artist and UWA senior lecturer Tom Gibbons. They were part of an influential group of post-war artists that included Robert Juniper, Guy Grey-Smith and Brian McKay. Her generous legacy will support the LEI's vision to prevent and cure blindness and eye disease. To find out more about leaving a legacy to the LEI in your will, visit www.lei.org.au/donate/make-a-bequest

Volunteers

The Volunteer Concierge Program was established in 2010 to assist patients attending the LEI for medical treatment. There are 27 volunteers who are rostered on morning and afternoon shifts from Monday to Friday. LEI volunteers give friendly and informed assistance to patients and visitors helping to provide a positive and welcoming environment. Duties consist of escorting the elderly and vision impaired to their appointments, collecting prescriptions, conveying them from treatment areas, arranging transport and making tea or coffee while they wait in the clinic. Each year, the volunteers participate in a re-fresher training session. During 2017, the volunteers underwent Fire Safety Training, which was followed by a delicious lunch to celebrate Volunteers Week. These sessions are not only informative but an opportunity to meet other volunteers, deal with any issues and discuss ways to improve a service that is greatly appreciated by patients and visitors.

Christmas Appeal tells Kate's story

The 2017 Christmas Appeal featured Kate, a patient who has retinitis pigmentosa. Kate is taking part in a clinical trial being conducted by Dr Fred Chen, which is monitoring the progression of retinal diseases. To read previous LEI appeals, visit www.lei.org.au/about/publications/newsletters

Professor Simon Foote



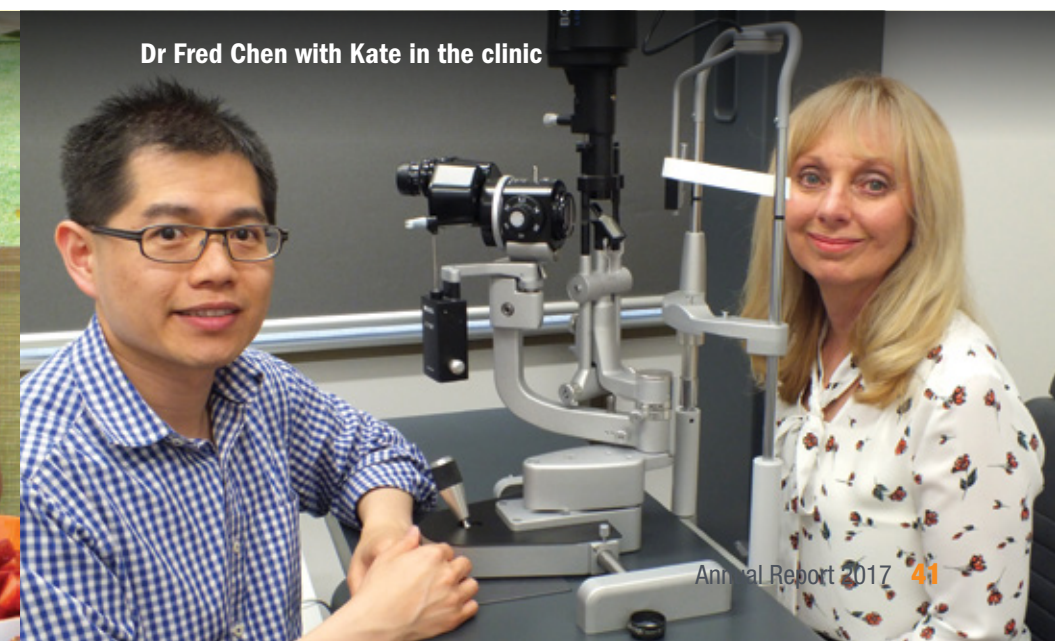
Jeff Mews with Professor Geoffrey Crawford



Western Australian artist Miriam Stannage



Dr Fred Chen with Kate in the clinic



Acknowledgments

including grants

Bequests

Estate of the Late Charles Anderson
 Estate of the Late Ian Bickle
 Estate of the Late Alan and Lilian Cameron
 Estate of the Late Miriam Gibbons
 Estate of the Late Guy Innes
 Estate of the Late Margaret Kerman
 Estate of the Late Doreen Letcher
 Estate of the Late Lance E. Rann
 Estate of the Late Robert Stallard
 Estate of the Late William Swindells

Memorial gifts, honouring

Mrs Barbara Sadler
 Ms Edna E Brown
 Mr Alan Smith

Pride of LEI Pledges of Support from WA Lions Clubs

Lions Club of Dardanup
 Lions Club of Kojonup
 Lions Club of Morley
 LEI Lions Club of Perth

Special Gifts

Anonymous
 Mr Frank Blakiston
 Mr James Candy
 Mr Harry Cohny
 Professor Geoffrey Crawford
 Mr and Mrs John & Gay Cruickshank
 Mr Norman Hogg
 Mr Paul Hogg
 Mrs Louise Law
 Mandurah Murray Mayday Club Inc
 Medical Centre Chemist
 Mr Walter Millstead
 Mr and Mrs Brad and Carolyn Miocevic
 Mr Carlo Orlando
 Oxford Compounding
 Mrs Gwynneth Roberts
 Mr & Mrs John and Lee Saleeba
 Mr Keith Spence

Trusts and Foundations

Carcione Foundation
 Constantine Family Foundation Pty Ltd
 Fred Hollows Foundation
 Hardie Foundation Pty Ltd
 Lions Save Sight Foundation
 McCusker Charitable Foundation
 Stan Perron Charitable Foundation Ltd
 The Patrick Foundation

Major Institutional Support

Australian Research Council
 Commonwealth Department of Health
 Department of Health
 Federal Government of Australia
 Government of Western Australia
 Lotterywest
 National Health and Medical Research Council
 Ophthalmic Research Institute of Australia
 The University of Western Australia
 WA Country Health Service



LSSF Chairman PCC Ambrose Depiazzi OAM presented a \$10,000 cheque to LEI inaugural PDG Dr Brian King AM MBE in December. The money was raised by the LSSF and Lions Clubs as a contribution to the new Ian Constable Chair in Discovery and Translational Ophthalmic Science

Lions Save-Sight Foundation

We are again honoured to have the opportunity to contribute to the 2017 Annual Report of the LEI.

Having spawned the LEI out of the Lions Save-Sight Foundation, we very much look upon the LEI as a parent/child relationship. As in any family, the child is never far from the parent's mind and that is very much the case in regard to our relationship with the LEI. Though time passes the support for the child is never far away.

Our Foundation continues to meet the commitments made when the Lions – UWA Chair of Ophthalmology was established back in the early 1970s, and along the way have added further financial support through funding of the Director of Research, the PDG Brian King Fellowship, the PDG Dr Jack Hoffman Scholarship, the Judy Glover Scholarship plus various other one-off requests. These commitments amount to

some \$350,000 per annum. As in any family it seems that offspring are always looking for support, something that as the parent, we are happy to provide where possible.

2017 has seen the redeveloped ground floor of the LEI clinic operating for the first full year. We congratulate all those involved with this project and see it as a huge plus for the Institute.

As a consequence, our office has relocated to the Harry Perkins building. We again thank all concerned with this move and for their support and acceptance of us into the LEI administrative section.

A further by-product of this re-development of the LEI has been the establishment of the Lions Lounge on the ground floor of the clinic. This recognises the contribution of Lions Clubs in WA to this wonderful facility. Clubs were invited to make a contribution to the LEI and in return were recognised by way of a name

plaque within the lounge. This raises further funding for necessary equipment within the LEI.

We continue to view with great pride the advancements made by the LEI in both the clinical and research areas as the fight against blindness continues. We shall also continue to support the Institute, both financially and physically, wherever possible. As Lions of Western Australia we are proud of what has developed out of a simple program of glaucoma screening that has resulted in a truly great ophthalmic centre. Long may it continue.

2018 will present new challenges and let me assure all involved with the LEI that the support of Lions and this Foundation will be standing with them as they tackle these challenges.

Ambrose Depiazzi OAM
 Chairman, Lions Save-Sight Foundation (WA) Inc.

Grants

Australian Competitive Grants

NHMRC Program Grant

Immunological therapies for cancer, chronic infection and autoimmunity
Chief Investigator – Degli-Esposti M

NHMRC Centre of Research Excellence

From discovery to therapy in genetic eye diseases
Chief Investigator – Mackey, D
Investigator – Chen, F

NHMRC Project

Young adult myopia: genetic and environmental associations
Chief Investigators – Mackey, D, Chen, F

NHMRC Project

A Fibroin-based Prosthetic Bruch's Membrane for the treatment of Age-related Macular Degeneration
Chief Investigator – Chen, F

NHMRC Project

The interplay between IL-6 and GVHD on anti-viral and anti-leukaemic immunity
Chief Investigators – Tey, S, Andoniou, C

NHMRC Project

Effective therapies to treat viral infections and their complications in transplantation
Chief Investigators – Degli-Esposti, M, Andoniou, C

NHMRC Development

Developing a novel Glaucoma surgery for clinical use and commercialisation

Chief Investigators – Yu, D, Cringle, S, Morgan, W

NHMRC Principal Research Fellowship

Chief Investigator – Degli-Esposti, M

NHMRC Early Career Fellowship

Chief Investigator – Yazar, S

ARC Discovery Project

Utilizing virally-encoded proteins to decipher apoptotic regulatory mechanisms

Chief Investigators – Andoniou, C, Degli-Esposti, M

ARC Discovery Early Career Researcher Award

Understanding cone photoreceptor migration and cell death mechanism

Chief Investigator – Carvalho, L

Ophthalmic Research Institute of Australia

Stem cell therapy for age-related macular degeneration

Chief Investigator – Chen, F

Government Grants

Commonwealth Department of Health

Lions Outback Vision
Chief Investigator – Turner, A

Government of Western Australia Department of Health

Round 20 MHRIF

Government of Western Australia Department of Health

Merit Award – Project
Voltage-gated potassium channels in inherited retinal dystrophy: disease mechanisms and treatment strategies
Chief Investigator – Carvalho, L

Government of Western Australia Department of Health

WA ATOM pilot study: Atropine treatment of myopia
Chief Investigator – Mackey, D

Government of Western Australia Department of Health

Research Translation Project
A novel approach to significantly improve clinical management of glaucoma
Chief Investigator – Yu, D

Government of Western Australia Department of Health

Lions Outback Vision
Chief Investigator – Turner, A

Government of Western Australia Department of Health

Research Institute Support (RIS)

WA Country Health Service

Chief Investigator – Turner, A

Other Grants

Lotterywest

Lions Eye Institute Outback Vision
Chief Investigator – Turner, A

Genetic Cures Australia

Usher 1F Syndrome
Chief Investigator – Carvalho, L

Fred Hollows Foundation

Chief Investigator – Turner, A

Eye Surgeons' Foundation

Chief Investigator – Turner, A

Stan Perron Charitable Foundation

Chief Investigator – Degli-Esposti, M

McCusker Charitable Foundation

Lions Outback Vision
Chief Investigator – Turner, A

McCusker Charitable Foundation

Ocular Tissue Engineering
Chief Investigator – Chen, F

Lions Save-Sight Foundation

Research Support

University of Western Australia

Education Futures Scholarship
Chief Investigator – Razavi, H

University of Western Australia

Healy Award
Chief Investigator – Schuster, I

University of Western Australia

Near Miss Central
Chief Investigator – Chen, F

University of Western Australia

Research Collaboration Award
Chief Investigator – Carvalho, L

University of Western Australia

Centre for Ophthalmology and Visual Science Infrastructure Funding

International Grants

National Institutes of Health

A novel treatment for Retinal Ischemia
Chief Investigators – Yu, D, Cringle, S

Usher 1F Collaborative Inc

Usher 1F Syndrome
Chief Investigator – Carvalho, L

**Total
Grants 2017
\$5,657,920**

Financial Statements

Profit or Loss and Statement of Other Comprehensive Income	2017	2016
Year ended 31 December 2017	\$	\$
Revenue	22,495,138	25,272,550
Materials, supplies and consumables	(2,670,254)	(2,729,149)
Other direct operating expenses	(10,679,850)	(8,781,346)
Gross surplus	9,145,034	13,762,055
Other non-operating income	1,527,000	1,481,170
Fair value adjustment of investments to market value	787,717	443,017
Marketing expenses	(1,372,696)	(749,983)
Research and development	(5,094,850)	(5,349,393)
Occupancy costs	(613,016)	(890,121)
Administrative employee expenses	(2,346,847)	(2,109,128)
Administration expenses	(2,973,320)	(2,156,565)
Surplus before income tax	(940,978)	4,431,052
Income tax expense	-	-
Surplus after tax	(940,978)	4,431,052
Other Comprehensive Income	89,954	(1,699,402)
Total Comprehensive Income	(851,024)	2,731,650

Statement of Changes in Equity	Revaluation of Available for Sale Financial Assets	Retained Earnings	Total
Year ended 31 December 2017	\$	\$	\$
Balance at 1 January 2016	2,367,702	34,736,722	37,104,424
Surplus After Tax for the year	-	4,431,052	4,431,052
Other Comprehensive Income for the year	(1,699,402)	-	(1,699,402)
Balance at 1 January 2017	668,300	39,167,774	39,836,074
Surplus After Tax for the year	-	(940,978)	(940,978)
Other Comprehensive Income for the year	89,954	-	89,954
Balance at 31 December 2017	758,254	38,226,796	38,985,050

Statement of Financial Position	2017	2016
As at 31 December 2017	\$	\$
Current Assets		
Cash and cash equivalents	10,773,083	15,993,141
Financial assets	985,312	879,483
Trade and other receivables	3,060,277	1,947,070
Inventories	38,479	35,907
Other current assets	188,138	197,301
Total Current Assets	15,045,289	19,052,902
Non-Current Assets		
Financial assets	26,947,485	23,381,550
Property, plant and equipment	11,775,823	12,760,235
Total Non-Current Assets	38,723,308	36,141,785
Total Assets	53,768,597	55,194,687
Current Liabilities		
Trade and other payables	12,854,739	13,542,273
Short-term provisions	1,422,808	1,360,340
Total Current Liabilities	14,277,547	14,902,613
Non-Current Liabilities		
Long-term provisions	506,000	456,000
Total Non-Current Liabilities	506,000	456,000
Total Liabilities	14,783,547	15,358,613
Net Assets	38,985,050	39,836,074
Equity		
Revaluation of Available for Sale Financial Assets	758,254	668,300
Retained Earnings	38,226,796	39,167,774
Total Equity	38,985,050	39,836,074

Statement of Cash Flows	2017	2016
Year ended 31 December 2017	\$	\$
Cash flows from operating activities		
Receipts from customers	21,388,181	26,460,981
Payments to suppliers and employees	(24,310,513)	(22,628,467)
Net cash provided by operating activities	(2,922,332)	3,832,514
Cash flows from investing activities		
Interest received	117,570	284,947
Dividends received	1,327,336	1,045,484
Proceeds from sale of investment securities	8,544,787	4,562,831
Proceeds from sale of capital assets	-	7,373
Payments for investment securities	(11,454,817)	(2,639,620)
Payments for property, plant and equipment	(1,040,258)	(6,098,347)
Net cash (used in) investing activities	(2,505,382)	(2,837,332)
Net increase/(decrease) in cash held	(5,427,714)	995,182
Cash and cash equivalents at the beginning of the financial year	17,493,220	16,498,038
Cash and cash equivalents at the end of the financial year	12,065,506	17,493,220
Cash and cash equivalents comprise		
- Current cash at bank, on hand and deposits	7,769,072	12,988,925
- Current restricted cash	3,004,011	3,004,216
	10,773,083	15,993,141
- Non-current term deposits	1,292,423	1,500,079
	12,065,506	17,493,220

Auditor's Report



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Independent Auditor's Report to the Members of Lions Eye Institute Limited

Report on the concise financial report

We have audited the accompanying concise financial report of Lions Eye Institute Limited comprises the statement of financial position as at 31 December 2017, the statement of profit or loss and other comprehensive income, statement of changes in equity and statement of cash flows for the year then ended and related notes, derived from the audited financial report of Lions Eye Institute Limited for the year ended 31 December 2017. The concise financial report does not contain all the disclosures required by the Australian Accounting Standards and accordingly, reading the concise financial report is not a substitute for reading the audited financial report.

Directors responsibility for the concise financial report

The Directors are responsible for the preparation of the concise financial report in accordance with Accounting Standard AASB 1039 Concise Financial Reports, Australian Charities and Not-for-profits Commission Act 2012 and the Corporations Act 2001, and for such internal control as the directors determine are necessary to enable the preparation of the concise financial report.

Auditor's responsibility

Our responsibility is to express an opinion on the concise financial report based on our audit procedures which were conducted in accordance with Auditing Standard ASA 810 Engagements to Report on Summary Financial Statements. We have conducted an independent audit, in accordance with Australian Auditing Standards, of the financial report of Lions Eye Institute Limited for the year ended 31 December 2017. Our audit report on the financial report for the year was signed on 13 April 2018 and was not subject to any modification. The Australian Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report for the year is free from material misstatement.

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An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the concise financial report. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the concise financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the concise financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.

Our procedures in respect of the concise financial report included testing that the information in the concise financial report is derived from, and is consistent with, the financial report for the year, and examination on a test basis, of evidence supporting the amounts and other disclosures which were not directly derived from the financial report for the year. These procedures have been undertaken to form an opinion whether, in all material respects, the concise financial report complies with Accounting Standard AASB 1039 Concise Financial Reports.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit, we have complied with the independence requirements of the Australian Charities and Not-for-profits Commission Act 2012. We confirm that the independence declaration required by the Australian Charities and Not-for-profits Commission Act 2012, which has been given to the directors of Lions Eye Institute Limited would be in the same terms if given to the directors as at the time of this auditor's report.

Auditor's opinion

In our opinion, the concise financial report of Lions Eye Institute Limited for the year ended 31 December 2017 complies with Accounting Standard AASB 1039 Concise Financial Reports.

GRANT THORNTON AUDIT PTY LTD
Chartered Accountants

C Becker
Partner - Audit & Assurance

Perth, 13 April 2018

DID YOU KNOW



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ORGANISATION

