

Lions Eye Institute



2008 Annual REPORT



2008-2008

A CLEAR VISION TO THE FUTURE



OUR *Mission*

is to achieve excellence
in scientific research
and clinical practice
to prevent blindness.

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Chairman's Report



Lions Eye Institute (LEI) celebrated its 25th anniversary during 2008 with a number of special events culminating in a gala fundraising dinner in October. At the dinner, Founding Director Professor Ian Constable was awarded the Helen Keller Award from Lions International - their highest award. It was pleasing to be joined by so many people who were involved with the start-up phase of the Institute, including inaugural LEI Chairman Brian King.

In August 2008 LEI entered a new era with the announcement that then Associate Professor David Mackey had been appointed as our next Managing Director. Professor Ian Constable is stepping down from this role at the end of February 2009 but will continue both his research and clinical practice at the Institute. On behalf of the Board I would like to take this opportunity to thank Professor Constable for his outstanding leadership over the past 25 years.

Professor Mackey's appointment will commence in March 2009 although he will take six months leave of absence during the year to complete

current research scholarship responsibilities. Under Professor Mackey's leadership LEI will continue to focus on introducing new initiatives in science and clinical ophthalmology. Such initiatives will require additional revenue and this will be challenging in the current economic climate. The Board is delighted Professor Mackey is joining the Institute and I look forward to working with him as we further develop LEI in the future.

The financial results in 2008 were impacted by the downturn in the global financial market. Surplus from operations of \$1.9m was offset by the decline in the value of investments of \$3.0m, which resulted in a net loss of \$1.1m. Despite this write-down, the Institute remains in a strong financial position with total revenue from operations of \$10.8m; with \$7.8m generated from clinical services, and \$0.9m from bequests and donations. The Institute holds \$16.3m in net (assets) reserves, of which \$7.0m is in plant, property and equipment.

Planning of modern medical research facilities to

be located at the QEII and Fiona Stanley hospital sites has progressed during the year. To be managed by the WA Institutes for Health, these centres are being funded by the state and federal governments and The University of Western Australia. Construction tenders for the QEII project should be called by mid 2009 with completion scheduled for 2011.

LEI's highly anticipated Phase I gene therapy clinical trials for Age Related Macular Degeneration continued to reach new regulatory milestones during 2008 and is on track for acceptance from the Therapeutic Goods Administration. This is a truly exciting and groundbreaking venture for LEI and offers hope to those afflicted with this devastating disease.

Throughout the year our researchers and scientists attracted funding in excess of \$4 million, testament to our internationally renowned research expertise.

In September, The University of Western Australia invited Professor David Mackey to present the annual Ian Constable Lecture. Professor Mackey's oration on genetics provided a valuable insight into various eye diseases and the role of genetics versus environmental factors. The lecture was warmly received by over 300 people and was an excellent way of introducing Professor Mackey to Western Australia.

The major focus of the Board in 2008 was the recruitment of a new Managing Director and strategic planning. Board membership remained unchanged for the year and the Board reviewed its performance and identified areas where improvements could be made. I thank the Directors for their contribution and guidance as we collectively help to steer the Institute towards achieving our goals.

I also wish to acknowledge the ongoing support of the Lions Save-Sight Foundation (LSSF) and the Australian Foundation for the prevention of Blindness Trust (AFPB). Such support is essential in meeting the ever increasing costs of running the Institute and providing much needed equipment for research departments.

I also thank the staff of the Institute for their dedication and services and look forward to working with them under the leadership of Professor Mackey in 2009.

David Eiszele
Chairman



David Eiszele with Professor Constable at the 25th Anniversary Gala Dinner

Managing Director's Report



The year 2008 marked the 25th anniversary of the Lions Eye Institute. There were many celebrations during the year organised by our Director of Development Helen Rowe and her team, the highlight of which was a formal dinner at The University of Western Australia attended by the Premier the Honourable Colin Barnett MLA and a legion of LEI supporters. They came from government, academia, business, health and science communities, and from our all important philanthropic donors and statewide ophthalmic patient support base. During these 25 years LEI has developed progressively to be a major medical and scientific resource for Western Australia. By establishing a dedicated medical research institute for eye disease closely affiliated with The University of Western Australia

and public teaching hospitals embracing both scientific research and high quality ophthalmic practice, we have been able to maintain progressive growth and productive output.

Our clinical division, led by Associate Professor Ian McAllister, made solid gains during the year. Our clinicians are increasingly involved in multicentre clinical trials of potential new therapies, especially in the areas of retinal disease, glaucoma and uveitis. Clinical trials continuously improve the quality of medical care and require a sustained and skilled performance by all our clinical staff. They contribute to the assurance that LEI patients receive international best care management. During the year we saw a record number of patients and increased our

number of surgical procedures at the Institute. The need for extra space is becoming a major limiting factor. During the year Associate Professor Graham Barrett was one of nine individuals honoured by the International Society of Refractive Surgery of the American Academy of Ophthalmology for his outstanding contributions to refractive surgery.

Our research achievements were well recognised nationally. Professor Dao-Yi Yu held one of only four national Program Grants in Western Australia for basic investigation of retinal disease and glaucoma. Associate Professor Mariapia Degli-Esposti is leading a major team dedicated to immunological research and is also short-listed for a national Program Grant. Advanced agreements promise international funding for both telemedicine and gene therapy. Professor Yogesan Kanagasigam was honoured in the statewide Inventor of the Year program. Of equal importance were the many contributions of younger post doctoral researchers and students - they help make the Lions Eye Institute a delightful place to work.

I am particularly grateful for the dedicated input of our Board of Directors led by Chairman David Eiszele. The economic downturn has been a serious threat to our financial reserves and the Board and its Investment Sub-Committee have worked overtime to limit this loss. They take on onerous responsibilities as volunteers on a charitable Board such as this, but in doing so greatly enhance our reputation for quality in the community.

Equally, the work and dedication of the Lions Save-Sight Foundation (LSSF), led by Past District Governor Lorraine Strickland, is much appreciated. During the 25th Anniversary Dinner the LSSF presented the world's highest resolution retinal image analyser at the cost of \$250,000. It will be used by all our research groups.

In 2009 we will welcome our new Managing

Director at LEI and Director of the Centre for Ophthalmology and Visual Science at the University of Western Australia, Professor David Mackey. Professor Mackey has worked previously at the University of London and Johns Hopkins University in Baltimore, USA, and is currently Associate Professor of Ophthalmology at the University of Melbourne and Clinical Professor of Ophthalmology at the University of Tasmania. He brings with him a stellar international reputation in the field of population genetics and has a special interest in the genetic basis of eye disease. His combined expertise in clinical ophthalmology and research will further enhance LEI's ability to discover new information at the bench and bring it to clinical practice. He will also lead the challenge for LEI to manage a major collaboration with our partners at the West Australian Institute for Medical Research, University of Western Australia and the West Australian State Health Department in the expanded new facilities scheduled to be constructed in 2010. We all look forward to supporting David in this next era.

*Professor Ian Constable AO
Managing Director*

Our Board



David Eiszele FAICD [Non-executive Chairman](#)

David Eiszele joined the Board in 2003 and was appointed Chairman from 1 January 2005. He is Chairman of PearlStreet Limited, a director of Torrens Energy Limited and a Fellow of the Australian Institute of Company Directors (WA Division). A former Managing Director of Western Power Corporation - a major government trading entity - Mr Eiszele has held national leadership roles as a member of the Business Council of Australia and Chairman of ESAA. He holds a Diploma of Civil Engineering and a Master of Business Administration Degree. He is a past Fellow of the Institution of Engineers Australia and Australian Institute of Management.



Professor Ian Constable AO FAICD [Managing Director \(Until 28th February 2009\)](#)

In 1975 Professor Ian Constable was appointed by the University of Western Australia to the Lions Foundation Chair of Ophthalmology. He was recruited from the USA where he served as a Clinical Retinal Fellow at the Massachusetts Eye and Ear Infirmary and a Harvard University lecturer. In 1983 Professor Constable led the establishment of the Lions Eye Institute. He heads UWA's Centre for Ophthalmology and Visual Science and is Deputy Chair of the Western Australian Science and Innovation Council. He is also past President of the Asia Pacific Academy of Ophthalmology, an association serving more than half the world's blind.



Professor David Mackey [Managing Director \(From 1st March 2009\)](#)

Professor David A Mackey was born and educated in Tasmania, studying Medicine at the University of Tasmania. After resident years in Launceston and Hobart he trained in Ophthalmology at the Royal Victorian Eye and Ear Hospital, subsequently doing a fellowship in Paediatric and Genetic eye diseases at the Royal Children's Hospital where he completed his MD thesis. After fellowships at the Johns Hopkins Centre for Hereditary Eye Diseases in Baltimore and Moorfields Eye Hospital and the Great Ormond Street Hospital for Sick Children in London he returned to Australia to specialise in genetic eye diseases.



Brian King AM MBE [Non-executive Director](#)

With his long standing association with Lions Clubs International including 19 years as Chairman of the Lions Save-Sight Foundation, Mr King played a lead role in the creation of the Lions Eye Institute. He was appointed as LEI founding Chairman in 1983 and continuously held this position until his retirement on 31 December 2004. Mr King is a former general insurance executive and in 1981 was appointed a Member of the British Empire. In 2004 he was honoured with a Member of the Order of Australia for service to the community.



John Atkins B.Juris, LLB, LLM, FAICD [Non-executive Director](#)

John Atkins is Chairman, Western Australia - ANZ. Before joining ANZ, Mr Atkins was Head of the Perth office of national law firm, Freehills. In addition to his role at ANZ, he is also non-executive chairman of the nickel exploration company, Breakaway Resources Ltd, non-executive director of listed engineering services company PearlStreet Limited, non-executive director of financial services company Australian Finance Group Ltd, Director and Vice President of the Chamber of Commerce and Industry, Member of the Council of Presbyterian Ladies College and Deputy Chairman and former Chairman of Committee for Perth. Mr Atkins is an experienced commercial lawyer and has substantial strategic planning, business building and corporate realignment experience.



William Bloking FAICD [Non-executive Director](#)

William (Bill) Bloking joined the Board in 2003. Mr Bloking is currently Chairman of KAL Energy, Norwest Energy, Cool Energy, the National Offshore Petroleum Safety Authority, and Cullen Wines (Australia) and he is a director of Nido Petroleum, the John Holland Group, Australia Asia Energy, and the West Australian Symphony Orchestra. He is also a Governor of the American Chamber of Commerce in Australia, a Fellow of the Australian Institute of Company Directors, an Adjunct Professor at Murdoch University, and a Councillor of the Western Australian Division of the Australian Institute of Company Directors.



Rudolf Brunovs FAICD [Non-executive Director](#)

Rudolf Brunovs joined the Board in 2005. He is a Fellow of the Institute of Chartered Accountants, CPA Australia and the Australian Institute of Company Directors, and holds a Masters of Business Administration. Mr Brunovs retired as a partner of the chartered accounting firm Ernst & Young on 30 June 2006 after 27 years as a partner in a number of their offices. He is currently a Director and the Principal of Mainstay Consulting Pty Ltd and a Director of Deep Yellow Limited.



Michele Dolin FAICD [Non-executive Director](#)

Ms Dolin joined the Board in 2003. She holds a Masters Degree in Arts from Michigan State University and an MBA from the University of Melbourne. She is a Director of the Association of Superannuation Funds of Australia, and a Fellow of the Australian Institute of Company Directors, Fellow and Life Member of the Australian Institute of Management and a Senior Fellow of the Financial Services Institute of Australia. Ms Dolin has held senior executive positions at BankWest, Westpac and Challenge Bank and is the Pro-Chancellor, Curtin University.



Our Patron [Sir James Cruthers AO](#)

Sir James Cruthers had a long career in the media and entertainment industry, receiving his knighthood for service to commerce, the community and the arts. After war service he was appointed a journalist with the Perth Daily News. In 1958 he became founding General Manager of TVW Channel 7 and later Chairman. Past chairmanships include the Australian Film Commission and News American Publishing Inc where he was personal adviser to Mr Rupert Murdoch. Sir James is a philanthropist who established TVW Telethon and the WA annual Christmas Pageant. He actively supports many charitable groups.

Corporate Governance Statement

The Lions Eye Institute exists to:

- conduct research into the causes, prevention and treatment of diseases and conditions giving rise to blindness and other ocular disorders on a not-for-profit basis;
- advance the standards of medical eye care through education and training of the medical and allied professions; and
- stimulate public interest in the social and economic impact of eye disease through promotion of eye health awareness, community screening programs and population research relevant to prevention of blindness.

In meeting its obligations to the community the Institute adheres to high standards of corporate governance as a limited liability company with not-for-profit and Tax Exempt Gift Recipient status.

Board of Directors

Our Board of Directors comprises six non-executive directors, including the Chairman, and one executive director, the Managing Director. Directors each give of their expertise and time on a voluntary basis. There was no change in the compilation of the Board in 2008, other than the appointment of Professor David Mackey from 1st March 2009. Professor Ian Constable stepped down from the position of Managing Director on 28th February 2009.

The Board provides strategic guidance to Institute management to ensure the quality, efficiency and longevity of our research, clinical, teaching and community activities.

The Board and Institute management continued their ongoing implementation and subsequent annual review of the strategic plan introduced to formalise the future direction of the Institute. This plan will assist us in achieving our principal objective of eliminating avoidable blinding eye disease.

The Board formally meets eleven times a year and on other occasions as required. It receives regular and detailed financial and operational reports from senior management. Upon request, senior management attend Board meetings, provide briefings and respond to questioning by Directors.

An Investment Committee and an Audit & Risk Committee operate to assist the Board to fulfil its obligations.

Executive Committee

Our Executive Committee consisting of the Managing Director, Director of Research, Director of Clinical Services, Director of Development, Director of Nursing, Chief Financial Officer and Head of Information Technology meets bi-monthly to discuss key budgetary, operational and strategic activities. In addition, Associate Professors Bill Morgan and Mariapia Degli-Esposti have been co-opted onto the committee.

Financial reporting

The Institute's financial year ended on 31st December 2008. Our Managing Director signed off on the annual financial reporting process on behalf of the Board, advising that to the best of his knowledge the financial statements provided a true and fair view of the financial position of the Institute.

Audit governance

The Institute engages Grant Thornton (WA) Partnership as an external audit team to independently review its financial reports and uphold the integrity of the reporting process.

Risk management

In order to reduce exposure to insurable risk the Institute has in place a risk management plan. This plan has effect across all business activities and is regularly reviewed to safeguard our reputation and financial security. Additionally, the Institute maintains a comprehensive insurance program.

Accreditation of clinical services

The Lions Eye Institute's Clinical Services Division has received ISO9001 accreditation as part of World's Best Practice for delivery of outstanding patient care. Patients who receive treatment at our Day Surgery Unit, Laser Vision Centre and Patient Clinic do so in the knowledge that they will receive expert and personal care.

Introducing Professor David Mackey



The annual Ian Constable Lecture in September 2008 offered its audience their first glimpse of the changing face of LEI, introducing then Associate Professor David Mackey as LEI's newly appointed Managing Director.

Professor Ian Constable, LEI's founding and only Managing Director, will step down from this role in February 2009. His successor Professor Mackey brings to the Institute a wealth of experience and is recognised internationally for his research on the genetics of eye disease. An ophthalmologist specialising in genetic eye diseases, Professor Mackey is an outstanding medical scientist with extensive publications.

Premier Colin Barnett, who met Professor Mackey at the 25th Anniversary Dinner in October, said he was delighted an ophthalmologist of such standing was coming to Western Australia. In acknowledging the exceptional talent and great achievements of WA's science community, the Premier said that Professor Mackey would contribute a significant amount to the state's reputation and expertise.

Recognising Professor Constable's outstanding leadership and extraordinary research capacity, Premier Barnett also affirmed his confidence in Professor Mackey's ability to continue to meet the high standards set by the Institute.

Professor Constable is confident that LEI will prosper under Professor Mackey's leadership, with his record in ophthalmic genetics and research enhancing the Institute's reputation and

enabling it to continue to flourish.

Professor Constable will continue seeing patients and researching eye disease at the Institute.

A word from Professor David Mackey

"I first came to Perth during the America's Cup defence in 1987, which was also the year I started my ophthalmology training. What struck me about Perth and WA was the excitement, the energy and the enthusiasm, not only in the social, political and business arenas, but in terms of academia and research as well. I believe this is still true.

I have big shoes to fill. Ian Constable was another boy from outside Western Australia, but he saw the opportunities and had the vision to nurture LEI. I will be coming to a very well developed organisation, but one that still has tremendous potential to grow and expand to maintain its leading edge.

I'm a specialist ophthalmologist for genetic eye diseases. Thanks to studying genetics, we have made major advances in our knowledge of eye disease. The human genome project is revealing that genetics is involved in almost all aspects of disease, even events like trauma and infection. At LEI, I will continue my genetics work, but will be involved in almost all areas of ophthalmology and eye care. I am as interested in people and their eye problems as I am in working in the laboratory.

Introducing Professor David Mackey

As an eye doctor you are inside in the dark for much of the time, so most of my recreational activities focus on enjoying the outdoors: I am an avid bushwalker, having done a fair bit of walking in Tasmania. I'm looking forward to discovering the Bibbulmun Track and hope to do it in segments. I also enjoy sailing, swimming, surfing, kayaking and skiing. Whilst I have explored the south-west of WA to some extent, I haven't seen the northern part and am immensely excited about the prospect of

exploring it. In coming to WA, I will have worked in all four corners of the country and I've experienced a lot of Australia, but the West is my new frontier.

It is a privilege to take the Institute into its next quarter-century of advanced medical research and outstanding eye care. This is an exciting time to be involved in medical research, and the Lions Eye Institute is the place to be if you want to make a difference to people and their health."



Professor David Mackey with Founding Chairman Brian King at the 25th Anniversary Dinner

Centre for e-Health

Distance often poses difficulties for people when they need specialist health care, which is why LEI's Centre for e-Health concentrates on providing rural and remote communities with better options for disease screening, diagnosis and treatment.

The Centre for e-Health advances understanding of clinical conditions by capitalising on its strengths in e-medicine, decision support, medical imaging and computer aided tools. Its efforts have already resulted in the transfer of clinical information and data via the internet becoming more prevalent within the medical community.

The Centre has developed innovative digital imaging technology such as the multipurpose diagnostic device and software for high volume screening and diagnosis of debilitating eye diseases including diabetic retinopathy and glaucoma. Technology under development has many other potential uses in fields including dentistry, dermatology and otolaryngology.

The research and development of affordable, portable and non-invasive diagnostic tools, intelligent electronic medical record systems, imaging algorithms and computer aided diagnostic software are the focal points of the Centre's research.

The Centre also concentrates on providing vital clinical services in rural and remote areas and educating and training healthcare professionals in telemedicine and the management of medical data. Technology and medicine are intertwined in the twenty first century and LEI's position in this key field is enviable.

Research outcomes & highlights

- At the 2008 WA Inventor of the Year Awards Professor Yogesan Kanagasingam was awarded Runner Up in the Early Stage category and received the Mitsubishi Corporation Encouragement Award for the development of i-Test. This low cost vision testing software enables adults and children to self-test for vision abnormalities.
- The Centre conducted the third Continuing Professional Development/Continuing Medical Education e-Health and Telemedicine workshop to educate GPs, nurses and health

care specialists in the area of telemedicine and medical/nursing informatics.

- Funding was received from the State Health Research Advisory Council (SHRAC) of the Department of Health in WA to validate novel diagnostic screening technology and telemedicine based follow up care of newborns and children.
- Professor Kanagasingam was invited to convene the Electronic Health Record Systems and Teleophthalmology Instruction Course at the prestigious American Academy of Ophthalmology Annual Meeting in Atlanta, USA. He also chaired the Teleophthalmology Symposium at the World Ophthalmology Congress in Hong Kong.
- The Centre received funding from the Commonwealth Department of Health and Ageing to validate a cost effective telemedicine system comprising of a low cost, easy to operate multipurpose imaging device, web-based telemedicine and electronic referral system, computer aided vision testing, and clinical decision support system.
- Development of a non-invasive glucose measurement device; low cost diagnostic technologies; clinical decision support tools to aid early diagnosis and monitoring of retinal diseases such as glaucoma, and web-based telemedicine and computer aided diagnosis systems.



*Professor Yogesan Kanagasingam,
Director, Centre for e-Health*

Sponsors

- NHMRC
- LSSF
- MHRIF
- SHRAC
- Commonwealth Department of Health and Ageing



Associate Professor Ian McAllister, Director, Clinical Services

The Lions Eye Institute has a strong history of clinical research bringing laboratory generated ideas and techniques to fruition. Additionally, the clinic provides a living clinical laboratory for the measurement of disease and associated factors that may be altered to improve disease understanding and outcome. Throughout 2008, areas of clinical research included:

- Participation in a wide range of international multicentre clinical drug trials, notably for age-related macular degeneration (AMD), which remains the commonest cause of blindness in our community.
- Ongoing development of several laboratory generated ideas and techniques into useful clinical tools, mainly for glaucoma, retinal vascular disease, cataract and corneal diseases.
- Surgical and medical audits to monitor and improve treatment outcomes using conventional therapies.
- Assessment of physiological disease hypotheses, such as the study of vein pathology in the causation of glaucoma, conducted in collaboration with other WA ophthalmologic groups.
- Studying causes of blindness, their associations and Aboriginal eye health, again conducted in collaboration with the Association for the Blind of WA and other WA ophthalmologic groups.

We have eleven specialty trained ophthalmologists here at the Institute; all have particular expertise in branches of ophthalmology. In 2008, some 38,000 patients visited LEI with some 2700 surgical procedures being performed and over 2000 Avastin/Lucentis ocular injections were given for some of the retinal disorders listed above.

Several ophthalmologists have their own clinical databases. Data collected on patients is used for audits, clinical trials and the assessment of various hypotheses concerning disease causation. The Institute is currently working towards integrated electronic clinical record keeping to maximise usage of this research resource. In 2009, we will welcome Professor David Mackey who will become Managing Director. He has extensive clinical research experience and is keen to optimise the utilisation of this large database.

Associate Professors Barrett and Crawford and Dr. Wiffen pursued their work improving the corneal graft and LASIK refractive surgery outcomes. Associate Professor Crawford

actively modifies and optimises artificial cornea outcomes. Professor Barrett has developed new techniques for improving the predictability of cataract surgery outcomes in unusual and difficult circumstances such as in patients who've had extensive refractive surgery.

Associate Professor McAllister has continued to refine and develop laser techniques for treating blinding vein occlusions and is a key investigator on studies to reduce retinal swelling and vision loss following venous occlusions. Professor Constable continues his very active clinical management role and is currently developing techniques for repairing genetic defects. These two professors and Dr Isaacs are conducting nine separate multicentre clinical drug trials investigating new therapies for the treatment of retinal macular degeneration, retinal swelling disorders, diabetic retinopathy, and retinal vascular occlusions which are responsible for 65% of blindness in WA. We have been most fortunate that the Lions Save-Sight Foundation purchased an Optical Coherence Tomography scanner specifically for this and other research at the Institute.



Dr Adam Gajdatsy

Doctors deSousa and Gajdatsy play key teaching roles for both medical students and registrars. They have been at the forefront in the application of new ocular plastic and orbital surgical techniques.

Doctor Mei-Ling Tay-Kearney is a key investigator on several multicentre international drug trials for improving outcomes in chronic ocular inflammatory



Dr Antonio Giubilato

disease in both adults and children. These studies involve inserting slow release devices into the eye as well as more traditional injections and eye drop application methods.

Doctor Giubilato and Associate Professor Morgan have been active in conducting drug trials and audits of difficult surgical glaucoma cases. Associate Professor Morgan is involved in studies to monitor retinal veins features to improve glaucoma treatment. He has also performed one of the first new microfistula tube insertions for glaucoma and is a principal investigator in a large statewide blindness study.

Clinical research at LEI has enormous breadth, studying a wide range of common blinding conditions, making significant advances in the treatment and understanding of these diseases. The increased community wide and international collaboration has greatly increased the power of this work. We are proud to have wonderful clinic staff who are most accommodating to the extra demands placed upon them for the purposes of research. In particular we thank our clinical research coordinators Lynne Smithies, Milada Zlatnik, Caroline Adams and Rachel Trotter.



Assoc. Prof. Mariapia Degli-Esposti, Director, Immunology & Virology

The Immunology and Virology Group studies how the immune system deals with challenges imposed by infection and malignancy with the aim of defining the requirements for optimal immunity to pathogens and cancer.

Many viruses cause systemic as well as ocular disease. Our research uses a model of a chronic viral infection that can cause severe ocular complications, as well as significant systemic disease, especially in immunocompromised hosts. Much of the disease caused by this virus may be prevented by a better understanding of the immune responses required to limit chronic infection. Our research over the last few years has focused on understanding how immune responses can be improved to better control ongoing viral infection. Seminal research findings from our group have provided novel and exciting insights into the requirements for effective immune responses able to limit chronic viral infection.

These findings have attracted much attention and have been the subject of numerous invited presentations at premier medical conferences both in Australia and overseas.

In addition, our group has continued to investigate the mechanisms used by viral pathogens to subvert host physiological responses. Pathogens achieve this by producing viral proteins that mimic, interfere with, or alter important cellular functions. Dr Christopher Andoniu's team has identified and characterised several viral proteins that interfere with programmed cell death or apoptosis. Insights into how apoptotic pathways may be modulated can be used to design improved treatments for degenerative eye diseases caused by inappropriate cell death.

Although a number of eye diseases have an immune component, knowledge of immune responses in the eye remains limited. In 2008, we were fortunate to recruit Dr Martin Zinkernagel to

our research team. Dr Zinkernagel, a Swiss ophthalmologist, has a strong interest in the immunology of the eye and is pursuing innovative and exciting research to define the causes of eye diseases that have an immune component.

2008 also saw further developments in the area of immunology with the establishment of the Centre for Ocular Immunology at the Institute. The Centre is a joint initiative between LEI and the Faculty of Medicine and Dentistry at The University of Western Australia. The Centre was established to foster new and inspiring collaborations between researchers with an interest in ocular immunology. We were fortunate to attract Professor McMenemy to LEI for a sabbatical period through this initiative.

Research Outcomes & Highlights

- Defined the requirements for efficient long term immune responses.
- Defined the requirements for improved control of chronic viral infections.
- Defined the molecular basis of virally induced immune suppression.
- Defined novel aspects of programmed cell death.
- Identified viral proteins that interfere with programmed cell death.
- Invited to numerous international premier conferences.
- Establishment of the Centre for Ocular Immunology.

Major Sponsors

- NHMRC
- MHIRF

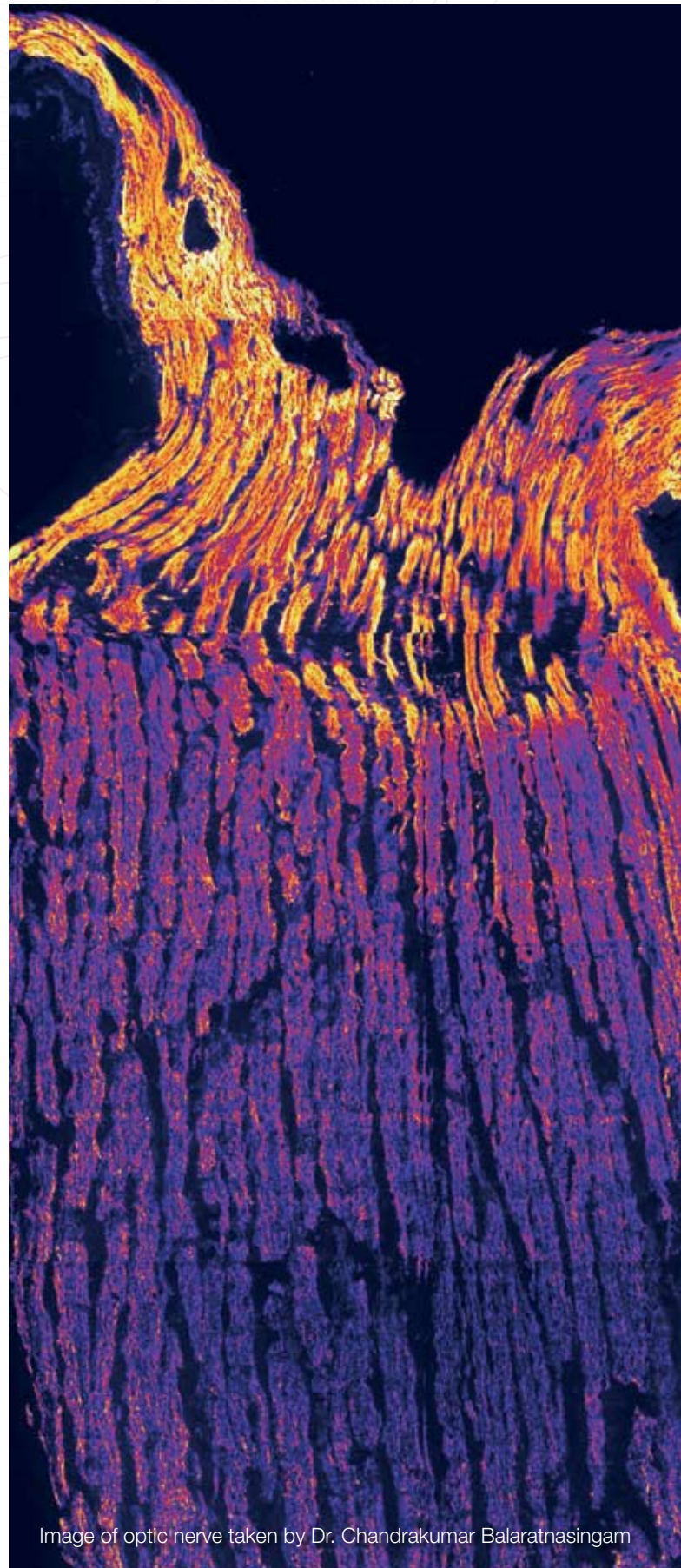


Image of optic nerve taken by Dr. Chandrakumar Balaratnasingam

Our group is interested in diseases of the eye which have an immune or inflammatory basis. Much of this work arose out of ongoing laboratory research over the past 15 to 20 years into the basic biology of ocular Dendritic cells and macrophages. In 2008 Professor Paul McMenamin, who has 30 years of experience in eye research, moved to LEI for his sabbatical year from his home school of Anatomy & Human Biology at The University of Western Australia. This allowed him to immerse himself in a more research intensive environment with basic cellular immunologists including Associate Professor Mariapia Degli-Esposti and Dr Tony Scalzo, molecular biologists and eye researchers such as Professor P. Elizabeth Rakoczy, and a number of leading ophthalmologists.



*Prof. Paul G McMenamin, Co-Director,
Ocular Immunology*

Approaches to the research questions of interest to Professor McMenamin's group have recently begun to incorporate the use of newly available

transgenic (knock-out and knock-in) and chimeric mice. These have been added to an arsenal of investigative tools that include immunofluorescence microscopy, confocal microscopy and now the new Heidelberg scanning laser ophthalmoscope with OCT function.

Using genetically modified animals we have also recently begun to look at novel methods of visualising immune cell function and biology in living eyes and their role in models of common eye diseases. These novel methods of visualising immune cells are possible because the transgenic mice have a 'green fluorescent protein' inserted as a 'reporter gene' alongside a gene which encodes a receptor only expressed by certain immune cell types, enabling us to watch the behaviour of these tagged cells over time. The possibilities for advancing our research and understanding of immune mediated forms of eye disease are endless.

Examples of projects currently underway are:

- The role of macrophages and Dendritic cells in the cornea in models of bacterial keratitis.
- The role of macrophages and Dendritic cells in a model of posterior uveitis.
- Examining the effects of inflammation on the progression of diabetic retinopathy.
- The role of age, pigmentation and immune cells in the pathology of age related macular degeneration.
- Comparative anatomy of the eye, including the retinal vascular anatomy of marsupials.
- Development of the eye.

Research outcomes and highlights

- Completion and passing of PhDs by Holly Chinnery and Jelena Kezic.
- Submission of M.Sc. by Kelly Banz.
- Completion of B.Med.Sci degrees by Timothy Humphries and Louise Walker.
- Co-supervision of new PhD students, Nina Vagaja and Dr Martin Zinkernagel.
- Publication of a large number of major papers.
- Publication of the third edition of a major



Prof. Paul McMenamin's photo of a macrophage within the subretinal space from human developing eye appeared on the cover of *The Journal of Clinical and Experimental Ophthalmology* (Vol 36, No 7 2008)

textbook "The Eye: Basic Sciences in Practice" with colleagues in the UK.

- Publication of 'The Ida Mann Lecture' (RANZCO lecture in 2007).
- Successful visits to several UK and US laboratories to observe new techniques and establish collaborative links.
- Successful establishment of a 'Centre for Ocular Immunology' within LEI.
- Success in obtaining major NHMRC funds for 2009-2011.

Sponsors

- 2008-2010 Establishment of 'Centre for Ocular and Experimental Immunology'. Source: VC Discretionary Funds, Dean's Discretionary Fund, Faculty of Medicine, Dentistry and Health Science, Lions Eye Institute

Age-related Macular Degeneration

We continued to pursue the necessary regulatory approvals for the Phase I gene therapy clinical trial of age-related macular degeneration (AMD). We were requested to make a CTX application to the Therapeutics Goods Administration (TGA) authority of Australia. The CTX application procedure (normally used for the introduction of new drugs into the Australian market) was specifically extended to our gene therapy trial.

In 2008, several milestones were reached:

- The Human Ethics submission to Sir Charles Gairdner Hospital (SCGH) Human Ethics Committee was submitted in November 2008. The ethics approval and the signature of the Agreement between SCGH and LEI are expected to be finalised in March 2009.
- The TGA submission was completed in late November. In January 2009, the TGA advised that it had granted approval to start human Phase I clinical trial for the administration of gene therapy for AMD. This is a major milestone that ensures the timely start of the Phase I clinical human toxicity trials in 2009.

- LEI and Avalanche Biotechnologies signed a Memorandum of Understanding for the commercialisation of the gene therapy treatment.

With all these developments, the Molecular Ophthalmology AMD gene therapy project has achieved all its objectives that were set out 15 years ago.

Diabetic Retinopathy

The Group has continued to focus its attention on the identification and characterisation of biomarkers for diabetes related complications with the aim of developing early warning tests. To date, we selected 5 biomarkers for diabetic retinopathy. We started to characterise these markers on our animal models that were developed specifically for these studies. To expand the potential value of the newly identified markers we set up collaboration with diabetic nephropathy experts, Drs Terry Allen and Karin Jandeleit-Dahm at the Baker Institute, Melbourne.

Research outcomes & highlights

- Completion of large animal data interpretation for AMD gene therapy
- New animal model for diabetic retinopathy complications

Sponsors

- UWA
- Retina Australia
- LSSF
- Western Australian Retinitis Pigmentosa Foundation

The Molecular Ophthalmology group has continued to focus on two diseases: Age-related Macular Degeneration (AMD) and Diabetic Retinopathy (DR).



Dr. Nicolette Binz, Senior Research Officer

Physiology & Pharmacology Group

The Physiology and Pharmacology Group at LEI has continued to make significant progress in its efforts to develop new therapeutic and diagnostic approaches to the major sight threatening diseases in clinical ophthalmology. These diseases include diabetic retinopathy, age-related macular degeneration, retinal vascular diseases and glaucoma. During 2008, the group submitted more than twenty papers for publication in international ophthalmic journals with twelve already accepted for publication. The diverse range of topics studied included the development of novel therapeutic and diagnostic techniques that have evolved from our basic research programme. Several of our projects have advanced to the pre-clinical and clinical trial stage.

The Group's US based development partners recently raised further funding to continue with the commercialisation of our new technology for treating glaucoma. This technology, based on new concepts that have been proven by long term basic research, could provide a completely new approach to glaucoma surgery in clinical ophthalmology and benefit millions of glaucoma patients worldwide. There is also the possibility of a significant funding boost to LEI and UWA through established licensing agreements.

Over the past 25 years the Physiology and Pharmacology Group has been supported by National Health and Medical Research Council program and project grants, Australian Research Council Centre of Excellence grants, as well as industry and international funding. In a further boost to its funding, the Physiology and Pharmacology team was invited to be part of an extension bid with the Australian Research Council Centre of Excellence in Vision Science. If successful, the extension bid will see the Groups' ARC funding extend into 2013, and provide a significant expansion of its research funding base.

Research outcomes & highlights

- Established new areas of investigation in fields such as novel drugs for the prevention of scarring following glaucoma surgery,



Dr. Chandrakumar Balaratnasingam, Ophthalmology registrar

vascular and structural changes in the ageing human eye, and new techniques using lasers for intraocular surgery.

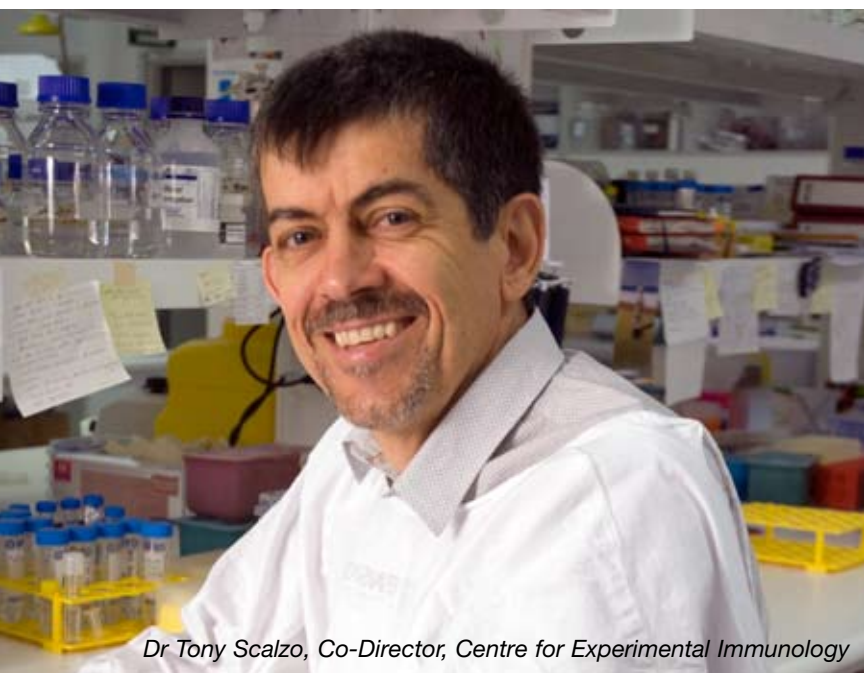
- Submitted more than 20 papers to peer reviewed journals in 2008.
- Expanded collaborative links with research groups in the USA, China and India.

Sponsors

- NHMRC
- ARC Centre of Excellence in Vision Science
- State Government of Western Australia (MHRIF)
- UWA

Within the Centre for Experimental Immunology at LEI sits the Viral Immunogenetics Group. This group's research focuses on providing insights into novel mechanisms of viral immune evasion. This is considered to be an important step on the path towards developing therapies that limit the severity of viral diseases, including those that affect vision.

Severe acute diseases, caused by numerous viruses, can result in widely varying outcomes from death to being cured. A number of viruses have, over many years, evolved with their hosts and adopt quite different strategies for their life cycles. While large DNA viruses such as cytomegalovirus (CMV) generally cause only asymptomatic infection in healthy individuals, they can be lethal or cause diseases such as retinitis in immunosuppressed individuals.



Dr Tony Scalzo, Co-Director, Centre for Experimental Immunology

The work in this Group consists of several major themes. Firstly, we are investigating the influence of host resistance genes that limit the severity of infection and which regulate NK cells, a key anti-viral effector cell. Research has shown that mouse CMV replication is regulated by the *Cmv1* locus that encodes an NK cell activation receptor Ly49H. However, CMV can escape Ly49H surveillance by the emergence of escape mutants

in the m157 ligand and many variants of m157 exist that engage inhibitory Ly49 receptors.

The entry of large DNA viruses into target cells is dependent on a number of viral proteins and we are presently studying a CMV protein called M73.5 that appears to have an important role in replication in mouse fibroblasts. This knowledge of how proteins are involved in viral entry may lead to the development of new strategies for controlling viral infections. This is pivotal for vaccine design.

Research outcomes & highlights

- Investigating the consequences of sequence variability of the MCMV m157 protein. These studies have defined differences in m157 binding to both activating and inhibitory NK cell receptors from a range of different inbred mouse strains.
- Showing that a viral immune evasion molecule that can bind a cell adhesion molecule can affect viral virulence through effects on cytotoxic T cell responses and by regulating cytokine and chemokine production.
- Demonstrating that CMV encodes a spliced viral gene involved in supporting viral replication and these spliced genes and transcripts are present in a range of betaherpesviruses.

Sponsors

- NHMRC
- MHRIF

Our Clinical Services



Julie Robson, Clinic Practice Manager with clinic staff

The clinic continued to meet our patients' needs this year by expanding its services to the first floor and providing state of the art equipment and dedicated staffing. Our services included numerous ongoing clinical trials in collaboration with a number of international clinics. The continued expansion of our Murdoch satellite centre also provided a more comprehensive service to all patients in the southern metropolitan area.

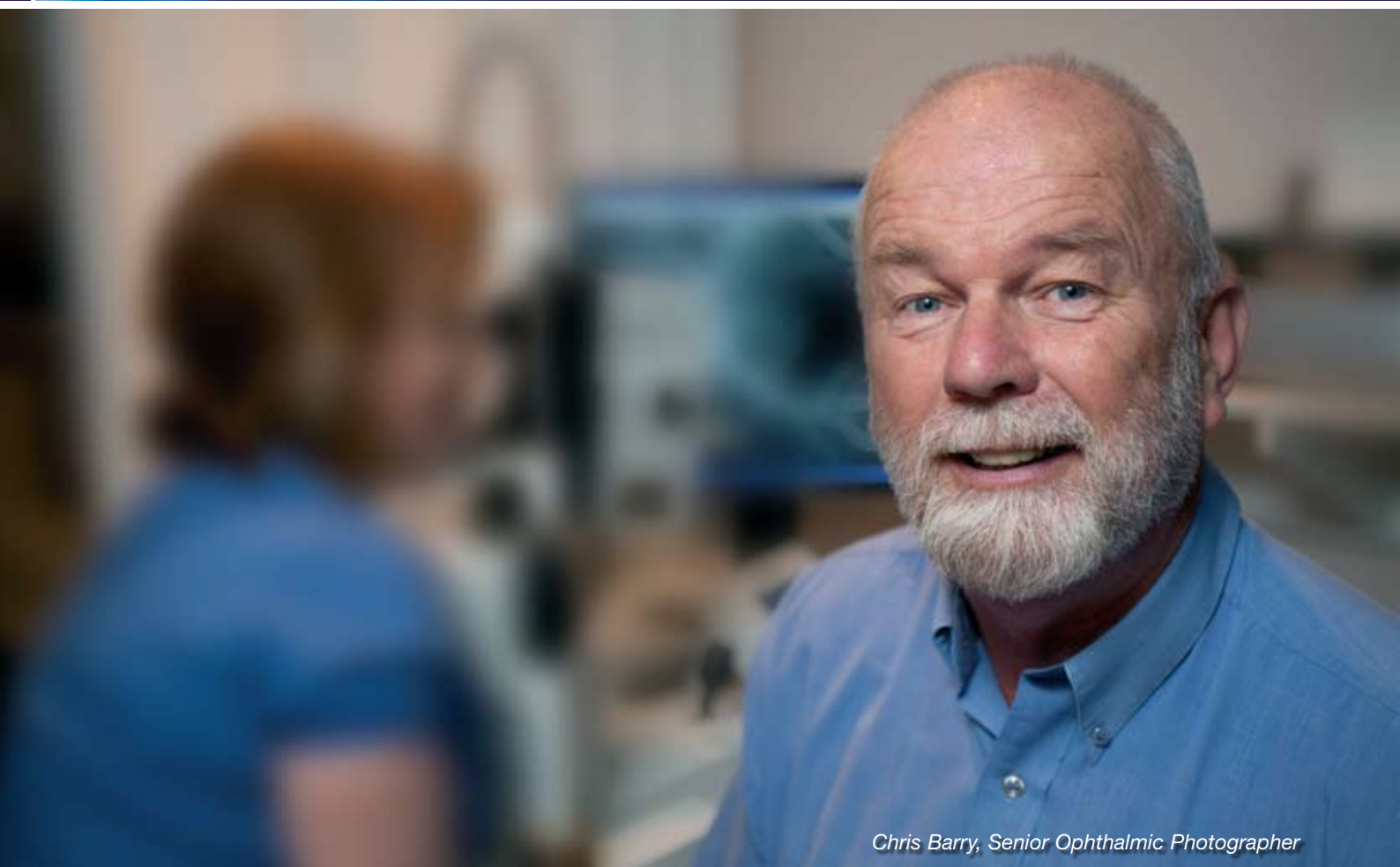
Day Surgery procedures increased to record numbers and we continued to offer patients a wide variety of surgery options that can be performed on a day basis at the Institute. As part of our accreditation process patients were audited to assess our standard of care. The results were impressive and our staffs' contribution significantly affected this result.

The Laser Vision Centre continued to provide excellent service to their refractive patients and our Intralase machine has proved to be



Elizabeth Zambotti, Director of Nursing

Our Clinical Services



Chris Barry, Senior Ophthalmic Photographer

outstanding technology. During the year we also upgraded the Centre's website, making it more interactive and beneficial to potential patients considering such procedures.

The photography department continued to provide a high quality service to both our general and clinical trial patients. LEI's senior ophthalmic photographer, Chris Barry, is renowned for his many local and international awards.

The Clinical trials team continues to provide a holistic service to both our ophthalmologists and the general community and their dedication is exceptional. It is vital to the Institute and the community that we take part in clinical trials, which in the longer term may find treatments for many of the diseases that we currently deal with. We look forward to the many challenges in the future and the contribution of all who work here.



Frank Shilton, Ophthalmic Photographer

The Lions Eye Bank

The Lions Eye Bank of Western Australia was established in 1986 and over the last 22 years has been responsible for the collection, processing and distribution of over 3,000 corneas. It is also the role of The Lions Eye Bank to maintain a waitlist of patients who require corneal transplant operations. The number of people waiting, fluctuates over time and until recently the waitlist had continued to gradually increase. Last year, with the supplementation of corneas from interstate sources, there was a 20% reduction in the number of patients waiting for a cornea. During 2008, 41 of the 129 corneal transplants performed were received from Eye Banks in other States.

In 2008, The Lions Eye Bank collected a total of 139 corneas, of which 129 were suitable for transplantation, while 76 sclerae were provided for surgery.

A secondary role of The Lions Eye Bank is to assist in providing eye tissue for research. This can only occur with the fully informed consent of the donor families and is additional to the consent given for eye tissue to be used for transplantation. Research is supplementary to eye tissue donation and complements its use as some parts of the eye are not transplantable. Occasionally, after assessment and examination, corneal tissue may be considered unsuitable for transplantation but may still be suitable for use in ethically approved research projects.

The Lions Eye Bank is supported by each individual who chooses to register as an eye donor and their families who support this choice by giving their consent. We are immensely grateful to all these people. Their altruistic donation means that we are able to continue the work we do in the WA community and provide the chance of sight, or an improved quality of life, for those with eye diseases.

If you are considering registering as an eye tissue donor, please contact the Australian Organ Donor Register on 1800 777 203 for an

information booklet, or collect one from LEI or any Medicare office. Please remember it is critical to discuss your decision with your family. Once a registered donor has made their wishes clear, their family or next of kin will usually confirm the decision to donate.



Dr Steve Wiffen, Director of The Lions Eye Bank

Lions Optics

Conveniently located adjacent to LEI is Lions Optics, which offers both eye examinations and a wide range of spectacles, contact lenses, sunglasses and accessories. Lions Optics offers the combined expertise of two optometrists and a qualified optical dispenser, ensuring our clients receive the highest standard of clinical care. Now in its second decade of operation, all profits from Lions Optics are directed towards LEI's sight saving research. Standard optometrist examinations can be bulk billed to Medicare and Lions Optics is a HBF Gold participating provider. For further information or an appointment please telephone (08) 9381 3860.

Our Clinicians

Associate Professor Graham Barrett

Keratorefractive surgery, corneal and anterior segment disorders and surgery



Trained in ophthalmology in Perth, Western Australia, Associate Professor Barrett undertook specialty training in the USA. He is a consultant ophthalmic surgeon and Head of Department at Sir Charles Gairdner Hospital. Associate Professor Barrett is founding and current president, Australasian Society of Cataract & Refractive Surgeons and president, Asia Pacific Association of Cataract and Refractive Surgeons. He is the recipient of major international awards including the Ridley Medal (European Society of Cataract & Refractive Surgeons), the Binkhorst Medal (American Society of Cataract & Refractive Surgeons) and the Ridley Medal (Congress of German Ophthalmic Surgeons).

Professor Ian Constable AO

Vitreoretinal surgery, retinal vascular disease, diabetic retinopathy, macular degeneration



Professor Constable trained in ophthalmology in New South Wales before being appointed as Clinical Retinal Fellow at the Massachusetts Eye and Ear Infirmary and a Lecturer at Harvard University. He is a consultant retinal surgeon at Royal Perth, Sir Charles Gairdner and Princess Margaret Hospitals and was Managing Director at LEI from 1983 to February 2009.

Associate Professor Geoffrey Crawford

Corneal disorders and surgery, cataract and refractive surgery, oculoplastic surgery



Associate Professor Crawford completed his ophthalmic training in Western Australia before undertaking further sub-specialty training in cornea and refractive surgery at Moorfields Eye Hospital, London, and Emory University, Atlanta, USA. He is Director of Surgical Services at LEI and a consultant ophthalmic surgeon at Royal Perth and Princess Margaret Hospitals. Associate Professor Crawford has held many positions within RANZCO including Director of Continuing Professional Development, inaugural Chairman of the

Programme Committee and Chairman of Examiners. He is a co-inventor of the AlphaCor™ artificial cornea and developed the techniques of its insertion. He also introduced LASIK surgery to Western Australia.

Dr Jean-Louis deSousa

Oculoplastics, orbital and lacrimal surgery, cosmetic eyelid surgery



Dr deSousa trained in ophthalmology in Perth before completing fellowships in ophthalmic plastic and reconstructive surgery in Oxford and East Grinstead in the UK. He is a member of the Australian and New Zealand Society of Ophthalmic Plastic Surgeons. A consultant ophthalmologist at Royal Perth Hospital he also provides ophthalmic services to the central wheatbelt from Merredin. Dr deSousa is the WA representative for continuing professional development and a basic sciences examiner for RANZCO.

Dr Adam Gajdatsy

Oculoplastic and cosmetic eye surgery



Dr Gajdatsy trained in ophthalmology in Western Australia before undertaking fellowship training in oculoplastic, lacrimal and orbital surgery at the University Hospital of Wales, Cardiff, and Moorfields Eye Hospital, London. He is consultant ophthalmic surgeon at Sir Charles Gairdner Hospital and an honorary consultant ophthalmologist at Princess Margaret Hospital. Dr Gajdatsy is a State Councillor for RANZCO, a Fellow of the Australian and New Zealand Society of Ophthalmic Plastic Surgeons and coordinator of ophthalmology teaching at UWA. His research interests currently include novel methods of eyelid reconstruction and tear drainage following chemotherapy for breast cancer.

Dr Antonio Giubilato

Glaucoma



After training in ophthalmology in Perth, Western Australia, Dr Giubilato underwent specialty fellowship training in glaucoma at the Royal Victorian Eye and Ear Hospital. This included both clinical and surgical management of glaucoma as well as research into new

therapies for the condition. He is presently consultant ophthalmologist in the Glaucoma Clinic at Royal Perth Hospital and also consults at Bentley Hospital for public patients. Dr Giubilato is currently Director of Training for the WA branch of RANZCO and an LSSF Board Member.

Dr Tim Isaacs

Vitreoretinal surgery, diabetic retinopathy, macular degeneration, retinal vascular disease



After training in ophthalmology in the UK, Dr Isaacs completed sub-specialty training in vitreoretinal surgery at Royal Perth Hospital and Sir Charles Gairdner Hospital. He is a consultant ophthalmologist at Royal Perth Hospital and also practises at LEI's satellite clinic at Murdoch. His research interests include the evaluation of new therapies for diabetic retinopathy and macular degeneration. Dr Isaacs is also actively involved in third world ophthalmology and the provision of high volume cataract surgery in Nepal.

Associate Professor Ian McAllister

Vitreoretinal surgery, retinal vascular disease, diabetic retinopathy, macular degeneration, ocular trauma



Associate Professor McAllister undertook training in Western Australia with additional sub-specialty training in vitreoretinal disorders in the USA. He is Director of Clinical Services at LEI and a consultant ophthalmologist at King Edward Memorial Hospital for Women and the Royal Perth, Sir Charles Gairdner and Princess Margaret Hospitals. Associate Professor McAllister is actively involved in research for cures for vitreoretinal disorders, especially retinal vascular disorders, and has held six NHMRC grants in this area. He has been involved for many years in statewide diabetic retinopathy screening and treatment services and coordinates and reviews photographs from diabetic screening in remote parts of Western Australia. Associate Professor McAllister is currently vice chairman of the Ophthalmic Research Institute of Australia and has been chairman of the Research Board for many years.

Associate Professor William Morgan

Glaucoma, ophthalmic public health



Also trained in Perth, Western Australia, Associate Professor Morgan undertook his fellowship at the Centre for Ophthalmology and Visual Science based at LEI. A consultant ophthalmologist at Royal Perth and Princess Margaret Hospitals, he is an Associate Professor at UWA and also Co-Director of LEI's McCusker Glaucoma Centre. He has completed a doctorate in philosophy studying the response of the optic nerve to pressure, particularly in relation to glaucoma. Associate Professor Morgan maintains an active research interest in glaucoma as well as the epidemiology of blinding eye disease and aboriginal eye disease.

Dr Mei-Ling Tay-Kearney

Opportunistic infections, uveitis and inflammatory disorders of the eye



Dr Tay-Kearney completed her medical training in Perth, Western Australia before pursuing postgraduate study at Johns Hopkins Hospital in Baltimore, USA. In 2003 Dr Tay-Kearney was appointed Head of Department of Ophthalmology at Royal Perth Hospital. She is a Senior Lecturer at UWA and a member of the Australian Society for HIV Medicine and the Australian Uveitis Study Group. She is the Chair of Qualifications and Education as well as an Examiner for the RANZCO Part 2 College examinations.

Dr Steven Wiffen

Ocular surface disorders, corneal and refractive surgery, anterior segment disorders & surgery



Dr Wiffen trained in ophthalmology in Western Australia before undertaking fellowships at the Corneo-Plastic Unit, East Grinstead, UK, and at the Mayo Clinic, Rochester, Minnesota, USA. Dr Wiffen is a consultant ophthalmologist at Fremantle Hospital and a Senior Lecturer at UWA. He is Director of The Lions Eye Bank of Western Australia.

Our Shared Vision

"The range of specialist knowledge and skills developed at LEI in the ongoing fight against eye disease is the soul of this Institute, and our passion for finding new ways to treat patients thrives because of the continued support we receive. Treatments that now provide hope for so many people have started here as simple ideas."

Dean Darcy, Senior Technician, Department of Physiology & Pharmacology

LEI is the largest eye research facility in the southern hemisphere. With this reputation comes the responsibility of delivering world class research and clinical services. It is the ongoing attainment of these lofty goals that allow the Institute to continue to attract both individual and corporate support in the form of donations and gifts-in-kind. The Development & Media Group is responsible for securing additional financial support that assists in closing the gap between ever increasing research costs and income derived through the highly competitive grant processes.

Through a range of media and public relations activities the Development & Media Group also showcases to the wider community LEI's research successes and clinical activities.

Media Highlights

As the 25th Anniversary year for the Institute, 2008 proved to be a year of accolades, many of which were acknowledged by both local and international media. Some of the highlights reported by the media in 2008 included:

Top Honour for Top Man

Professor Ian Constable was announced the inaugural recipient of the Sir Charles Court Inspiring Leadership Award for his immense contribution to science and vision care. The award, sponsored by the Oswal Group, was presented by the Governor of Western Australia, Dr Ken Michael, at the 2008 Western Australian Citizen of the Year Awards. Joining the Governor onstage to present the award was Radhika Oswal of the Oswal Group.



Radhika Oswal from the Oswal Group presenting Professor Constable with the Inspiring Leadership Award

WA is the place to be

That's according to a Sri Lankan newspaper that detailed the virtues of WA, including the world class education that is available. The Institute rated a special mention as leading the world in investigating cataract, diabetes, glaucoma, retinal degeneration, artificial cornea and laser and gene therapies.



Assoc. Prof. Bill Morgan performs surgery on an orangutan at Perth Zoo

Helping Hsing-Hsing

The media showed strong interest in this touching story. Hsing-Hsing is the oldest male Sumatran orangutan at the Perth Zoo and suffers from glaucoma. LEI's Associate Professor Bill Morgan and other specialists donated their time and expertise to try and help cure 33-year old Hsing Hsing of glaucoma. The procedure provided valuable insight to Associate Professor Morgan and his colleagues, who were amazed at how similar the animal's eyes were to those of humans.

Inspiring inventor in double win

The media were quick to acknowledge the double accolade for the Institute's inventor, Professor Yogesan Kanagasingam. Professor Kanagasingam was a runner up in the Early Stage Category for his vision testing system and kiosks, an automated system that assesses children for blindness and vision abnormalities. The system also picked up a lucrative Encouragement Award. The success came at the WA Inventor of the Year Award, which is

administered by the Innovation Centre WA under the Department of Industry and Resources.

25th Anniversary Liftout

The media highlight of 2008 was the 25th Anniversary liftout featured in The West Australian in August. Detailing the Institute's numerous achievements over the past 25 years, the eight page liftout showcased activities from current research projects to the latest laser surgery techniques.

Student follows dream at Institute

Student Amos Ngoi secured a "dream research scholarship" to work at LEI, the media reported in December. The scholarship was part of the Science and Innovation Studentship Awards, and allows outstanding students to complete a 10-week, hands on research program at the organisation of their choice. Amos chose LEI to help develop a simple, cheap and non-invasive screening to help diagnose cataracts.

Our Shared Vision



The Premier, The Hon. Colin Barnett presenting Professor Constable with the Helen Keller Award

LSSF captures the Helen Keller Award for Professor Constable. Lions Clubs worldwide have dedicated many years of service to the eradication of preventable blindness. This has entailed the organisation and funding of many outstanding sight projects including the provision of medical facilities, research, clinical treatment and training.

As a tribute to their efforts, and to honour the work of Helen Keller, the decision was made to create an award to be presented to those whose contribution to saving sight and eye health was

exemplary. The Helen Keller Award is presented to those who have demonstrated great leadership in its many forms, conducted and supervised extraordinary research, supported clinical excellence in the treatment of patients with visual impairment, or who have provided training for those who will carry on Lions' work to save sight in the future.

The Lions Save-Sight Foundation believed Professor Ian Constable to be a worthy recipient of this prestigious award, presented at the 25th Anniversary dinner by The Premier, The Hon. Colin Barnett MLA.

Pilbara Aboriginal Eye Health Program

The regular retinal screening undertaken in 2008 in the remote indigenous communities in the Pilbara continued to promote the necessity of eye health care throughout the region. The communities of Jigalong, Karratha, Tom Price, South Hedland, Roebourne, Onslow, Yandeyarra and Mawarnkarra were included in the screening schedule conducted by eye health professional, Gwyneth White. The partnership between BHP Billiton Iron Ore and LEI to identify diabetes related eye disease continued to provide a sight saving service, along with an important awareness raising role in preventing



Director of Development, Helen Rowe with children at the Jigalong Community in the Pilbara

eye disease. Since 2004, BHP Billiton Iron Ore's generous support has enabled LEI to play a major role in its quest to eradicate preventable blindness in the region.

LEI and BHP Billiton Iron Ore remain totally committed to improving eye health in remote Aboriginal communities and will continue to work with local indigenous health agencies and eye health specialists to ensure better outcomes are achieved in these communities in the future.

Community Support

Gerry Hanssen is a local builder whose company Hanssen Pty Ltd constructed the current LEI premises. It was this interaction that inspired him to conduct annual fundraising on behalf of the Institute. "Professor Constable's dedication to his work and commitment to his patients has inspired me to do whatever I could to support the Institute" said Gerry Hanssen. In 2008, his fundraising luncheon raised over \$20,000. Since 2001, Mr Hanssen's company has raised in excess of \$150,000 for the Institute. Ongoing contributions such as Gerry Hanssen's are critical as they allow the benefits of fundraising to be consolidated over time.

A keen eye

An eye for detail is essential in quilting - just ask the members of Born to Quilt. A dozen Perth and Geraldton based members worked for a year to complete a vibrant sixteen-panel quilt which they then donated to LEI. The exquisite quilt was a much sought after raffle prize at a fundraising dinner held in March 2008. LEI congratulates all Born to Quilt members on their superb quilting skills and thanks them for their very generous support.

The activities organised by the Born to Quilt group and the Hanssen family demonstrate how easy it is to show your support for the Institute in varied and meaningful ways. LEI welcomes such support, which doesn't have to be by means or events that are beyond the reach of our many donors.

How you can help

In light of recent financial turbulence many not-for-profit organisations, including LEI, will feel the strain as donors struggle to maintain their level of commitment. Unfortunately, blindness and the critical research necessary to finding new treatments remain prevalent. The tireless research conducted at the Institute relies heavily on financial support from the wider community.

Research projects often raise just as many questions as they answer. Your donation ensures LEI has resources on hand to pursue unforeseen yet promising research opportunities as they become known. Just as significantly, these funds help cover the gap between government funding and the true costs of research.

Many people find themselves in a financial position to offer a significant gift to LEI in their lifetime. Such generous gestures inspire LEI's researchers and provide them the resources they need to succeed. Just as significantly, however, these gifts offer donors an opportunity to view first hand the impact of their generosity in the quest for answers.

As Australia's population ages, both the incidence and costs associated with blindness will increase exponentially. We must act now if we are to meet this challenge.

The Lions Eye Institute Limited is endorsed as a Deductible Gift Recipient with the Australian Taxation Office and all donations over \$2 will be receipted. For a confidential discussion on making a donation to LEI please contact the Development & Media Group on (08) 9381 0708, or alternatively:

- Forward a cheque/money order payable to the Lions Eye Institute Limited to:
**Lions Eye Institute Limited,
Reply Paid 62815, NEDLANDS WA 6009**
(no stamp required); or
- Contact the Development & Media Group on (08) 9381 0708 with your credit card details.

25th Anniversary Year Events

Gala Dinner – jewel in the crown for anniversary year

2008 proved to be a particularly busy year for the Development & Media Group with numerous 25th Anniversary events held throughout the year. A gala dinner held on Friday 24th October at The University Club, UWA, represented a highlight in the 25th Anniversary calendar and afforded an opportunity to showcase the achievements of LEI over the past 25 years.

Jeff Newman from Channel 7 kindly donated his time to MC the evening. Well known for his ongoing work in the community, notably as Telethon anchor for over 30 years, he offered some warm anecdotes of the Institute's early days and his friendship with the LEI's inaugural Chairman, Brian King.



Lorraine Strickland, Lions Save-Sight Foundation Chairman presenting to Professor Constable

One of the highlights of the evening was the presentation by the Lions Save-Sight Foundation Chairman, Lorraine Strickland, of a Heidelberg Spectralis camera. Purchased in part by a generous bequest from the estate of Josephine and Ross Spence, this camera is an all-in-one tool for retinal imaging and captures digital images of the eye. It operates at 40,000 scans per second, uses 4,000 different light sources (including infra-red), and is so powerful it can capture details of the eye's photo receptors.

With over 220 people in attendance, the dinner was a resounding success and rounded off a landmark year in the history of the Institute.

The 25th Anniversary gala dinner was made possible due to the generous support of our platinum sponsor Goldman Sachs JBWere and our gold sponsor Cullen Wines (Australia) Pty Ltd. In addition, the Institute wishes to acknowledge Rochelle Adonis Cakes & Confections for their support.



JBWere



Swan Yacht Club Fundraising Dinner

Representing the first of its kind for the Institute, a special fundraising dinner was held at the Swan Yacht Club, East Fremantle, in March 2008. LEI were very appreciative of sponsorship received from Ian Fatharhy of the Property Intelligence Group, Woodlands. A special thanks as well to strong supporter of LEI, Di Watts, who was instrumental in organising the event in conjunction with the Development Office. Many raffle prizes, ranging from magnums of champagne donated by Vintage Cellars to dinners donated by Kailis Brothers, ensured a good time was had by all. The evening proved to be a successful fundraising venture that will be held again in future years.

Family Fun

As part of its 25th Anniversary celebrations, LEI conducted an Open Day on Sunday 17th August attracting over 500 people from the wider community who took a "behind the scenes" look at the Institute. The day showcased the many and varied functions of the different departments within LEI. Tours were particularly popular and allowed visitors to receive hands on information regarding the groundbreaking work undertaken at the Institute.

The Open Day offered several activities for children including dissecting pig eyes, simple experiments, face painting for the younger visitors, and a quiz to win a digital camera, kindly donated by Peta North of Camera Solutions.



Iona Schuster, PhD student, helps children with some experiments at the Family Open Day

Other activities on the day included free glaucoma screening, eye testing and a LASIK lecture by Dr Steve Wiffen. Many visitors throughout the day welcomed the Devonshire teas and sausage sizzle provided by the Lions Save-Sight Foundation.

New Managing Director guest speaker at IJC Lecture

[“Twin studies reveal genetics don’t completely control our destiny”.](#)

The 2008 annual Ian Constable Lecture was presented by Associate Professor David Mackey. His informative lecture on gene therapy provided an insight into the role of genetics versus environmental factors on eye diseases. Associate Professor Mackey has completed extensive research into glaucoma in twins. His passion in this area of study was apparent during the lecture and he fielded many interesting questions from the audience of 300 attendees.

Christmas cheer to thank our supporters

The annual Visionary Luncheon was held at LEI on December 1st 2008. The event provides the

Institute the opportunity to recognise and thank some of its committed supporters.

Senior researcher, Dr Marie Estcourt, explained the role of the Experimental Immunology Group at LEI and how immunology relates to eye disease. She discussed the group’s work on understanding the interactions between the immune system and viruses, and highlighted the important role students play in furthering research at the Institute.

Professor Constable and the Institute’s Chairman, David Eiszele, were present to personally thank those in attendance for their ongoing support.

A year of reflection

Throughout 2008, our 25th Anniversary activities allowed the Institute to reflect on its past achievements and consolidate its future direction. It is now poised to move ahead with a certain pride knowing that, under the leadership of its new Managing Director, Professor David Mackey, the next 25 years offer considerable promise.

A Lasting Legacy



Kim Dutton with Dr Tay-Kearney

Seven year old Kim has a wonderful outlook on the world. She loves painting, drawing, reading and playing with her three sisters, but all this could have been very different.

Before Kim had even started school, her mother Veronique noticed that she seemed to have trouble with her eyesight, and glasses were prescribed. Kim never complained as her view of the world was all she knew, but a routine visit to her optometrist revealed that something was seriously wrong.

Within a few days Kim had been referred to LEI's Dr Mei-Ling Tay-Kearney who diagnosed intermediate uveitis in both of her eyes. Uveitis is an inflammation which occurs as the body's immune system starts to reject parts of the eye. Intermediate uveitis like that affecting Kim is generally isolated to the eyes but is still a very serious condition. If not treated promptly, it can destroy tissue within the eye leading to blindness.

Fortunately Dr Tay-Kearney, one of the world's leading specialists in uveitis and inflammatory disorders of the eye, immediately recognised

Kim's condition and put her on a course of steroids to control the inflammation. Kim's treatment regimen is still in its early days but there is little doubt that without treatment she would have suffered significant visual loss.

The vital research being carried out at LEI, which made Kim's treatment possible, relies heavily on the financial support the Institute receives from the community.

By including a bequest to LEI in your Will you can ensure the Institute remains at the cutting edge of research and clinical excellence. The value of your bequest is as significant as your decision to give, and this simple gesture will offer hope for future generations.

Making a bequest is as simple as including the following wording in your Will:

I GIVE DEVISE AND BEQUEATH to the LIONS EYE INSTITUTE LIMITED free from all duties, the following (please specify) and direct that the receipt of the Managing Director for the time being will be a sufficient discharge to my Trustees / Executor.

Preparing and updating your will is one of the most important duties you will ever undertake and ensures your estate is distributed according to your wishes. A free will and advisory service is available for anyone wishing to substantially include LEI in their will. Further information can also be found in our Preserving the Gift of Sight brochure. For a confidential discussion on including a bequest to LEI in your will or to request a brochure please contact the Development & Media Group on (08) 9381 0708.

LEI remains indebted to those who have been inspired to make a bequest to LEI. Such gestures are very much appreciated and we acknowledge with gratitude the following individuals who bequeathed to LEI during 2008:

- The Estate of the late Dulcie Armstrong
- The Estate of the late Alan & Lilian Cameron
- The Estate of the late Margaret Kerman
- The Estate of the late John Marion
- The Estate of the late Evelyn Marlam
- The Estate of the late Toh Hong Tan

A generous gift

Mrs Dulcie Armstrong first came to LEI in 1991 to consult with Associate Professor Geoffrey Crawford regarding removal of a cataract from her right eye. After striking her face in a fall in 2001, she experienced pain and flashes in her eye and was referred to Professor Ian Constable. Diagnosed with a sub-retinal haemorrhage, Mrs Armstrong visited the clinic several times over the next few years for treatment. The care she received at LEI enabled her to continue her active lifestyle, including playing Mahjong with an old friend. LEI would like to acknowledge the generous bequest made by Mrs Armstrong and her compassion for others afflicted with blinding eye disease.

Tribute to a fine lady

It was with great sadness that LEI learned of the passing of benefactor and patient Miss Elizabeth Read. Afflicted with glaucoma for 35 years, Miss Read was so inspired by LEI's groundbreaking research she made a substantial contribution with the view to establishing an ongoing scholarship to further the Institute's scientific capabilities. Despite only having 10 per cent vision in one eye, Miss Read was an active person and a regular visitor to LEI.



Elizabeth Read with the plaque to acknowledge her generous donation

Appointments, Awards & Honours

"As my boss said, when you get the science correct everything else will come looking for you - awards, honours and appointments. However, we scientists and researchers underestimate the influence of public relations and media - they can help bring public awareness, funding and recognition for both the individual and the Institute."

*Professor Yogesan Kanagasigam, Director of LEI's
Centre for e-Health*

Dr Christopher Andoniou

Australasian Society for Immunology - Treasurer
NK2008 - 11th Meeting of the Society for
Natural Immunity - Chair, Scientific Program

Assoc. Prof. Graham Barrett

American Society of Cataract and Refractive
Surgery - Member

Asia Pacific Association of Cataract and
Refractive Surgeons - President

Asia Pacific Region of the International Society of
Refractive Keratoplasty - International
Representative

Australasian Society of Cataract and Refractive
Surgeons - President

International Intraocular Implant Club - Secretary

International Society of Refractive Keratoplasty
- Member

Sir Charles Gairdner Hospital - Head of
Department; Consultant Ophthalmologist

University of Western Australia - Senior Lecturer

Chris Barry

Australian Institute of Medical and Biological
Illustration - Fellow

Ophthalmic Photographers' Society - Fellow

Zeiss Calender Competition - Winner

Dr Nicolette Binz

Lions Save-Sight Foundation - Brian King
Fellowship

Dr Holly Chinnery

Association for Research in Vision and
Ophthalmology - International Travel Grant;
Runner Up, The Cora Verhagen Prize for Ocular
Immunology

Australian Society of Immunology - Best Post-
Doctoral Presentation, Perth Immunology Group
Meeting.

Australian Society for Medical Research
Symposium - Department of Health Award for
Best Student Presentation

University of Western Australia - PhD awarded

Prof. Ian Constable AO

Lions Eye Institute Limited - Managing Director

Academia Ophthalmologica Internationalis -
Member

Asia Pacific Academy of Ophthalmology - Past-
President

Scientific Advisory Council, Western Australian
Institute for Medical Research - Member

State Facilities Council for Centres of Excellence
- Member

State Health Research Advisory Council -
Member

University of Western Australia - Foundation
Lions Professor of Ophthalmology, Centre of
Ophthalmology and Visual Science

West Australian Science and Innovation Council
- Deputy Chairman

Assoc. Prof. Geoffrey Crawford

Lions Eye Institute Limited - Director of Surgical Services; Director, Laser Vision Centre

Australian Society of Cataract and Refractive Surgeons - Executive Committee Member

Princess Margaret Hospital - Consultant Ophthalmic Surgeon

Royal Australian and New Zealand College of Ophthalmologists (WA Branch) - Executive Committee Member

Royal Perth Hospital - Consultant Ophthalmic Surgeon

Tokushima University, Japan - Visiting Professor

University of Western Australia - Associate Professor of Ophthalmology, Centre of Ophthalmology and Visual Science

Assoc. Prof. Mariapia Degli-Esposti

Lions Eye Institute Limited - Co-Director, Centre for Experimental Immunology

Immunology and Cell Biology Journal, Editorial Board - Member

NHMRC - Recipient of two new Project Grants

NK2008 - 11th Meeting of the Society for Natural Immunity - Chair

Dr Jean-Louis deSousa

Australian and New Zealand Society of Ophthalmic Plastic Surgeons - Member

Royal Australian and New Zealand College of Ophthalmologists - Fellow; CPD representative; Basic sciences examiner

Royal Perth Hospital - Consultant Ophthalmologist

Dr Marie Estcourt

Raine Foundation - Raine Priming Grant

RG Menzies Foundation - Board Member

RG Menzies Memorial Scholar Association - Treasurer/Secretary

Dr Adam Gajdatsy

American Academy of Ophthalmology - International Member

Australian and New Zealand Society of Ophthalmic Plastic Surgeons - Fellow

Princess Margaret Hospital - Honorary Consultant Ophthalmologist

Royal Australian and New Zealand College of Ophthalmologists - Fellow; State Councillor

Royal College of Physicians of the UK - Member

Sir Charles Gairdner Hospital - Consultant Ophthalmic Surgeon

University of Western Australia - Senior Lecturer; Teaching Coordinator, Ophthalmology; Postgraduate Anatomy Lecturer

Dr Antonio Giubilato

Lions Save-Sight Foundation - Board Member

Royal Australian and New Zealand College of Ophthalmologists (WA Branch) - Director of Training (WA)

Royal Perth Hospital - Consultant Ophthalmologist, Glaucoma Clinic

Dr Tim Isaacs

Royal Australian and New Zealand College of Ophthalmologists - Fellow

Royal Perth Hospital - Consultant Ophthalmologist

The Royal College of Ophthalmologists (UK) - Fellow

Appointments, Awards & Honours

Prof. Yogesan Kanagasingam

Lions Eye Institute Limited - Director, Centre for e-Health

WA Inventor of the Year Awards 2008 - Runner Up in the Early Stage category; Mitsubishi Corporation Encouragement Award

American Academy of Ophthalmology - Member/Teleophthalmology Course Coordinator

Australasian Telehealth Society - President

Digital Imaging and Communication in Medicine - Committee Member of Working Group 9 to establish international digital imaging standard in ophthalmology

International Council on Medical and Care Compunetics, Holland - Vice President of Board of Directors

International Society for Telemedicine and e-Health - Member of the Scientific Advisory Committee

National Health and Medical Research Council - Senior Research Fellow

Standards Australia - Member of Telehealth Sub-committee

University of Western Australia - Professor, Centre of Ophthalmology and Visual Science

WA Department of Health - Committee Member of Health Network Telehealth Innovation Group

Dr Jelena Kezic

University of Western Australia - PhD awarded

Dr Andrea Khong

University of Western Australia - PhD awarded

Assoc. Prof. Ian McAllister

Lions Eye Institute - Deputy Director, Clinical Services; Consultant Ophthalmologist

American Academy of Ophthalmology - Member

Australian Foundation for the Prevention of Blindness - Director

Australian Medical Association - Member

Cleveland Ophthalmological Society - Member

Cocos Keeling Islands & Christmas Island, Indian Ocean - Visiting Consultant Ophthalmologist

Hollywood Private Hospital - Consultant Ophthalmologist

King Edward Memorial Hospital - Consultant Ophthalmologist

Northern Greece Ophthalmological Society - Member

Oceanic Retina Association - Member

Princess Margaret Hospital - Consultant Ophthalmologist

Retina Society - Member

Royal Australian College of Ophthalmologists - Member

Royal Australian College of Surgeons - Member

Royal Perth Hospital - Consultant Ophthalmologist

Sir Charles Gairdner Hospital - Consultant Ophthalmologist

University of Western Australia - Associate Professor of Ophthalmology, Centre of Ophthalmology and Visual Science

Assoc. Prof. William Morgan

Lions Eye Institute Limited - Consultant Ophthalmologist

Association for the Blind of Western Australia - Honorary Ophthalmic Consultant to the Board of Directors

Australian New Zealand Glaucoma Interest Group - Board Member

Curtin University - Associate Professor

Goldfields Trachoma and Eye Health Program for Aboriginal Communities - Consultant Ophthalmologist

National Health and Medical Research Council - Chair, Development of Guidelines for the Management of Glaucoma Working Committee; Training Awards Committee - Member Assessment Panel

Princess Margaret Hospital - Consultant
Ophthalmologist

Royal Australian and New Zealand College of
Ophthalmologists - Member

Royal Australian College of Surgeons - Fellow

Royal Perth Hospital - Consultant
Ophthalmologist

University of Western Australia -
Associate Professor

Dr Tony Scalzo

Lions Eye Institute Limited - Co-Director, Centre
for Experimental Immunology

Frank Shilton

Ophthalmic Photographer Society - Member

Certified Retinal Angiographer

Dr Mei-Ling Tay-Kearney

Australian Society for HIV Medicine - Member

Australian Uveitis Study Group - Member

International Ocular Inflammation Society -
Member

Royal Australian and New Zealand College of
Ophthalmologists - Qualifications and Education
Committee Chair, RACE Examiner

Royal Perth Hospital - Head of Department of
Ophthalmology

University of Western Australia - Senior Lecturer

Ireni Ali Rahman

University of Western Australia - Edward Ardnt
Fund Travel Grant

Prof. P. Elizabeth Rakoczy

Lions Eye Institute Limited - Head of Molecular
Ophthalmology

University of Western Australia - Director of
Research, Centre of Ophthalmology and Visual
Science

Animal Resources Authority of Western Australia
- Board Member

Association for Research in Vision and
Ophthalmology - International Member
Committee (invited committee member)

International Society for Eye Research -
Membership Committee Member

National Health and Medical Research Council -
Invited Medical Science Reviewer

Raine Medical Research Foundation -
Board Member

Retina International - Scientific Medical Advisory
Board Member

Retina International Scientific Committee -
Committee Member

International Society for Ophthalmology and Cell
Biology (ISCOB) - Organizing Committee
Member; Foundation Board Member

Dr Steven Wiffen

The Lions Eye Bank of Western Australia - Director

Fremantle Hospital - Consultant Ophthalmologist

University of Western Australia - Senior Lecturer

Prof. Dao-Yi Yu

Lions Eye Institute Limited - Director, Physiology
and Pharmacology Centre, Centre of
Ophthalmology and Visual Science, Co-Director,
McCusker Glaucoma Centre, Centre of
Ophthalmology and Visual Science

Dalhousie University, Canada - Professor
(Adjunct),

Fudan University, Shanghai, China - Professor
(Adjunct),

Murdoch University, Perth - Professor (Adjunct),

University of Western Australia - Professor

Elizabeth Zambotti

Australian Day Hospital Association - President
(WA); Executive Committee Member

Australian Day Nurses Association - Member

Australian Private Hospital Association - Member

Day Surgery WA - Chair

Collaborators & Visitors

"Collaborations increase success as they engage multiple people to work together towards a common goal. LEI encourages participation in science networks by sharing learning and resources not only locally but also nationally and internationally. We currently have exciting collaborations with the Diamantina Institute and QIMR in Queensland, WEHI and the Peter MacCallum Cancer Centre in Melbourne and with the Ludwig Institute for Cancer Research in Switzerland, the latter I personally established."

Jerome Coudert, Research Fellow, Centre for Experimental Immunology

Centre for e-Health

Mr Noam Allon - Medivision, Israel

Prof. Rafat Ansari - NASA Glenn Research Center and The University of Texas School of Health Information Sciences, Houston, USA

Dr Ralph Chapman - Department of Corrective Services in Western Australia, Perth, Australia

Dr Margaret Crowley - Association for the Blind of Western Australia, Perth, Australia

Assoc. Prof. Jorge Cuadros - School of Optometry, University of California, Berkeley, USA

Assoc. Prof. Len Goldschmidt - US Department of Veterans Affairs, VA Palo Alto Health Care System, USA

Prof. Richard Hartley - Australian National University & NICTA, Canberra, Australia

Prof. Trevor Lamb - John Curtin School of Medical Research, Australian National University, Canberra, Australia

Prof. Ralph Matin - Centre of Excellence for Alzheimer's Disease Research and Care, Hollywood Hospital, Perth, Australia

Mr Uma Oza - Symphony Limited, India

Dr Brett Patterson - Institute of Photonics, University of Strathclyde, Glasgow, Scotland

Mr Michael Popovich - Scientific Technologies Corporation, Tucson, Arizona, USA

Mr Rajiv Ramaprasad - World Healthcare, Malaysia

Dynatouch - San Antonio, Texas, USA

Centre for Experimental Immunology

Dr Daniel Andrews - Cancer Immunology Program, Peter MacCallum Cancer Centre, Melbourne, Australia

Prof. Matt Brown - Diamantina Institute, University of Queensland, Brisbane, Australia

Assist. Prof. Michael Brown - Department of Medicine, University of Virginia, Charlottesville, Virginia, USA

Assist. Prof. James Carlyle - Department of Immunology, University of Toronto, Toronto, Canada

Prof. Ian Frazer - Diamantina Institute, University of Queensland, Brisbane, Australia

Prof. Werner Held - Ludwig Institute for Cancer Research, Lausanne, Switzerland

Assist. Prof. Jon Heusel - Department of Pathology, University of Iowa, Iowa City, Iowa, USA

Prof. Geoff Hill - Bone Marrow Transplant Laboratory, Queensland Institute of Medical Research, Brisbane, Australia

Dr David Huang - Molecular Genetics of Cancer Division, The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia

Prof. Stipan Jonjic - Department of Histology and Embryology, University of Rijeka, Rijeka, Croatia

Prof. Lambert Loh - University of Saskatoon, Saskatchewan, Canada

Prof. Andrew Makrigiannis - ICRM, McGill University, Montreal, Canada

Prof. Paul McMenam - School of Anatomy and Human Biology, University of Western Australia, Perth, Australia

Prof. Mark Smyth - Cancer Immunology Program, Peter MacCallum Cancer Centre, Melbourne, Australia

Prof. Ranjey Thomas - Diamantina Institute, University of Queensland, Brisbane, Australia

Prof. Giorgio Trinchieri - Cancer and Inflammation Program, Laboratory of Experimental Immunology, Center for Cancer Research, National Cancer Institute, Frederick, Maryland, USA

Prof. Rolf Zinkernagel - Institute for Experimental Immunology, University Hospital Zurich, Switzerland

[Molecular Ophthalmology](#)

Assoc. Prof. Terri Allen - Baker Heart Research Institute, Melbourne, Australia

Prof. Chong-Lye Ang - Singapore Eye Research Institute, Singapore

Dr Lee Shu Yen - Singapore Eye Research Institute, Singapore

Dr Nigel Barnett - Vision, Touch & Hearing Research Centre, School of Biomedical Sciences, University of Queensland, Australia

Assoc. Prof. Sarah Dunlop - Department of Animal Biology, University of Western Australia, Perth, Australia

Prof. Miranda Grounds - School of Anatomy and Human Biology, University of Western Australia, Perth, Australia

Prof. Kristina Narfstrom - College of Veterinary Medicine, University of Missouri, Columbia, USA

Prof. Jude Samulski - University of North Carolina, USA

Prof. Terry Speed - Department of Statistics,

UCLA and Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia

[Ocular Immunology](#)

Prof. John Forrester - Department of Ophthalmology, University of Aberdeen, Foresterhill, Aberdeen, Scotland, UK

Prof. Eric Pearlman - Director of Research, Department of Ophthalmology and Visual Sciences, Case Western Reserve University, Cleveland, USA

Prof. Charles NJ McGhee - Chair, Department of Ophthalmology, University of Auckland, New Zealand

Dr Martin Zinkernagel - Lions Eye Institute, Perth, Australia

Dr Shirley Sarks and Dr Svetana Cheparoff - Prince of Wales Medical Research Institute, Sydney, Australia

Dr Simon Watkins - Department of Cell Biology and Physiology, School of Medicine, University of Pittsburgh, USA

[Physiology & Pharmacology](#)

Prof. Balawantray Chauhan - Dalhousie University, Nova Scotia, Canada

Prof. Tom Gardner - Penn State University, Pennsylvania, USA

Prof. Wenyi Guo - Fudan University, China

Prof. Mark Humayun - Doheny Eye Institute, California, USA

Prof. Trevor Lamb - Australian National University, Canberra, Australia

Prof. Jonathan Stone - Australian National University, Canberra, Australia

Prof. Xinghuau Sun - Fudan University, China

Dr Xiaobo Yu - Fudan University, China

Dr Gerhard Zinser - Heidelberg Engineering, Germany

AqueSys - USA

Iridex Corporation - USA

Pharmaxis - Australia

Conferences & Invited Lectures

"The Ophthalmologists and staff at the Institute attend a number of conferences throughout the year in their various sub specialities. These local and international conferences allow the Institute to showcase our clinicians' work and it allows us to foster relationships. It is an important aspect of our work to gather with colleagues and display our commitment to ongoing clinical research."

Elizabeth Zambotti, Director of Nursing

January 2008

Keystone Symposium on Viral Immunity
(Colorado, USA)

Assoc. Prof. Mariapia Degli-Esposti

Invited plenary lecture: Regulation of innate and adaptive immunity.

February 2008

Australian Cornea and Eye Bank Meeting
(Brisbane, Australia)

Assoc. Prof. Geoffrey Crawford

Keystone Symposium on NK/NKT Cell Biology
(Colorado, USA)

Assoc. Prof. Mariapia Degli-Esposti

Invited plenary lecture: Interplays between mouse NK cells and dendritic cells.

31st Annual Meeting of the Japanese Society of
Ophthalmic Surgeons (Yokohama, Japan)

Assoc. Prof. Graham Barrett

Invited Speaker: Co-axial micro-incision surgery:
Reducing the incision size without compromise.

Invited Speaker: Monovision - An alternative solution
for unaided near vision after cataract surgery.

March 2008

Asia Cornea Society (Singapore)

Assoc. Prof. Geoffrey Crawford

Invited speaker: My personal experience with
AlphaCor™.

Australian and New Zealand Glaucoma Interest
Group (Melbourne, Australia)

Dr Steve Cringle, Min Kang, Prof.
WH Morgan, Prof. Dao-Yi Yu

Oral: Preliminary results of phase two venous
pulsation study trial suggest that retinal vein
alterations occur following treatment of glaucoma.

Dr Antonio Giubilato

Singapore National Eye Centre (Singapore)

Assoc. Prof. Graham Barrett

Oral: Choice of viscoelastic - Healon - Healon 5.

Oral: Choice of Phaco machine - Stellaris.

Oral: Choice for near vision - Monovision.

April 2008

American Society of Cataract & Refractive
Surgeons (Chicago, USA)

Assoc. Prof. Graham Barrett

Oral: Minimise incision size without compromise.

Association for Research in Vision and
Ophthalmology Annual Meeting (Fort Lauderdale,
USA)

Dr Holly Chinnery

Poster: TLR ligand-induced keratitis is partially
restored in TLR-/- chimeric mice by donor TLR+
bone marrow-derived cells in the corneal stroma.

Dr Tim Isaacs

Panel Member

Prof. Paul McMenamin

Invited speaker: Turnover of bone marrow
derived cells in the varied microenvironments of
the eye: The use of chimeric mice to study novel
adaptations for immune surveillance in the eye.

Ireni Ali Rahman

Poster: Long-Term Upregulation of Endothelin-2 in a VEGF-Driven Mouse Model (trVEGF029) of Retinal Neovascularisation (RNV).

Prof. PE Rakoczy

Oral: Preclinical Evaluation of rAAV.sFlt-1 in Monkeys: Toxicity and Biodistribution.

Dr May Lai

Poster: Characterization of the Akimba mouse, a diabetic mouse with ocular and renal changes.

[Australasian Academy of Facial Plastic Surgeons Annual Meeting \(Perth, Australia\)](#)

Dr Jean-Louis deSousa

Invited speaker: Periorbital flaps and total eyelid reconstruction.

[International Ophthalmic Meeting \(Bali, Indonesia\)](#)

Assoc. Prof. Ian McAllister

Invited Speaker: History of the ophthalmoscope.

Invited Speaker: Changing trends in retinal detachment treatment.

Invited Speaker: Current management and trends in central retinal vein occlusion.

[Innate Sculpting of Adaptive Immunity 2008 \(Hamilton Island, Queensland\)](#)

Assoc. Prof. Mariapia Degli-Esposti

Invited symposium lecture: Interactions between innate and adaptive immune effectors shape anti-viral immunity.

May 2008

[Department of Immunology, Imperial College \(London, England\)](#)

Dr Holly Chinnery

Oral: Membrane nanotubes in vivo: a novel feature of MHC class II+ DCs in the mouse cornea.

June 2008

[Aachen Regional Ophthalmologists Meeting - "Wie entsteht der Zentralvenenpuls" \(Aachen, Germany\)](#)

Assoc. Prof. Bill Morgan

Invited Speaker: The significance of Ophthalmodynamometry in assessing the probability of progression in glaucoma.

[European Glaucoma Society Meeting \(Berlin, Germany\)](#)

Dr Antonio Giubilato

[Indigenous Health Summit \(Melbourne, Australia\)](#)

Prof. Yogesan Kanagasingam

[The Australian Society for Medical Research Symposium \(Perth, Australia\)](#)

Dr Holly Chinnery

Oral: Membrane Nanotubes In Vivo: A Feature of MHC Class II+ Cells in the Mouse Cornea.

Dr Jelena Kezic and Prof. Paul McMenamin

Oral: Differential turnover rates of monocyte-derived cells in varied ocular tissue microenvironments.

[University of Cologne Ophthalmology Department Meeting \(Cologne, France\)](#)

Assoc. Prof. Bill Morgan

Invited Speaker: The significance of Ophthalmodynamometry in assessing the probability of progression in glaucoma.

[World Ophthalmology Conference \(Hong Kong\)](#)

Assoc. Prof. Graham Barrett

Oral: Prevention and management of tear in capsulorhexis.

Oral: Approaches to biometry in patients who have had corneal refractive surgery.

Assoc. Prof. Geoffrey Crawford

Invited speaker: Outcomes for AlphaCor™ artificial cornea.

Dr Steve Cringle, Min Kang, Assoc. Prof. Bill Morgan, Er-Ning Su, Prof. Dao-Yi Yu, Paula Yu, Xiaobo Yu

Oral: Role of conjunctival lymphatics in glaucoma drainage surgery.

Conferences & Invited Lectures

Dr Steve Cringle, Assoc. Prof. Bill Morgan, Prof. Dao-Yi Yu

Oral: Applications of cross-linked gelatin in ophthalmology.

Prof. Yogesan Kanagasingam

Presenter: Diabetic Retinopathy Screening and other Roles for Telemedicine for the Developing World Symposium.

Chair: Teleophthalmology Symposium.

Elizabeth Zambotti

2nd Australian Vaccine and Immunotherapeutics Development (Surfers Paradise, Australia)

Assoc. Prof. Mariapia Degli-Esposti

Invited main symposium lecture: Improving anti-viral immunity: a key to eliminating persistent viral infections.

July 2008

ARVO Summer Eye Research Conference - Ocular Autoimmunity and Inflammation (California, USA)

Dr Jelena Kezic and Prof. Paul McMenamin

Oral: Investigating the role of Cx3cr1 and resident versus haematogenous cell contributions in the early pathogenesis of Experimental Autoimmune Uveoretinitis.

Prof. Paul McMenamin

Oral: Resident and migrant ocular dendritic cells.

Australasian Society of Cataract & Refractive Surgeons (Coolum, Australia)

Assoc. Prof. Graham Barrett

Assoc. Prof. Geoffrey Crawford

St Vincent's Institute Melbourne, Seminar Series (Melbourne, Australia)

Assoc. Prof. Mariapia Degli-Esposti

Invited seminar lecture: Novel insights into the critical requirements for the control of persistent infections.

August 2008

31st Annual Meeting of the Australasian Flow Cytometry Group (Perth, Australia)

Dr Marie Estcourt

Invited Speaker: Cytomegalovirus Infection: Unraveling Immune Responses Using A Flow Cytometer

The Royal Australian and New Zealand College of Ophthalmologists Queensland Branch Meeting - Oculoplastics (Gold Coast, Australia)

Dr Jean-Louis deSousa

Western Australian Vision Education Conference (Perth, Australia)

Dr Jean-Louis deSousa

Invited speaker: Orbital disease.

Dr Mei-Ling Tay-Kearney

Oral: Gene Therapy for the Treatment of Age-Related Macular Degeneration.

September 2008

Association for Medical Education in Europe Workshop (Prague, Czech Republic)

Prof. Paul McMenamin

Oral: Body Painting: practical applications.

European Society of Cataract & Refractive Surgeons (Berlin, Germany)

Assoc. Prof. Graham Barrett

Invited Speaker: Why I wouldn't use multifocals. What are the alternatives?

Assoc. Prof. Geoffrey Crawford

Invited speaker: Correction of post-keratoplasty astigmatism with a crescentic corneal wedge excision.

Pathology Seminar Series (Cleveland, USA)

Prof. Paul McMenamin

Oral: Newly discovered membrane nanotubes on corneal DCs in vivo may be a novel means of cell-cell communication in an immune privileged tissue.

Retina Society (Scotsdale, USA)

Assoc. Prof. Ian McAllister

Invited Speaker: The central vein bypass study - a randomised multi-centre prospective controlled trial of laser induced chorioretinal venous anastomosis for central retinal vein occlusion.

[The Royal Australian and New Zealand College of Ophthalmologists WA Branch Meeting \(Perth, Australia\)](#)

Dr Holly Chinnery

Oral: The use of transgenic mice to explore corneal immunology.

Dr Jelena Kezic and Prof. Paul McMEnamin

Oral: Using transgenic mouse models as a tool to explore ocular autoimmune disease.

October 2008

[11th Meeting of the Society of Natural Immunity \(Fremantle, Australia\)](#)

Dr Anthony Scalzo

Symposium Speaker: Consequences of NKC and viral variation on mouse NK responsiveness.

[58th Annual Meeting, The Society of Pelvic Surgeons \(Sydney, Australia\)](#)

Prof. Paul McMEnamin

Presidential Panel: Anatomy of the lymphatic drainage in the pelvis: The role of lymphadenectomy.

[AMD Congress \(Florence, Italy\)](#)

Dr Tim Isaacs

[Australian Private Hospital Association National Conference \(Adelaide, Australia\)](#)

Elizabeth Zambotti

[NK2008 - 11th Meeting of the Society for Natural Immunity \(Perth, Australia\)](#)

Dr Christopher Andoniou

Oral: Interactions between innate and adaptive immune effectors shape anti-viral immunity.

[Perth Immunology Group, Inaugural Western Australian Meeting for the Australian Society for Immunology \(Perth, Australia\)](#)

Dr Holly Chinnery

Oral: Resident bone marrow-derived macrophages and dendritic cells regulate TLR4- but not TLR2- induced corneal inflammation.

Dr Jelena Kezic and Prof. Paul McMEnamin

Oral: Investigating the role of resident versus haematogenous cell contributions in the early pathogenesis of EAU.

[WA Health Conference \(Perth, Australia\)](#)

Prof. Yogesan Kanagasingam

Presentation: Tele-ophthalmology services to reduce the long wait-list at public hospitals and to reduce cost of delivery of eye care in WA.

[1St StgN Dendritic Cell Workshop, Singapore Immunology Network \(Biopolis, Singapore\)](#)

Assoc. Prof. Mariapia Degli-Esposti

Invited plenary lecture: Interactions between innate and adaptive immune effectors shape anti-viral immunity.

November 2008

[American Academy of Ophthalmology Annual Meeting \(Atlanta, USA\)](#)

Assoc. Prof. Graham Barrett

Award Recipient: ISRS (International Society of Refractive Surgeons) Casebeer Award.

Prof. Yogesan Kanagasingam

Instruction Course Convenor: Electronic Health Record Systems (EHR) and Teleophthalmology.

[Asia Pacific Academy of Cataract & Refractive Surgeons \(Bangkok, Thailand\)](#)

Assoc. Prof. Graham Barrett

Oral: Monovision

[Australian Ophthalmic Nurses Association WA Branch Meeting \(Perth, Australia\)](#)

Dr Jean-Louis deSousa

Invited speaker: Eyelid reconstruction.

Invited speaker: Lacrimal surgery.

Conferences & Invited Lectures

[Consortium of Thailand Medical Schools Annual Conference \(Bangkok, Thailand\)](#)

Prof. Paul McMenamin

Workshop: Body Painting as an aid to medical anatomy teaching.

Plenary Lecture: Is the teaching of preclinical sciences still relevant in modern medical curricula?

[Glaucoma Society of India \(Chandigarh, India\)](#)

Assoc. Prof. Bill Morgan

Invited Speaker: Ophthalmodynamometry.

Invited Speaker: Pressure differential across optic nerve head.

[40th Annual Scientific Congress of The Royal Australian and New Zealand College of Ophthalmologists \(Melbourne, Australia\)](#)

Dr Steve Cringle, Assoc. Prof. Bill Morgan, Prof. Dao-Yi Yu

Oral: A study of cytochrome oxidase expression in the pig optic nerve head after acute IOP elevation.

Dr Steve Cringle, Assoc. Prof. Bill Morgan, Prof. Dao-Yi Yu

Oral: Pia mater is thickened at the termination of the optic nerve subarachnoid space.

Dr Jean-Louis deSousa

Oral: Ptosis repair, blepharoplasty.

Poster: Intraocular extension of squamous cell carcinoma of the conjunctiva.

Dr Anthony Giubilato
Dr Tim Isaacs
Dr Mei-Ling Tay Kearney

Oral: The players of non-infectious posterior uveitis.

Oral: Case studies in uveitis.

December 2008

[38th Annual Scientific Meeting of the Australasian Society for Immunology \(Canberra, Australia\)](#)

Dr Christopher Andoniou

Oral: Inhibition of Bax in leukocytes promotes dissemination of murine cytomegalovirus.

Dr Marie Estcourt

Oral: Innate immunity impacts anti-viral T cell responses to persisting cytomegalovirus infection.

Dr Anthony Scalzo

Invited Symposium Speaker: Consequences of NK gene complex and viral variation on mouse NK cell recognition.



Prof. Constable speaking at the World Ophthalmology Conference in Hong Kong

Publications

Publications

"Conducting basic research is a cornerstone activity of biomedical research. All the contributions from scientists around the world add incrementally to our knowledge base. Ultimately the aim of all this activity is to generate key discoveries that in the case of LEI can lead to the treatment of blinding eye disease."

Dr Tony Scalzo, Co-Director, Centre for Experimental Immunology

- Andoniou CE, Coudert JD, Degli-Esposti MA.**
Killers and beyond: NK-cell-mediated control of immune responses. *Eur J Immunol.* 2008 38:2938-2942.
- Andrews DM, Andoniou CE, Fleming P, Smyth MJ, Degli-Esposti MA.**
The early kinetics of cytomegalovirus-specific CD8+ T-cell responses are not affected by antigen load or the absence of perforin or gamma interferon. *J Virol.* 2008 82:4931-4937.
- Bahaadini K, Yogesan K.**
Gap Analysis in Telemedicine. *Journal of Telemedicine and Telecare.* 2008;14(6):326-8
- Balaratnasingam C, Morgan WH, Bass L, Cringle SJ, Yu DY.**
Time dependent effects of elevated intraocular pressure on optic nerve head axonal transport and cytoskeleton proteins. *Investigative Ophthalmology and Visual Science* 2008;49:986-999.
- Balaratnasingam C, Morgan WH, Bass L, Ye L, McKnight C, Cringle SJ, Yu DY.**
Elevated pressure induced astrocyte damage in the optic nerve. *Brain Research* 2008;1244:142-54.

Balaratnasingam C, Morgan WH, Yu DY.

Cytoskeleton proteins in the human optic nerve head. *The Journal of Ophthalmic Photography* 2008;30:41-43.

Brown MG, Scalzo AA.

NK gene complex dynamics and selection for NK cell receptors. *Semin. Immunol.* 2008;20:361-368.

Chinnery HR, Pearlman E, McMenamin PG.

Cutting edge: Membrane nanotubes in vivo: A unique morphological feature of MHC class II+ macrophages and putative DCs in the mouse corneal stroma. *Journal of Immunology* 2008;180:5779-5783.

Forrester JV, Dick A, McMenamin PG, Roberts F.

The Eye: Basic Sciences in Practice. 3rd edn. London: WB Saunders, 2008.

Foundas M, Donaldson MD, McAllister IL, Bridges LR.

Vision loss due to coincident ocular and central causes in a patient with Heidenhain variant Creutzfeldt-Jakob disease. *Case Report. Age and Ageing* 2008;37:231-232.

Iizuka K, Scalzo AA, Xian H, Yokoyama WM.

Regulation of the NK Cell Allo-reactivity to Bone Marrow Cells by the Combination of the Host NK Gene Complex and MHC Haplotypes. *J. Immunol.* 2008;180:3260-3267.

Kezic J, McMenamin PG.

Differential turnover rates of monocyte-derived cells in varied ocular tissue microenvironments. *J Leuc Biol* 2008;84(3):721-9.

Kezic J, Xu H, Chinnery HR, Murphy CC, McMenamin PG.

Retinal microglia and uveal tract dendritic cells and macrophages are not CX3CR1 dependant in their recruitment and distribution in the young mouse eye. *IOVS* 2008;49:1599-1608.

Kong X-M, Sun X-H, Yu DY, Guo W-Y, Yu X-B.

Study of retinal microvessels in a rhesus monkey model of chronic high intraocular pressure. *Veterinary Ophthalmology* 2008;11(5):321-326.

Kumar S, Yogesan K, Constable IJ.

Telemedical diagnosis of anterior segment eye

Publications

diseases: validation of digital slit-lamp still images. *Nature, Eye* (Advanced online publication). doi:10.1038/eye.2008.11: 1-9.

[Manzur M, Fleming P, Huang DC, Degli-Esposti MA, Andoniou CE.](#)

Virally mediated inhibition of Bax in leukocytes promotes dissemination of murine cytomegalovirus. *Cell Death Differ.* 2009 16:312-320.

[Mavrikakis I, DeSousa JL, Malhotra R.](#)

Periosteal fixation during subperiosteal brow lift surgery. *Dermatol Surg.* 2008;34(11):1500-6.

[McMenamin PG.](#)

Body painting as a teaching tool in medical education. *Anatomical Sciences Education* 2008;1:139-144.

[McMenamin PG.](#)

The Ida Mann Lecture: "Planet Eye". *Clin Exp Ophthalmol* 2008;36:592-599.

[Morgan WH, Balaratnasingam C, Cringle SJ, Yu DY.](#)

Glaucoma and Cerebrospinal Fluid Pressure. *Ophthalmology* 2008;115:2317-8.

[Morgan WH, Cringle SJ, Balaratnasingam C, Yu DY.](#)

Impaired cerebrospinal fluid circulation and its relationship to glaucoma. *Clinical and Experimental Ophthalmology* 2008;36:802-3.

[Morgan WH, Cunneen TS, Balaratnasingam C, Yu DY.](#)

Wearing swimming goggles can elevate intraocular pressure. *British Journal of Ophthalmology* 2008;92(9):1218-1221

[Morgan WH, Hazelton ML, Balaratnasingam C, Chan H, House PH, Barry CJ, Cringle SJ, Yu DY.](#)

The association between retinal vein ophthalmodynamometric force change and optic disk excavation *Br. J. Ophthalmol.*, Dec 2008; doi:10.1136/bjo.2008.149963

[Morgan WH, Yu DY, Balaratnasingam C.](#)

The role of cerebrospinal fluid pressure in glaucoma pathophysiology: The dark side of the optic disc. *Journal of Glaucoma* 2008;17(5):408-413.

[Morgan WH, Yu DY, Cringle SJ, Balaratnasingam C.](#)

Glaucoma and cerebrospinal fluid pressure. *Ophthalmology. Letter.* 2008;15(12):2317-2318.

[Narfstrom K, Seeliger MW, Lai CM, Vaegan, Katz ML, Rakoczy PE, Reme C.](#)

Morphological aspects on the long-term functional improvement of the retina 4 years following rAAV-mediated gene transfer in the RPE65 null mutation dog. *Adv Exp Med Biol.* 2008;613:139-46.

[Pandav S, Morgan WH, Townsend R, Cringle SJ, Yu DY.](#)

Inability of a confocal scanning laser Doppler flowmeter to measure choroidal blood flow in the pig eye. *The Open Ophthalmology Journal.* 2008;2:146-151.

[Pearlman E, Johnson A, Adhikary G, Sun Y, Chinnery HR, Fox T, Kester M, McMenamin PG.](#)

Toll like receptors at the ocular surface. *Ocular Surface* 2008;6:108-116.

[Scalzo AA, Yokoyama WM.](#)

Cmv1 and natural killer cell responses to murine cytomegalovirus. *Curr. Top. Microbiol. Immunol.* 2008;321:101-122.

[Tee LBG, Penrose MA, O'Shea JE, Lai CM, Rakoczy EP, Dunlop SA.](#)

VEGF-induced choroidal damage in a murine model of retinal neovascularisation. *Brit J Ophthalmol* 2008;92: 832-38.

[Yogesana K.](#)

Technology and Trends: The Future of Medicine. Ed. Shane Cummings. *Medical Forum WA.* 2008;1:8-10

[Yu DY, Cringle SJ, Su E-N, Sun X, Guo W, Morgan WH, Balaratnasingam C, Yu X.](#)

Retinal Cellular Metabolism and its Regulation and Control. In: *Neurovascular Medicine: Pursuing Cellular Longevity for Healthy Ageing.* Kenneth Maiese, Oxford University Press 2008;ISBN10: 0195326695

Grants

"Obtaining research grants is tougher now than at any stage in my 30 year career as an eye researcher so to remain competitive one has to work alongside the best scientists and clinicians who by closely collaborating and combining their efforts and expertise can focus on performing high quality eye research which will help combat blindness. LEI provides such an environment."

Prof Paul G McMenamin

NHMRC Senior Research Fellowship

Title: [Scalzo Research Fellowship](#).

Investigator: A Scalzo

\$109,750

NHMRC Principal Research Fellowship

Title: [Degli-Esposti Principal Research Fellowship](#).

Investigator: M Degli-Esposti

\$133,000

NHMRC Senior Research Fellowship

Title: [Yogesana Kanagasingam Senior Research Fellowship](#).

Investigator: Y Kanagasingam

\$121,500

NHMRC Project Grant

Title: [The impact of interplays between viral immune evasion proteins and host cell surface receptors on viral pathogenesis](#).

Investigator: A Scalzo

\$160,743

NHMRC Program Grant

Title: [Advanced new therapeutics and diagnostics in retinal diseases and glaucoma](#).

Investigator: D-Y Yu

\$696,835

NHMRC Project Grant

Title: [Viral interference with apoptosis: defining the mechanisms and effects on viral pathogenesis](#).

Investigator: C Andoniou, D Huang, M Degli-Esposti

\$183,700

NHMRC Project Grant

Title: [Defining the mechanisms that regulate effective long-term anti-viral immunity](#).

Investigator: M Degli-Esposti, M Smyth

\$182,364

NHMRC Development Grant

Title: [Non-mydratic retinal imager for glaucoma screening](#).

Investigator: Y Kanagasingam, F Reinholz

\$195,830

Grants

NHMRC Project Grant

Title: [Improving adaptive anti-viral responses: a key to eliminating persistent viral infection.](#)

Investigators: M Degli-Esposti, R Van der Most

\$176,340

Department of Health & Ageing

Title: [Affordable and intelligent telemedicine technology to increase early detection and prevent avoidable blindness.](#)

Investigator: Y Kanagasingam

\$179,850

Centre of Excellence

Title: [Centre of Excellence in Vision Science.](#)

Investigator: D-Y Yu

\$150,000

Ophthalmic Research Institute of Australia

Title: [Investigating the structural changes in the cells lining the retinal veins at sites vulnerable to blockage.](#)

Investigator: I McAllister et al

\$34,477

Medical & Health Infrastructure Fund - Round 11

Investigator: PE Rakoczy

\$132,969

Medical & Health Infrastructure Fund - Round 11

Investigator: D-Y Yu

\$238,844

Medical & Health Infrastructure Fund - Round 11

Investigator: A Scalzo

\$60,994

Medical & Health Infrastructure Fund - Round 11

Investigator: Y Kanagasingam

\$55,332

Medical & Health Infrastructure Fund - Round 11

Investigator: M Degli-Esposti

\$135,972

Department of Health - State Health Research Advisory Council

Title: [Research translation project](#)

Investigator: Y Kanagasingam

\$100,000

Raine Priming Grant

Title: [Immunological requirements for improved viral vaccine design.](#)

Investigator: M Estcourt

\$103,799

University of Western Australia Title: Centre for Experimental Immunology to incorporate Ocular Immunology Investigator: P McMenamin, M Degli-Esposti	\$180,000
University of Western Australia Title: Alvina King Scholarship. Investigator: I Schuster	\$19,812
Lions Save-Sight Foundation Title: Administrative support.	\$15,932
Lions Save-Sight Foundation Title: Brian King Fellowship - Post Doctoral Research Appointment. Investigator: N Binz	\$56,250
Lions Save-Sight Foundation Title: Chair, Centre of Ophthalmology and Visual Science, University of Western Australia. Investigator: IJ Constable	\$119,488
Lions Save-Sight Foundation Title: Research grant. Investigator: J Miller	\$10,000
Lions Save-Sight Foundation Title: Research support. Investigator: PE Rakoczy	\$67,490
Lions Save-Sight Foundation Title: Jack Hoffman Scholarship. Investigator: A Riono	\$20,000
Lions Save-Sight Foundation Title: Medical imaging & illustrations. Investigator: C Barry	\$14,226
DEST Title: Infrastructure Funding, Centre of Ophthalmology and Visual Science, University of Western Australia	\$593,122
Total	\$4,248,619

Financial Statements

Lions Eye Institute Limited

The Company is a charitable and public benevolent institution. The principal activities during the year were in medical research and promotion of eye care through education and training of medical and allied professions and fundraising to support research activities.

To enable measurement of our activity and performance we have included the following financial information from the Audited Special Purpose Financial Statements for the year ended 31 December 2008 and details of Research Grant Funds.

Income Statement

FOR THE YEAR ENDED 31 DECEMBER

	2008	2007
	\$	\$
Total income including research grants	13,784,655	11,586,282
Total expenditure including research expenses	<u>(11,857,401)</u>	<u>(10,281,465)</u>
Operating profit before significant items	1,927,254	1,304,817
Significant item	<u>(3,003,306)</u>	<u>(402,021)</u>
Operating (loss)/profit after significant items	(1,076,052)	902,796
Accumulated profit at the beginning of the year	<u>17,402,028</u>	<u>16,499,232</u>
Accumulated profit at the end of the year	<u><u>16,325,976</u></u>	<u><u>17,402,028</u></u>

SIGNIFICANT ITEM

Comprised of:

Fair value adjustment of investments to market value	<u>(3,003,306)</u>	<u>(402,021)</u>
Total	<u><u>(3,003,306)</u></u>	<u><u>(402,021)</u></u>

GENERAL AVAILABLE CASH AND BEQUEST FUNDS

LEI's cash and bequest funds include some amounts specifically set aside for ongoing research projects.

Donation and bequest funds are also preserved for special future projects, enabling the Institute to continually expand into new areas of research and to support the further development of existing projects that are showing promising results. Allowing for specific research funds and bequests, the general cash reserves available are:

	2008	2007
	\$	\$
Research grant funds not yet spent	3,890,971	3,282,205
Endowment Fund	8,138,877	10,271,924
General cash reserves	<u>1,725,845</u>	<u>853,504</u>
Cash at bank and bequest funds	<u><u>13,755,693</u></u>	<u><u>14,407,633</u></u>

STATISTICAL SUMMARY

	2008	2007	2006	2005	2004
	\$	\$	\$	\$	\$
Total income	13,784,655	11,586,282	12,750,609	10,788,897	9,632,690
Total expenditure	14,860,707	10,683,486	10,193,592	9,347,969	9,416,709
Net assets	16,325,976	17,402,028	16,499,232	13,942,215	12,501,287
Property, plant and equipment (net)	<u>7,049,392</u>	<u>7,054,370</u>	<u>6,790,136</u>	<u>6,848,116</u>	<u>7,051,975</u>
Average no. of FTE staff	67	69	69	93	86

Financial Statements







Balance Sheet

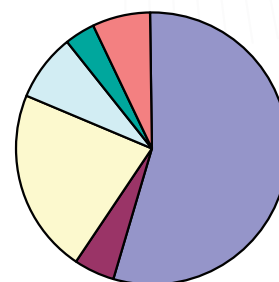
AS AT 31 DECEMBER

	2008	2007
	\$	\$
TOTAL FUNDS	<u>16,325,976</u>	<u>17,402,028</u>
Represented by:		
Cash assets	6,272,214	4,468,821
Other assets	1,576,755	938,572
Other financial assets	7,509,021	9,964,354
Property, plant and equipment	<u>7,049,392</u>	<u>7,054,370</u>
TOTAL ASSETS	<u>22,407,382</u>	<u>22,426,117</u>
Payables	1,628,256	1,185,859
Research grant funds not yet spent	3,890,971	3,282,205
Provision for employee entitlements	<u>562,179</u>	<u>556,025</u>
TOTAL LIABILITIES	<u>6,081,406</u>	<u>5,024,089</u>
NET ASSETS	<u>16,325,976</u>	<u>17,402,028</u>





INCOME FOR THE YEAR ENDED 31 DECEMBER

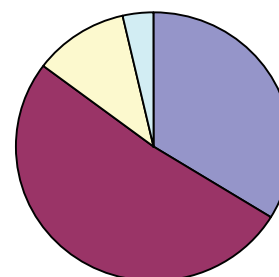
(EXCLUDING SIGNIFICANT ITEM)

		2008	2007
Clinic, Day Surgery & LASIK	A 	57%	54%
Donations & bequests	B 	6%	5%
Research grants (excludes UWA funds)	C 	22%	22%
Interest	D 	7%	8%
Optics Shop	E 	3%	4%
Other	F 	5%	7%



EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER

		2008	2007
All staffing salaries, fees & oncosts	A 	34%	34%
Other research & clinical costs	B 	50%	51%
Equipment, depreciation & maintenance	C 	12%	11%
Administration & overheads	D 	4%	4%



CURRENT YEAR RESULTS

The loss from ordinary activities after income tax amounted to \$1,076,052

Research funds received by the LEI are held in trust for application to the research projects for which they are received.

Financial Statements

Australian Foundation for the Prevention of Blindness Trust

The Treasurer and Chairman for the Australian Foundation for the Prevention of Blindness Trust (AFPB Trust), Mr Carlo Manera, has continued to provide sound financial guidance during the last financial year.

FINANCIAL REPORTS

The following summary financial reports reflect the financial position of the AFPB Trust for the year ended 31st December 2008.

	2008	2007
	\$	\$
INCOME		
Donations and subscriptions	1,150	1,250
Imputation Credits	28,608	22,888
Interest & Investment Income	129,991	324,819
	<u>159,749</u>	<u>348,957</u>
LESS EXPENDITURE		
Audit and accounting	1,980	1,500
Administration	50	-
Insurance	2,307	2,608
Bank and federal tax charges	105	212
Fair value adjustment of investment to market value	(725,456)	(148,787)
	<u>729,898</u>	<u>153,107</u>
(DEFICIT)/EXCESS FOR THE YEAR	(570,149)	195,850
Settled Sum (establishing Trust) & accumulated funds at beginning of year	<u>2,711,414</u>	<u>2,515,564</u>
ACCUMULATED FUNDS AT END OF YEAR	<u>2,141,265</u>	<u>2,711,414</u>
Represented by:-		
CURRENT ASSETS		
Cash at bank	861,525	39,295
Other Assets	13,545	1,512
	<u>875,070</u>	<u>40,807</u>
NON-CURRENT ASSETS		
Investments	<u>1,267,995</u>	<u>2,672,407</u>
TOTAL ASSETS	<u>2,143,065</u>	<u>2,713,214</u>
CURRENT LIABILITIES		
Other Creditors	<u>1,800</u>	<u>1,800</u>
NET ASSETS	<u>2,141,265</u>	<u>2,711,414</u>

08 Corporate DIRECTORY

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Chairman
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Day Surgery Facility 9381 0880

Laser Vision Centre 9381 0758

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