Mission

Our mission is to achieve excellence in scientific research and clinical practice to prevent blindness.
"Every five seconds one person in our world goes blind. Every minute a child goes blind. The implications of visual disability are enormous. The public imperative of blindness cannot be ignored."

Prof. Ian Constable AO
The LEI Board and its management are pleased with the progress of the many programs contained within the Institute’s three year strategic plan. Following a highly successful Board and management workshop held in June it was agreed that the rapid growth expected at LEI in the near future necessitated a change in focus. I am therefore pleased to advise that LEI’s newly defined principal objective is, “To achieve excellence in scientific research and clinical practice to prevent blindness.”

LEI will focus on introducing new initiatives in science and clinical ophthalmology and securing the vigorous leadership to make these initiatives happen. Such initiatives will require a re-evaluation of our revenue raising programs and a continuation of sound financial management. In 2007 LEI achieved a net surplus in General Member funds of $0.9m. This surplus was achieved from revenue of $8.7m comprised of $8.2m from clinical services and $0.5m from bequests and donations. LEI holds net assets of $17.4m of which $7.1m is in property, plant and equipment.

In my last report I welcomed commitments from the Western Australian Government and The
During the year the Federal Government announced substantial financial support for the project and the Western Australian Institutes of Health, of which LEI is a member, is now managing this significant investment in health and medical research infrastructure.

Architects and building consultants have been appointed and LEI will take space in both the QEII and Fiona Stanley facilities for research purposes. The planning and design of the QEII medical research building will accelerate next year and it is hoped construction will be underway by late 2008. In preparation for the new research building, LEI's management will step up their efforts to recruit key scientists and researchers.

Throughout the year our researchers and scientists attracted research funding of $2.9m. It is expected that new initiatives envisaged in the latest strategic plan will ensure future success for LEI by attracting additional research funding to meet our expansion plans.

LEI remained a world leader in both research and clinical excellence in 2007. Our gene therapy project as a treatment for age related macular degeneration progressed towards the clinical trial stage while our glaucoma research in the USA also produced very encouraging results. On the clinical front, the Laser Vision Centre's acquisition of the world's most advanced LASIK vision correction technology, the 100% blade-free IntraLase Method, further enhanced the standard of care and treatment options available to our patients.

Another highlight was the Ian Constable Lecture presented by Prof. Peter Quinn, Premier's Fellow at the School of Physics at UWA. In excess of 550 people attended this free public lecture which acknowledges Prof. Constable's achievements as the University's founding Professor of Ophthalmology. Prof. Quinn's lecture focussed on how the invention and development of telescopes over the past 400 years has allowed humankind to step outside its own solar system and begin a voyage of discovery back to the birth of the cosmos.

Membership of LEI's Board remained unchanged during the year and it focussed heavily on the new strategic direction and executive succession planning. I thank the Directors for their contribution, support and guidance in the team effort required to achieve LEI's principal objective.

In 2008 LEI will celebrate its 25th anniversary. Brian King was the Institute's inaugural Chairman and Prof. Ian Constable its Founding Director. LEI is indeed fortunate that these two key people responsible for its founding are still involved in its activities today.

In the past LEI has received outstanding support from the Lions Save-Sight Foundation (LSSF) and the Australian Foundation for the Prevention of Blindness and I look forward to their ongoing support of the challenging research initiatives planned for 2008. It has been a pleasure working with Prof. Constable and the LEI staff over the past three years and I thank them all on behalf of the Board for their collective effort for LEI.

David Eiszele

Prof. Peter Quinn, orator of the 2007 Ian Constable Lecture, with Prof. Ian Constable AO.
Our Institute continues to fill a major role locally, nationally and in the region. We conduct medical scientific research of the highest international calibre and provide world’s best practice medical eye care to almost 50,000 patients each year.

In 2007 the newly promoted Assoc. Prof. Bill Morgan implanted our first dissolving glaucoma tube in a patient suffering from glaucoma. Prof. Dao-Yi Yu and Assoc. Prof. Steven Cringle are the scientific team leaders on this project which is a world first and a product of a major National Health & Medical Research Council (NHMRC) Program Grant.

During the year extensive additional preparatory work was carried out by Prof. Elizabeth Rakoczy and her team to gain national approval to carry out the world’s first clinical trial of secretion gene therapy for wet macular degeneration.

We were delighted to welcome to the Institute Prof. Paul McMenamin, distinguished eye researcher, Associate Dean of Teaching and Learning at UWA’s Faculty of Medicine, Dentistry and Health Sciences, and senior member of the School of Anatomy and Human Biology. Prof. McMenamin and his team of postdoctoral, doctoral and honours students add greatly to the core scientific strength of the Institute and will collaborate with molecular immunology, virology and immunogenetics groups.
headed by Assoc. Prof. Mariapia Degli-Esposti and Dr Tony Scalzo.

Our Telemedicine Group headed by Prof. Yogesan Kanagasingam signed a licensing agreement through UWA with Ophthalmic Imaging Systems, a Nasdaq-listed company in the United States, to further develop and commercialise eye scan diagnostic instrumentation.

Underscoring each of these major achievements are teams of scientists including postdoctoral Fellows, postgraduate students and researchers from a very wide range of scientific disciplines.

We are justifiably proud of the quality of our scientists and their commitment, and each represents an important component of our overall program.

We were pleased to acknowledge numerous individual achievements during the year. Director of Nursing, Elizabeth Zambotti, provided key leadership and expertise in the development of the Australian Bali Memorial Eye Hospital and was present to receive acknowledgement of her leadership at the official opening by our Prime Minister and the President of Indonesia. Our internationally acclaimed Clinical Photographer, Chris Barry, won the top award for the best photograph at the two major international ophthalmic meetings held in the United States - the American Society of Cataract and Refractive Surgeons and the American Academy of Ophthalmology.

Our Director of Development, Helen Rowe, was selected to attend an Advanced Management Course at Harvard University.

The great and sustained economic growth spurt in Western Australia is now impacting on the strategic plans of the Lions Eye Institute for the future and for the re-organisation of medicine, including research, in Western Australia generally. During the year I have been privileged to serve on the State Science and Innovation Council which reports directly to the Premier as Minister for Science, and also on the Strategic Health Research Advisory Committee. In our development agreement with the Western Australian Institute for Medical Research, the State Health Department and UWA, much preparatory work has proceeded to develop major new research facilities for Western Australia. Chairman David Eiszele and I sit on the overarching Implementation Committee and are pleased with the progress that has been achieved. The site has been selected next to the Lions Eye Institute research facility with easy access to the main parts of the Sir Charles Gairdner Hospital. So far, $83M is assured to proceed with building which should commence in the second half of 2008.

I would like to acknowledge the strategic input to the management and future of the Institute from our Board of Directors. David Eiszele as Chairman is leading the search for our next Managing Director and also led a very constructive series of strategic planning sessions during the year. Each member of the Board has a skill set of major value for the Lions Eye Institute and their commitment is greatly appreciated by the entire staff, and I am sure, our vast community of patients. Beyond the Board I would also like to acknowledge the continued support of our Patron, Sir James Cruthers, and the expertise of Mr Richard Alder who sits on our Investment Advisory Committee.

2008 will mark our 25th anniversary as an independent, not-for-profit medical research institute. This anniversary will mark major changes in our development and provide an opportunity for all those who have supported or benefited from the expertise of our wonderful, dedicated staff to both celebrate and lend new support to our shared vision.

Prof. Ian Constable AO
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 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 past 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. Mr Eiszele is also a director of Torrens Energy Limited.

Prof. Ian Constable AO FAICD
Managing Director

In 1975 Prof. 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 Prof. 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 Premier’s Science and Innovation Council. He also holds the position of Director of Statewide Ophthalmology Services, WA Health Department, and is past President of the Asia Pacific Academy of Ophthalmology, an association serving more than half the world’s blind.

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. Brian 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 FAICD
Non-executive Director

John Atkins joined the Board in 2003. He holds a Bachelor Degree in Law from the University of Western Australia and a Masters Degree in Law from London University. He is a Fellow of the Australian Institute of Company Directors. Mr Atkins is a senior Partner and head of the Perth office of a major national legal firm. His current directorships include the Chamber of Commerce and Industry of WA, Australian Finance Group Ltd, Breakaway Resources Ltd (Chairman), PearlStreet Ltd, Committee for Perth Ltd (Deputy Chair) and Presbyterian Ladies College. 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 Norwest Energy NL, Cool Energy Limited, and Cullen Wines (Australia) Pty Ltd, and he is Vice Chairman of KAL Energy, Inc. He is also a director of Nido Petroleum, The John Holland Group, Delta Pacific Mining Plc, Australia Asia Energy Pty Ltd, and the West Australian Symphony Orchestra, and is a Governor of the American Chamber of Commerce in Australia and an Adjunct Professor at Murdoch University. Mr Bloking is a member of the Advisory Board for the University of Western Australia’s Confucius Institute 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 and the Chief Executive Officer of the Government Employees Superannuation Board, a Director of the Association of Superannuation Funds of Australia, and a Fellow of the Australian Institute of Company Directors, Australian Institute of Management and 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 comprised of six non-executive directors, including the Chairman, and one executive director, being 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 2007.

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 three year strategic plan introduced in 2005 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.

Financial reporting

The Institute’s financial year ended on 31 December 2007. 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 Bentley’s MRI 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 Day Surgery Unit 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.
It is often difficult for those living in remote and rural regions to access specialist health care services. Research undertaken at LEI’s Centre for e-Health focuses on providing these communities with improved disease screening, diagnosis and treatment options.

Capitalising on its strengths in e-medicine, decision support, medical imaging and computer-aided tools, the Centre continues to advance understanding of numerous clinical conditions. It has also developed innovative digital imaging devices and software to facilitate high volume screening and diagnosis of debilitating eye diseases such as diabetic retinopathy and glaucoma. With other potential applications for this technology including dentistry, dermatology and otolaryngology, the Centre remains at the forefront of medical imaging hardware and software development. Already e-Health’s efforts have resulted in the transfer of clinical information and data via the internet becoming more prevalent within the medical community.

Combining telemedicine and e-Health, the Centre’s activities concentrate on:

- research & development of affordable, portable and non-invasive diagnostic tools, intelligent electronic medical record systems, imaging algorithms and computer-aided diagnostic software;
- provision of clinical services in rural and remote areas; and
- education & training of healthcare professionals in the area of telemedicine and medical informatics (managing medical information and data).

Research outcomes & highlights

- The Centre launched its first interactive patient information kiosk at The Woodside Guide Dog Discovery Centre operated by the Association for the Blind of WA. Providing general information on eye anatomy, diseases and treatment options, the kiosk’s tactile screens and audio support make it ideal for access by children, people with low vision and the elderly. It can also be used as an education tool for nurses, allied health care professionals and others who screen for eye disease. The kiosks were developed in collaboration with Assoc. Prof. Len Goldschmidt from the Stanford School of Medicine and US Dept. of VA in Palo Alto.
- The development of low cost vision testing software ($200 per license) enabling children to self-test for vision abnormalities. Two systems were installed at The Woodside Guide Dog Discovery Centre. The Department of Education and Training in WA also requested access to this portable system to enable teachers to screen school children for vision abnormalities.
- Conducted the second 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.
- Received funding from the State Health Research Advisory Council (SHRAC) of the Department of Health in WA to validate the use of low cost telemedicine technologies in reducing public hospital waiting lists in the diagnosis of diabetic retinopathy and other eye conditions.
- Prof. Yogesan Kanagasingam was invited to convene the Electronic Health Record Systems and Teleophthalmology Instruction Course at the prestigious American Academy of Ophthalmology Annual Meeting in New Orleans.
- 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.

Sponsors

- NHMRC
- LSSF
- MHRIF
- SHRAC

Prof. Yogesan Kanagasingam with the Centre’s first interactive information kiosk.
The mission, values and culture of LEI are strongly reflected in our commitment to clinical research. Patient research is a fundamental driver of evidence-based medicine and indeed world’s best practice ophthalmology. This is reflected in numerous ways including:

- participation in a wide range of international multicentre clinical trials;
- the translation of laboratory breakthroughs to the clinic where current examples include the world’s first glaucoma microfistula tube for glaucoma and preparations for gene therapy for wet macular degeneration;
- the assessment of outcomes of surgery and medical therapy for eye disease;
- the analysis of environmental and genetic risk factors for eye disease; and
- the reporting of emerging patterns of disease and the impact on the community.

Approximately 20 internationally funded clinical trials are currently underway at LEI spanning the whole breadth of our expertise. All our ophthalmologists, optometrists, technical and nursing staff are fundamentally involved in these trials.

During the year we welcomed Dr Jean-Louis deSousa, an internationally trained surgeon with sub-specialty interest in oculoplastic surgery. Dr deSousa coordinates our postgraduate ophthalmic seminar program and has rapidly created great demand statewide for his services. An oculoplastic dedicated centre was established on the mezzanine floor of the Lions Eye Institute where Drs Adam Gajdatsy and Jean-Louis deSousa provide a unique service to the West Australian public.

During the year, Assoc. Profs. Geoffrey Crawford and Graham Barrett and Dr Steven Wiffen, who lead LEI’s laser refractive program, along with our dedicated team of optometrists including Andrew Godfrey, Max Cuypers, Esperan Pather and Joanne Cerutti, took delivery of a special laser (Intralase Femtosecond Laser) that has revolutionised the precision of LASIK surgery.

We are particularly indebted also to Director of Nursing, Elizabeth Zambotti, Clinic Practice Manager, Julie Robson, Operating Theatre Managers, Ann-Marie Pirrie and Jane Hebden, and all of their staff for their cheerful dedication to a very complex medical ophthalmic service made especially so by our large clinical trial commitment. Our Clinical Trials Unit, headed by Dr Lynne Smithies with Milada Zlatnik and Carolyn Adams, drives our clinical research with enormous dedication and ensures our demand internationally continues to grow.
This year marked the first of the Group’s five year NHMRC program grant looking at new avenues for the treatment of diabetic retinopathy, age related macular degeneration, retinal vascular diseases and glaucoma. During the year a total of nine papers were published in ophthalmic journals covering topics as diverse as optic nerve function, epidemiology, retinal oxygen distribution in disease models, mechanisms of cell death, clinical ophthalmology, ocular lymphatics and new methods of laser surgery.

2007 also saw the Group’s microfistula technology for glaucoma surgery enter clinical trials. The Group’s US based partners are continuing to develop this instrumentation for commercialisation and clinical use. This technology could provide a completely new approach to glaucoma surgery in clinical ophthalmology and benefit millions of glaucoma patients worldwide.

Throughout the year the Group sought to further expand its funding base and submitted grant applications to the American NIH, the NHMRC Australia-China Fellowship program and the Australia-India Strategic Research Fund. Regardless of the grant outcome, these collaborative ventures with overseas researchers help expand the scope of the Group’s research and initiate highly productive collaborative research.

Research outcomes & highlights
- Established several new areas of investigation in fields such as vessel permeability, axonal transport, and retinal metabolism during retinal ischemia.
- Published nine research papers in peer reviewed journals.
- Established 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
- UWA

This year marked the first of the Group’s five year NHMRC program grant looking at new avenues for the treatment of diabetic retinopathy, age related macular degeneration, retinal vascular diseases and glaucoma. During the year a total of nine papers were published in ophthalmic journals covering topics as diverse as optic nerve function, epidemiology, retinal oxygen distribution in disease models, mechanisms of cell death, clinical ophthalmology, ocular lymphatics and new methods of laser surgery.

2007 also saw the Group’s microfistula technology for glaucoma surgery enter clinical trials. The Group’s US based partners are continuing to develop this instrumentation for commercialisation and clinical use. This technology could provide a completely new approach to glaucoma surgery in clinical ophthalmology and benefit millions of glaucoma patients worldwide.

Throughout the year the Group sought to further expand its funding base and submitted grant applications to the American NIH, the NHMRC Australia-China Fellowship program and the Australia-India Strategic Research Fund. Regardless of the grant outcome, these collaborative ventures with overseas researchers help expand the scope of the Group’s research and initiate highly productive collaborative research.

Research outcomes & highlights
- Established several new areas of investigation in fields such as vessel permeability, axonal transport, and retinal metabolism during retinal ischemia.
- Published nine research papers in peer reviewed journals.
- Established 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
- UWA
Throughout 2007 LEI’s Molecular Ophthalmology Group continued its research into potential treatments for age related macular degeneration (AMD) and diabetes related blindness. AMD is the major cause of blindness in the developed world, with wet AMD the more devastating of the two forms of the disease. Patients with wet AMD can experience a rapid and severe loss of central vision as new blood vessels growing beneath the retina bleed into the delicate retinal tissue.

The Group’s 15 year effort to develop a long term treatment for the condition is slowly coming to fruition. With funding assistance from the LSSF, Retina Australia and the Western Australian Retinitis Pigmentosa Foundation, preparations have continued for human gene therapy trials as a treatment for wet AMD. To date, approvals have been obtained from the Gene and Related Therapies Research Advisory Panel, which is the gene therapy body of the NHMRC, and the Office of the Gene Technology Regulator. In 2007 the Group’s submission also reached the final stages towards approval with the Therapeutic Goods Administration (TGA).

It is anticipated human gene therapy trials for wet AMD will commence in 2008 once TGA approval is secured. The proposed treatment will be superior to all treatments presently available. It is predicted that one single injection into the eye of the Group’s product will not only lead to the regression of new blood vessels in the subretinal space, but prevent the development of new vessels for years to come. Present treatments require repeated injections into the eye every four to six weeks.

Treating diabetic complications remains another focus of the Group’s attention. Following the development of a diabetic animal model that presents symptoms of not only diabetic retinopathy but also nephropathy, the Group is the only one of its kind worldwide able to study the potential correlation in the development of these two complications of diabetes. Capitalising on this advantage the Group is working to identify new target genes that could be used for the treatment of diabetes related blindness.

Research outcomes & highlights
- Several projects matured this year, reflected by numerous requests to distribute research information and animal models to other academic and industrial entities.
- Between 2005 and 2007 the Molecular Ophthalmology Group provided materials to ten international research organisations and signed six confidentiality agreements with corporate entities.
- Prof. P. Elizabeth Rakoczy served on the prestigious NHMRC’s Fellowship Committee. This committee is responsible for awarding the highly competitive NHMRC Research Fellowships that provide career paths for senior scientists. Prof. Rakoczy also served by WA government appointment on the Board of the Animal Resources Centre.

Sponsors
- UWA
- Retina Australia
- Western Australian Retinitis Pigmentosa Foundation
- LSSF
- Angioblast Pty Ltd
The Molecular Immunology & Virology Group, which forms part of LEI’s Centre for Experimental Immunology, studies how the immune system deals with challenges imposed by infection and malignancy. Principally, the Group concentrates on defining the interactions that occur between viruses and components of the host immune system, with the aim of defining the requirements for optimal immunity to viral infection.

Many viruses cause systemic as well as ocular disease. Our research uses a model of cytomegalovirus infection. Like other members of the herpesvirus family, cytomegaloviruses have developed elaborate strategies to subvert immune-surveillance, and thus retain a lifelong association with their hosts. The development of effective therapies to treat chronic infections is of the highest priority as they cause considerable clinical challenges and on-going health care problems. Cytomegalovirus can cause significant morbidity and mortality in immunocompromised hosts, while ocular disease can be a significant complication in immunosuppressed patients. Much of the disease caused by this pathogen may be prevented by a better understanding of the immune responses required to limit chronic infection.

Viruses that have evolved to survive long-term with their hosts have learnt to successfully subvert host responses to their advantage. This is achieved by producing proteins that interfere with, or alter, important cellular functions. The Group is exploiting this feature of viral infection to design molecules that may be used to target specific cellular activities. For example, viral proteins that interfere with programmed cell death can be used to design improved treatments for degenerative eye diseases caused by inappropriate cell death. Furthermore, since immune evasion tactics similar to those used by viruses are used by tumours to escape immune-surveillance, our studies will also be of relevance to the development of cancer immunotherapies.

A number of eye diseases have an immune component, but the knowledge of immune responses in the eye remains limited. In collaboration with colleagues locally and abroad, we have developed a program of eye immunology aimed at defining the causes of eye diseases that have an immune component. Ultimately this program aims to define the requirements for improved treatments for these diseases.

Research outcomes & highlights

• Defined how early interactions between immune effectors contribute to the efficacy of on-going immune responses.
• Defined the critical requirements for the improved control of chronic infections.
• Defined how dysregulated immune responses contribute to pathology and disease.
• Defined the mechanisms that lead to dysregulated immunity following infection and designed a therapeutic approach to ameliorate the damage caused by inappropriate immune responses.
• 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.

Sponsors

• NHMRC
• Cancer Council WA
• MHIRF
Viral Immunogenetics Group

Dr Tony Scalzo, Director of LEI’s Viral Immunogenetics Group.
The research undertaken by the Viral Immunogenetics Group, part of LEI’s Centre for Experimental Immunology, is aimed at providing insights into novel mechanisms of viral immune evasion. This is an important step in increasing our understanding towards developing therapies that limit the severity of viral diseases, including those that affect vision.

Many viruses produce severe acute diseases that either cause death or are ultimately cured. Others, however, have evolved over many years 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.

Our work has 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. Our 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.

CMVs also employ many immune evasion strategies to persist and become latent. Studies on one of many immune evasion molecules that murine cytomegalovirus (MCMV) possesses have shown that this molecule is involved in modifying leukocyte activation via its ability to bind to a cellular adhesion molecule and modify cytokine production. This viral protein could be used therapeutically and we intend to investigate this in an ocular uveitis model.

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. Knowledge about proteins involved in viral entry may lead to the development of new strategies to control viral infections and will be important for vaccine design.

Research outcomes & highlights
- Investigating the consequences of sequence variability of the MCMV m157 protein results in differences in binding to both activating and inhibitory NK cell receptors from different inbred mouse strains for disease outcome.
- Showing that the viral immune evasion molecule that binds the cell adhesion molecule can affect viral virulence through effects on cytotoxic T cell responses by regulating cytokine production.
- Demonstrating that CMV encodes a spliced viral gene involved in supporting viral replication and these spliced genes are present in a range of beta-herpesviruses.

Sponsors
- NHMRC
- MHRIF
Our Clinical Services

Assoc. Prof. Geoffrey Crawford, LEI’s Director of Surgical Services and Director, Laser Vision Centre.
This year again proved to be busy for Clinical Services with over 50,000 patient consultations. Our ophthalmic team expanded to 11 with the arrival of oculoplastics specialist and surgeon Dr Jean-Louis deSousa. The team, one of the nation’s largest ophthalmic practices, continued to provide expertise in all ophthalmic sub-specialities.

Throughout the year our staff worked tirelessly to offer patients an unparalleled level of service. LEI continued to provide new treatments as they became available and participated in numerous national and international clinical trials. New consulting and treatment rooms on the mezzanine level alleviated congestion in the clinic for both patients and staff.

Our Murdoch satellite centre offered those living in Perth’s southern regions access to three ophthalmologists specialising in glaucoma, oculoplastics, cataract and retinal conditions without the need to travel to our Nedlands premises.

LEI’s Day Surgery was the first in Western Australia to achieve ISO 9001 international accreditation for its Quality Management System. In 2007 it provided first rate care to patients undergoing such procedures as cataract surgery, oculoplastic surgery and corneal grafts. Equipment acquisitions included the latest technology in cataract surgery with all staff undergoing rigorous training to ensure patients received world-class care.

The Laser Vision Centre’s introduction of the 100% blade-free IntraLase Method further cemented its reputation as WA’s premier refractive surgery centre. Reducing dependence on glasses and contact lenses, LASIK refractive surgery corrects refractive errors including short sightedness, long sightedness and astigmatism. Prior to the acquisition of IntraLase, LASIK was not an all-laser procedure and some patients were uncomfortable with the notion of a mechanical blade being used on their eye. IntraLase replaced the hand-held, oscillating metal blade traditionally used in LASIK with the safety and precision of an ultra-fast laser, virtually eliminating blade-related LASIK complications. The Centre’s three refractive surgeons, trained in corneal and refractive surgery at major international centres in the USA and UK, have successfully performed over 15,000 refractive procedures.

In July 2007 LEI’s Director of Nursing, Elizabeth Zambotti, completed her three year consultancy to AusAID with the opening of the $7m Australian Bali Memorial Eye Centre by the Prime Minister, The Hon. John Howard MP. A living memorial to the Australian and Indonesian victims of the 2002 Bali bombings, the centre provides high quality ophthalmic clinical care and training. LEI’s ophthalmic photographer, Chris Barry, trained Indonesian doctors and nursing staff in the use of a fundus camera for the diagnosis and treatment of retinal conditions. LEI will continue to provide both surgeons and training over coming years to ensure the facility evolves into a centre of excellence.
OUR CLINICAL SERVICES CONTINUED

excellence for ophthalmic services in eastern Indonesia. Ms Zambotti’s expertise was also sought in reviewing and providing specialised recommendations on proposed plans for a privately operated eye centre and hospital to be constructed in Sri Lanka.

In November, Perth hosted the 39th Annual Scientific Congress of The Royal Australian and New Zealand College of Ophthalmologists (RANZCO). Eight LEI ophthalmologists attended the Congress to keep abreast of recent advances and ensure the best treatment outcomes for those entrusting themselves to our care. The first national conference of the Australian Ophthalmic Nurses’ Association was held concurrently with the Congress. This provided LEI’s nursing staff with opportunities to enhance their skills and build key relationships.

The Clinical Services team are to be commended for their steadfast commitment to ensuring our patients receive an unrivalled and compassionate standard of clinical care.

Lions Eye Bank

The Lions Eye Bank of Western Australia is a non-profit, self-funding organisation which remains unsupported by government or private bodies. Since its inception in 1986 the Eye Bank has distributed over 3,000 corneas for transplantation. Licensed by the Therapeutic Goods Administration, the Eye Bank maintains a stringent quality system in order to provide high quality tissue for transplantation.

In 2007 the Eye Bank collected 110 corneas, of which 99 were suitable for transplantation, and 70 sclerae were provided for surgery. There was also a 13% increase in referrals and a 31% increase in the number of referrals pursued. This increased rate of referrals, however, did not equate to an increase in the number of local donors. The Eye Bank was
fortunate to receive excess tissue from interstate Eye Banks for 38 of the 99 corneal transplants performed during the year.

The number of Western Australians awaiting a corneal transplant has also been gradually increasing over the last few years. At the end of 2007 over 90 people were facing close to a 12 month wait for donated tissue to become available. To improve donation rates families need to be encouraged to discuss their wishes in regards to donation and record their intentions on the Australian Organ Donor Register (AODR). Anyone can register as an eye tissue donor by telephoning 1800 777 203. Information and registration forms are also available from Medicare offices or online at www.medicareaustralia.gov.au

Since 2000, the Eye Banks of Australia and New Zealand have been meeting on an informal basis. A common issue for Eye Banks and other tissue donation groups is the struggle to gain recognition, with public support and attention often directed strongly towards organ donation. With only five Eye Banks existing across Australia the support these organisations offer each other is critical. Discussions throughout 2007 saw a movement towards the establishment of a formal constitution for the Association of Eye Banks in Australia and New Zealand. Our collective voice as a united group will have far greater impact than as individuals.

In May 2006, the Federal Government provided significant funding towards a range of initiatives to improve Australia’s rate of organ and tissue donation. One such initiative was the establishment in October 2006 of the National Clinical Task Force on Organ and Tissue Donation. In 2007 Eye Banks and other tissue groups were invited to participate in these meetings and discuss ways to effectively support groups in the donation sector and increase donation outcomes. It was clear from these discussions that the systems already in place in Western Australia were well established and more cohesive than in many other states. While the effective manner in which WA donation groups worked together was recognised as their forte, their efforts were often hampered by logistics. The sheer physical size of the state, combined with the stringent time restrictions placed on collecting, processing and distributing tissue, has a negative impact on donation rates. The outcomes of the Federal Government initiatives will be an ongoing process but it is anticipated they will have a positive impact on local donation rates.

Lions Optics

Located adjacent to LEI is Lions Optics, a convenient service offering both eye examinations and a wide range of spectacles, contact lenses, sunglasses and accessories. Now in its second decade of operation, all profits from Lions Optics are directed towards LEI’s sight saving research.

The combined expertise of its two optometrists and a qualified optical dispenser ensures Lions Optics offers its clients the highest standard of clinical care. 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

Assoc. Prof. Graham Barrett
Keratorefractive surgery, corneal and anterior segment disorders and surgery

Trained in ophthalmology in Perth, Western Australia, Assoc. Prof. Barrett undertook speciality training in the USA. He is a consultant ophthalmic surgeon and Head of Department at Sir Charles Gairdner Hospital. Assoc. Prof. 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).

Prof. Ian Constable AO
Vitreoretinal surgery, retinal vascular disease, diabetic retinopathy, macular degeneration

Prof. 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 is Director, Statewide Ophthalmology Services, WA Health Department.

Assoc. Prof. Geoffrey Crawford
Corneal disorders and surgery, cataract and refractive surgery, oculoplastic surgery

Assoc. Prof. Crawford completed his ophthalmic training in Western Australia before undertaking further sub-speciality 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. Assoc. Prof. Crawford has held many positions within RANZCO including Director of Continuing Professional Development, inaugural Chairman of the Programme Committee and Chairman of Examiners. He was instrumental in the development of the AlphaCor™ artificial cornea and its techniques of insertion and 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 also a consultant ophthalmologist at Royal Perth Hospital.

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.

Dr Antonio Giubilato
Glaucoma

After training in ophthalmology in Perth, Western Australia, Dr Giubilato underwent speciality 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-speciality 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.

Assoc. Prof. Ian McAllister  
**Vitreoretinal surgery, retinal vascular disease, diabetic retinopathy, macular degeneration, ocular trauma**

Assoc. Prof. McAllister undertook training in Western Australia with additional sub-speciality training in vitreoretinal disorders in the USA. He is Director of Clinical Services at Lions Eye Institute and a consultant ophthalmologist at King Edward Memorial Hospital for Women and the Royal Perth, Sir Charles Gairdner and Princess Margaret Hospitals. Assoc. Prof. 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. Assoc. Prof. McAllister is currently vice chairman of the Ophthalmic Research Institute of Australia and has been chairman of the Research Board for many years.

Assoc. Prof. William Morgan  
**Glaucoma, ophthalmic public health**

Also trained in Perth, Western Australia, Assoc. Prof. 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, Assoc. Prof. Morgan is a Senior Lecturer 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. Assoc. Prof. 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 also an Examiner for the RANZCO Part 2 College examinations, coordinator of the Mentoring Programme for trainees in WA, and a WA representative for Continuing Professional Development. Dr Tay-Kearney delivers training to rural and regional based GPs and workplace safety education to companies in north-west Western Australia.

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 and holds the position of Chair of the Qualifications and Education Committee of the WA Branch of RANZCO.
Our Shared Vision

“I think of LEI’s scientists as linking the hopes of the community with the search for answers. Without the generous support of our many donors we simply could not share our knowledge and savoir-faire. Meeting our donors and hearing their stories inspires us to achieve our common goals.”

Geraldine Brizard, Research Assistant, Molecular Immunology & Virology Group

LEI is recognised across the world for its innovative research and successful outcomes. Our participation in international clinical trials provides vital links between the benchtop and the bedside for our research teams. Equally significant is the acclaimed standard of care our ophthalmologists offer to both private and public medicine throughout Western Australia. Each of these accomplishments is impressive in its own right, but in combination, they consolidate LEI’s reputation in the community and our ability to attract individual and corporate donations for eye research.

It is the role of the Development and Media Group to build and maintain links between LEI, its patients and the wider community. The Group’s programs are diverse and range from community education to funding the gap between escalating research costs and the competitive grants our researchers secure.

Inquiring young minds from Loreto Nedlands Primary School tour LEI.
In 2007 the Development and Media Group conducted over 30 tours and briefings for community groups. These activities are vital in reminding the community of the importance of eye health and the significance of science to everyday life. During a tour for a Year 4 class from Loreto Nedlands Primary School, the students met face to face with LEI scientists and participated in a number of “hands on” vision related activities.

The media also plays a vital role in communicating LEI’s research and clinical expertise. In May, 

**Pilbara Aboriginal Eye Health Program**

Established as a partnership between BHP Billiton Iron Ore and LEI to identify diabetes-related eye disease within remote indigenous Pilbara communities, the diabetic retinal screening program continued to provide a sight-saving service during 2007.

Since 2004, BHP Billiton Iron Ore’s generous support has enabled LEI to play an important awareness-raising role in preventing eye disease in these communities where the incidence of diabetes is still unacceptably high. While the program provides a diagnostic service only, LEI collaborates with visiting ophthalmologist Dr Phil House who undertakes the treatment of patients where necessary. LEI and BHP Billiton Iron Ore remain strongly committed to improving eye health in Aboriginal communities and will continue to work with local indigenous health agencies and eye health specialists to eradicate preventable blindness in the region.

The Australian reported that as a member of the Western Australian Institutes for Health, LEI would play a crucial role in stemming the state’s scientific “brain drain” and help bring medical breakthroughs from the laboratory to doctors’ surgeries. This alliance of 24 organisations, which will perform 95% of the state’s medical research, secured $100m from the Federal Government in 2007 to fund the establishment of two world class research facilities. Prof. Ian Constable advised the media that without internationally competitive science in WA, our quality of life would deteriorate.

All LEI’s donors share the same vision - a world where avoidable blinding eye disease is eradicated. While the nature of their support varies significantly, it is valued equally by all at LEI. The Institute remains indebted to the many individuals and organisations that provided both financial and in-kind support during 2007, including those who gave on the promise of anonymity. LEI is also grateful for the generous support the Hartley Estate Charitable Foundation Pty Ltd and Premium Personnel.

Health professional Gwyneth White (right) conducts a retinal screening as part of the Pilbara Aboriginal Eye Health Program.
An enduring partnership

The continuing support of LSSF and Lions Clubs statewide remained essential to LEI’s success in 2007. In addition to providing substantial funding towards a number of LEI’s research and clinical programs, LSSF conducted its first ever international eye screening in Banda Aceh, Indonesia. Using screening protocols developed in conjunction with LEI, the team also trained some 30 doctors and medical staff in the correct use of a range of donated ophthalmic equipment.

In December, LSSF announced Dr Nicolette Binz as recipient of the PDG Brian King Post Doctoral Fellowship. A member of LEI’s Molecular Ophthalmology Group, Dr Binz was selected from a field of national and international candidates. The incidence of diabetic retinopathy is escalating in response to the global diabetes epidemic. Dr Binz’s research aims to develop a blood-based diagnostic test functioning as an ‘early warning system’ to identify patients at risk of developing this disease using biomarker discovery. Such a diagnostic test will allow us for the first time to consider preventing this debilitating eye disease. Biomarkers may also represent novel targets for gene based therapies to treat patients with existing disease.

"Western Australia is extremely fortunate to have such a wonderful facility embracing diagnosis, treatment, eye operations and research. I was very pleased to have the opportunity to support the work of the Lions Eye Institute."

The Hon. June Craig AM upon making a significant donation towards LEI’s pioneering research.

Building a legacy

WA builder Gerry Hanssen has long been committed to supporting LEI. In 1994 his company, Hanssen Pty Ltd, constructed LEI’s current research and clinical facilities building. Since then he has coordinated several fundraising activities to benefit LEI with the 2007 event raising $65,000. Gerry’s substantial support of LEI has gone largely unnoticed in the community but many people continue to benefit from his magnificent support.
Southern belle supports LEI

Albany resident Patricia Woodhams is one of the Great Southern’s finest ambassadors for eye health. Two years ago LEI restored Patricia’s sight when she had cataracts removed from both eyes. Since then Patricia has not only urged people to remain vigilant about their eye health but has initiated numerous successful fundraising activities. Patricia hopes to raise $2,000 each year to help fund LEI’s sight saving research.

How you can help

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. While some donors prefer to direct their donation towards a specific project or the acquisition of major items of equipment, others choose to fund a scholarship, with one generation assisting the next.

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.
A Lasting Legacy

Pioneering research at LEI is helping save Emma’s sight.
“The greatest benefit Dr Tay-Kearney gives me is to keep hold of my eyesight for the rest of my life and not have to struggle to see.”

Emma Bartleman (10 years old)

When Emma first complained of sore ankles at just two and a half years of age her mother Debbie hoped it was nothing to worry about. Upon noticing the colour of Emma’s iris had changed from blue to green after she caught a cold, Debbie sought medical advice which led to a diagnosis of idiopathic juvenile arthritis. Uveitis, a potentially blinding inflammation inside the eye, is a complication of this condition.

In 2001 Emma became a patient of LEI’s Dr Mei-Ling Tay-Kearney, a specialist in uveitis and inflammatory disorders of the eye. Having exhausted all other treatment options Dr Tay-Kearney and her colleagues hoped the human antibody Infliximab would halt the irreversible eye damage that can occur in children like Emma.

So far Emma’s treatment has proved successful and it is hoped it will reduce the risk of her suffering permanent eye damage as she grows out of the arthritis. Dr Tay-Kearney is currently aiming to secure funding for a fully fledged clinical trial which will provide many more children in need with access to the drug.

As Emma’s story shows, LEI’s pioneering research is clearly making progress in the prevention and treatment of sight threatening diseases, yet government funding alone does not sustain this internationally acclaimed research.

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 2007:

The Estate of the Late Ethel Verna Goodman
The Estate of the Late Margaret Kerman
The Estate of the Late Terence Guy Martin
The Estate of the Late Irene Povey
The Estate of the Theo Swann
The Estate of the Late Victor Trobe

One man’s vision

A magnificent $1m donation in 2005 from the late Mr Richard Pearce continues to inspire research into blinding eye disease at LEI. Mr Pearce was afflicted with macular degeneration. The ongoing benefit of this donation has ensured LEI remains at the forefront of research into this disease through human gene therapy trials anticipated to commence in 2008. The LEI Board of Directors and staff remain grateful for this visionary benefactor’s belief in LEI to find a cure for macular degeneration.
"The remoteness of living and working in Western Australia could be considered a challenge when compared to more favoured scientific communities, yet the quality of work undertaken at LEI is highly regarded when comparisons are made in the competitive world arena."

Chris Barry, Ophthalmic Photographer

Dr Christopher Andoniou
Australasian Society for Immunology - Treasurer
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 - Member
International Society of Refractive Keratoplasty - Member
Sir Charles Gairdner Hospital - Head of Department; Consultant Ophthalmologist
University of Western Australia - Senior Lecturer

Chris Barry
American Society of Cataract and Refractive Surgery (Print only) - Multiple awards including “Best of Show”
Australian Institute of Medical and Biological Illustration - Fellow
Australian Institute of Professional Photography - Multiple awards
Ophthalmic Photographers’ Society - Fellow
Scientific Exhibit, Ophthalmic Photographers Society (USA) - Multiple awards including “Best of Show”

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
Statewide Ophthalmology Services, WA Health Department - Director
University of Western Australia - Foundation Lions Professor of Ophthalmology, Centre of Ophthalmology and Visual Science
West Australian Premier’s Science and Innovation Council - Deputy Chairman

Assoc. Prof. Geoffrey Crawford
Lions Eye Institute Limited - Director of Surgical Services; Director, Laser Vision Centre
Princess Margaret Hospital - Consultant Ophthalmic Surgeon
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
Australasian Society of Cataract and Refractive Surgeons - Executive Committee Member

Royal Australian and New Zealand College of Ophthalmologists (WA Branch) - Executive Committee Member
Assoc. Prof. Mariapia Degli-Esposti
Lions Eye Institute Limited - Co-Director, Centre for Experimental Immunology
Immunology and Cell Biology Journal, Editorial Board - Member

Dr Jean-Louis deSousa
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
University of Western Australia - Research Grant

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 - Research Grant; 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
Prof. Yogesan Kanagasingam  
Lions Eye Institute Limited - Director, Centre for e-Health  
American Academy of Ophthalmology - Member  
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 - Adjunct Professor, Centre of Ophthalmology and Visual Science  
WA Department of Health - Committee Member of Health Network Telehealth Innovation Group  

Dr Sajeesh Kumar  
University of Western Australia - Alvina King Post-Doctoral Research Fellow and Seeding Grant Recipient  

Dr Mitali Manzur  
University of Western Australia - PhD awarded  

Assoc. Prof. Ian McAllister  
Lions Eye Institute Limited - Director of Clinical Services  
Australian Foundation for the Prevention of Blindness - Director  
Inner City Diabetic Retinopathy Council - Board Member  
King Edward Memorial Hospital for Women - Consultant Ophthalmologist  
Ophthalmic Research Institute of Australia - Vice Chairman  
Princess Margaret Hospital - Consultant Ophthalmologist  
Retina Society - Member  
Royal Perth Hospital - Consultant Ophthalmologist  
Sir Charles Gairdner Hospital - Consultant Ophthalmologist  

Assoc. Prof. William Morgan  
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 Perth Hospital - Consultant Ophthalmologist  
University of Western Australia - Senior Lecturer  

Dr Nital Sumaria  
University of Western Australia - PhD awarded  

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 - Part Two Examiner, Chief Mentor (WA), Champion CPD (WA)  
Royal Perth Hospital - Head of Department of Ophthalmology  
University of Western Australia - Senior Lecturer  

Prof. P. Elizabeth Rakoczy  
Lions Eye Institute Limited - Director of Research; Director, Molecular Ophthalmology Group  
Animals Resources Centre - 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
Chris Barry’s award winning photograph of silicon oil bubbles in the anterior chamber of a patient’s eye. The oil has raised the retina which had dropped and was interfering with the patient’s vision.

Raine Medical Research Foundation - Board Member
Retina International - Scientific Medical Advisory Board Member
Retina International Scientific Committee - Committee Member
University of Western Australia - Biosafety Committee Deputy Chair; Faculty Research Committee Member

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

Dr Steven Wiffen
Lions Eye Bank of Western Australia - Director
Fremantle Hospital - Consultant Ophthalmologist
Royal Australian & New Zealand College of Ophthalmologists (WA Branch) - Chair, Qualifications and Education Committee
University of Western Australia - Senior Lecturer

Prof. Dao-Yi Yu
Lions Eye Institute Limited - Director, Physiology and Pharmacology Centre; Co-Director, McCusker Glaucoma Centre
Dalhousie University, Canada - Professor (Adjunct)
Fundan University, Shanghai, China - Professor (Adjunct)
Glaucoma Society of the International Congress of Ophthalmology - Member
Murdoch University, Perth - Professor (Adjunct)
University of Western Australia - Professor
Collaborators & Visitors

“The true value of collaboration is in the pooling of brain power, human and scientific resources to make the most efficient and effective use of available opportunities.”

Dr Paula K. Yu, Research Associate, Physiology & Pharmacology Group

COLLABORATORS

Centre for e-Health
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

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

Dr Margaret Haydon
Association for the Blind of Western Australia, Perth, Australia

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

Dynatouch
San Antonio, Texas, USA

Centre for Experimental Immunology
Dr Geeta Chaudhi
Division of Immunology and Genetics, John Curtin School of Medical Research, Australian National University, Canberra, Australia

Dr Helen Farrell
Sir Albert Sakzewski Virus Research Centre, Royal Children’s Hospital, and Clinical Medical Virology Centre, University of Queensland, Herston, Australia

Dr Geoff Hill
Infectious Diseases and Immunology Division, Queensland Institute for Medical Research, Herston, Australia

Prof. Jonathon Sprent
Immunology Program, Garvan Institute of Medical Research, Darlinghurst, Australia

Dr Martyn Zinkernagel
Department of Ophthalmology, Kantonsspital St. Gallen, Switzerland

Molecular Ophthalmology Group
Assoc. Prof. Terri Allen
Baker Heart Research Institute, Melbourne, Australia

Prof. Ang Chong-Lye
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
School 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. Paul McMenamin  
School of Anatomy and Human Biology, University of Western Australia, Perth, Australia

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

Physiology & Pharmacology Group  
Dr Peter Arthur  
School of Biomedical, Biomolecular and Chemical Sciences, University of Western Australia, Perth, Australia

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

Iridex Corporation  
USA

LEI Seminar Series  
Assoc. Prof. Merlin Thomas  
Baker Heart Research Institute, Biochemistry of Diabetic Complications, Melbourne, Australia

“Diabetic kidney disease; what goes wrong and where?”

LEI collaborator Prof. Paul McMenamin (right) with his ocular immunology team.
Conferences & Invited Lectures

“As scientists, we are often intensely engaged with and captivated by the details of our own research and experiments. Conferences remind us of the bigger picture and enable us to discuss outcomes and nurture relationships with colleagues across the world. They reinforce that as part of the global research community, our efforts are advancing understanding of disease and providing improved treatment options.”

Dr. Nicolette Binz, Senior Research Officer, Diabetic Retinopathy Consortium, Department of Molecular Ophthalmology

March 2007

ASIA-ARVO (Singapore)
Prof. P. Elizabeth Rakoczy
Oral: Gene Transfer in the treatment of ocular angiogenesis.

e-Health Research Colloquium (Brisbane, Australia)
Prof. Yogesan Kanagasingam
Invited Speaker: e-Medicine innovations from the West.

10th Meeting of the Society for Natural Immunity (Cambridge, UK)
Dr Tony Scalzo
Oral: Specificity of the murine cytomegalovirus m157 glycoprotein for NK cell activation and inhibitory receptors.

Dr Alexandra J. Corbett
Poster: Specificity of the murine cytomegalovirus m157 glycoprotein for NK cell activation and inhibitory receptors.

April 2007

Association for Research in Vision and Ophthalmology Annual Meeting (Fort Lauderdale, USA)
Dr Chandrakumar Balaratnasigam
Poster: Axonal Transport and Cytoskeletal Changes in the Laminar Regions Following Elevated Intraocular Pressure.

Dr May Lai
Poster: Inhibition of retinal vascular leakage in a transgenic VEGF mouse model following intravitreal bevacizumab.

Dr Tim Isaacs
Abstract: Inhibition of Retinal Vascular Leakage in a Transgenic VEGF Mouse Model Following Intravitreal Bevacizumab.

Assoc. Prof. Bill Morgan
Oral: Venous pulsation characteristics are predictive of increased optic disk excavation independently of intraocular pressure.

Dr Jigs Patel

Department of Experimental Medicine, University of Rome (Rome, Italy)
Dr Tony Scalzo
Invited Speaker: Specificity of the murine cytomegalovirus m157 glycoprotein for NK cell activation and inhibitory receptors.

Department of Experimental Medicine, University of Catanzaro Magna Graecia (Catanzaro, Italy)
Dr Tony Scalzo
Invited Speaker: Specificity of the murine cytomegalovirus m157 glycoprotein for NK cell activation and inhibitory receptors.
Institut Pasteur (Paris, France)
Assoc. Prof. Mariapia Degli-Esposti
Invited Seminar: Improving anti-viral immunity.
Japanese Ophthalmological Society (Osaka, Japan)
Assoc. Prof. Geoff Crawford
Invited Guest Lecturer: AlphaCor artificial cornea: surgery and outcomes.
Tokushima University (Tokushima, Japan)
Assoc. Prof. Geoff Crawford
Visiting Professor: The management of squamous cell carcinoma of the conjunctiva.
7th International Congress on Ambulatory Surgery (Amsterdam, The Netherlands)
Elizabeth Zambotti
10th Meeting of the Society for Natural Immunity and the 22nd International Natural Killer Cell Workshop (Cambridge, UK)
Assoc. Prof. Mariapia Degli-Esposti
Oral: The role of NK cells in viral immunity: more than just killers.

May 2007
Adelaide Oculoplastic Congress 2007 (Adelaide, Australia)
Dr Jean-Louis deSousa
Oral: Upper eyelid reconstruction.
Oral: Restylane Sub-Q and blepharoplasty.
Oral: Lateral approach to lower eyelid retractors for repair.
Australian Institute of Medical and Biological Illustration 17th Biennial Conference (Melbourne, Australia)
Chris Barry
Diabetic eye screening in Western Australia.

June 2007
Australian Society for Medical Research - Research Week (Perth, Australia)
Ireni Ali Rahman
Oral: Endothelin-2: a new therapeutic target for retinal neovascularisation?
China / Australia Biotherapeutics Summit (Hang Zhou, China)
Dr May Lai
Oral: Gene Therapy in Eye Diseases.
European Ophthalmological Society (Vienna, Austria)
Assoc. Prof. Geoff Crawford
Oral: The place of AlphaCor in anterior segment reconstruction.
2nd International Conference on Crossroads between Innate and Adaptive Immunity (Crete, Greece)
Dr Marie Estcourt
Oral: CD8 T cell responses to cytomegalovirus are profoundly affected by NK cell responses early in infection.

July 2007
Argentinian Congress of Ophthalmology (Buenos Aires, Argentina)
Assoc. Prof. Graham Barrett
Invited Speaker: A change in direction during phacoemulsification.
Australasian Society of Cataract & Refractive Surgeons (Kingscliff, Australia)
Assoc. Prof. Geoff Crawford
Vision Down Under (Cairns, Australia)
Assoc. Prof. Steve Cringle
Poster: High oxygen consumption of the retina during systemic hyperoxia in rat and man.
Marisa De Pinho
Poster: Bevacizumab has a transient effect on inhibiting retinal neovascularisation in a transgenic model.
Prof. SA Dunlop (DRC Member)
Poster: Potential treatments for retinal neovascularisation.

August 2007
Western Australian Vision Education Conference (Perth, Australia)
Chris Barry
Oral: Ophthalmic photography.
Assoc. Prof. Geoff Crawford
Invited Speaker: Refractive Lens surgery: which lens, which patient?
13th International Congress of Immunology, Immunity to Viruses Minisymposium (Rio de Janeiro, Brazil)
Assoc. Prof. Mariapia Degli-Esposti
Oral: Effective anti-viral immunity: a fine balance between host responses and viral immune escape.
September 2007

Asia-Pacific Association of Cataract & Refractive Surgeons (Hanoi, Vietnam)

Assoc. Prof. Graham Barrett

Australian Diabetes Society / Australian Diabetes Educators Association Annual Scientific Meeting (Christchurch, New Zealand)

Dr Nicolette Binz
Poster: The continued quest for suitable diabetes animal models.

Fremantle Hospital Eye Clinic, Grand Rounds (Perth, Australia)

Prof. Yogesan Kanagasingam
Oral: EyeScan and SODA.

Oceanic Retina Association Meeting (Byron Bay, Australia)

Prof. Ian McAllister
Invited Speaker: Mechanisms of action of triamcinolone in macular oedema.

Royal Victorian Eye & Ear Hospital

Dr Mei-Ling Tay-Kearney
Visiting Professor (ALCON).

Scitech Science Awareness Festival - Science Shorts (Geraldton, Australia)

Dr Nicolette Binz
Invited Speaker: Keeping an Eye on Diabetes - Diabetic Complications: Can we prevent them?

October 2007

AusBiotech Conference - Invest West: AMT, Tetra Q and Pfizer (Brisbane, Australia)

Prof. P. Elizabeth Rakoczy

Australasian Orientation and Mobility Conference (Perth, Australia)

Prof. Yogesan Kanagasingam

Australian Day Hospital Association Conference (Sunshine Coast, Australia)

Elizabeth Zambotti
Professional Learning Day, Visual Education Centre, Parliament House (Perth, Australia)

November 2007

American Academy of Ophthalmology Annual Meeting (New Orleans, USA)

Assoc. Prof. Graham Barrett
Oral: Split anterior capsulorhexis.

Prof. Yogesan Kanagasingam
Instruction Course Convenor: Electronic Health Record Systems (EHR) & Teleophthalmology.

Australian and New Zealand Society of Retinal Specialists Retinal Satellite Meeting (Perth, Australia)

Prof. Ian Constable
Invited Lecture: Inaugural Neil Della Memorial Lecture

Australian Ophthalmic Nurses Association First National Conference (Perth, Australia)

Chris Barry
Gloria Buchanan
Christine Darragh
Julie Drake
Maureen Gilpi
Philomena Grant
Cheryl McLeish
Noleen Peter
Ann Pirrie
Julie Robson
Lee Si Sok
Frank Shilton
Rosie Summers
Prof. Yogesan Kanagasingam  
Invited Speaker: Telemedicine.

Ophthalmic Photographers’ Society 38th Annual Meeting  
(New Orleans, USA)

Chris Barry  
Oral: Diabetic screening: panel discussion.

Orthoptic National Conference (Perth, Australia)

Chris Barry  
Oral: Diabetic screening in remote Western Australia.

The Third Australian Biotherapeutics & Tissue Regeneration Forum (Margaret River, Australia)

Prof. P. Elizabeth Rakoczy / Prof. SA Dunlop (DRC Member)  
Oral: Preparations for a phase I/II gene therapy clinical trial for macular degeneration.

University of Malaysia (Malaysia)

Dr Mei-Ling Tay-Kearney  

39th Annual Scientific Congress of The Royal Australian and New Zealand College of Ophthalmologists (Perth, Australia)

Dr Chandrakumar Balaratnasigam  
Oral: Astrocytes undergo morphological and enzyme changes in the laminar regions after acute rise in IOP.

Prof. Ian Constable  
Invited Speaker: Anti VEGF therapy in Ophthalmology.  
Oral: Exploratory clinical areas for anti-VEGF.

Dr Jean-Louis deSouza  
Oral: Dermal fillers in oculoplastic surgery.

Dr Anthony Guibilato  
Oral: Rubeosis iridis and anti-VEGF.

Dr Tim Isaacs  
Oral: Vitreous in the AC and lens material behind the PC – what to do for the cataract surgeon.  
Oral: Diabetic Proliferative diabetic retinopathy and anti-VEGF.

Prof. Ian McAllister  
Invited Speaker: Junk or jewels: antique ophthalmoscopes and their uses.  
Oral: Retinal vein occlusions and anti-VEGF.

Assoc. Prof. Bill Morgan  
Oral: Retinal vein pulsation characteristics are predictive of glaucoma progression.  
Oral: Wearing swimming goggles can elevate intraocular pressure.

Prof. P. Elizabeth Rakoczy  
Oral: Preparations for a Phase I/II Gene Therapy Clinical Trial for AMD.

Dr Mei-Ling Tay-Kearney  
Oral: The players of non-infectious posterior uveitis.  
Oral: Case studies in uveitis.

Prof. Yogesan Kanagasingam  
Oral: Telemedicine in developing countries.

December 2007

37th Annual Scientific Meeting of the Australasian Society for Immunology (Sydney, Australia)

Assoc. Prof. Mariapia Degli-Esposti  
Plenary Lecture: Regulation of innate and adaptive anti-viral immunity.
Publications

“The publication of our work in scientific journals is vital for the continued government funding of our research and in maintaining LEI’s strong reputation within the scientific research community. There is little point in conducting high quality research unless the knowledge gained from your efforts is shared with your peers in the broader scientific community to facilitate continued progress.”

*Dr Alexandra J. Corbett, Post-Doctoral Research Officer, Centre for Experimental Immunology*

Role of VEGF in maintaining renal structure and function under normotensive and hypertensive conditions. *Proc Natl Acad Sci USA* 2007; 104(36):14448-14453.

Arthur PG, Matich GP, Pang WW, Yu D-Y, and Bogoyevitch MA.


Abnormal iris processes may be a marker of glaucoma gene carrier status in some cases of primary infantile glaucoma. *Ophthalmic Genet* 2007; 28: 157-162.

Barry CJ.
*Blink, EyeNet* April 2007 p74.

Barry CJ.
*Blink, EyeNet* May 2007 p82.

Barry CJ.

Barry CJ.
*J Ophthalmic Photo* 2007; 29(S):54-57.

Barry CJ.

Chan E, Amon M, Marano RJ, Wimmer N, Kearns PS, Manolios N, Rakoczy PE, Toth I.
Chen FK, Chen SD, Tay-Kearney M-L.

Corbett AJ, Forbes CA, Moro D, Scalzo AA.
Extensive sequence variation exists among isolates of murine cytomegalovirus within members of the m02 family of genes. J Gen Virol 2007; 88:758.


Corbett AJ, Forbes CA, Moro D, Scalzo AA.
Extensive sequence variation exists among isolates of murine cytomegalovirus within members of the m02 family of genes. J Gen Virol 2007; 88:758.

deSousa J, Malhotra R, Davis G.

deSousa J, Malhotra R.

Dhingra N, Gajdatsy A, Neal JW, Mukherjee AN, Lane CM.

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


Hartley R, Yedidya T, Guillon J-P, Yogesan K.


NK cell maturation and peripheral homeostasis is associated with KLRG1 up-regulation. Journal of Immunology 2007; 178:4764-70.

Kain S, Morgan WH, Riley D, Dorizzi K, Hogarth G, and Yu D-Y.

Malhotra R, Saleh GM, de Sousa J L, Sneddon K, Selva D.

Miller J, Yu PK, Cringle SJ, Yu D-Y.

Morris S, deSousa J, Barrett AW, Malhotra R.

Saleh GM, Mavrikakis I, de Sousa JL, Xing W, Malhotra R.

Scala AA, Corbett AJ, Rawlinson WD, Scott GM, and Degli-Esposti MA.
The interplay between host and viral factors in shaping the outcome of cytomegalovirus infection. *Immunol. Cell Biol* 2007; 85:45-54.

Su E-N, Yu D-Y, Cringle SJ.

Then SY, De Sousa JL, Chandrasekharan L, Francis I, Malhotra R.

Yogesan K.

Yu D-Y, Cringle SJ, Yu PK, and Su E-N.

Zhu Y-F, Guo W-Y Sun X-H, and Yu D-Y.
Grants

“Grant funding from the major peer reviewed sources such as the National Health and Medical Research Council is highly competitive, with an average success rate of 25%. While it can be confronting to have your job on the line at the conclusion of each grant, it certainly stimulates researchers to maintain the high level of productivity necessary to find both the answers we seek and retain a competitive edge in our careers.”

Assoc. Prof. Steve Cringle, Physiology & Pharmacology Group

<table>
<thead>
<tr>
<th>Grant Type</th>
<th>Title</th>
<th>Investigator(s)</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHMRC Senior Research Fellowship</td>
<td>Scalzo Research Fellowship</td>
<td>A Scalzo</td>
<td>$107,500</td>
</tr>
<tr>
<td>NHMRC</td>
<td>Properties of human photoreceptors measured using a scanning laser ophthalmoscope to illuminate and image the retina.</td>
<td>F Reinholz, T Lamb, B Patterson</td>
<td>$33,300</td>
</tr>
<tr>
<td>NHMRC Project Grant</td>
<td>Role of DC-NK cross-talk in viral infection: defining the critical molecular mechanisms.</td>
<td>M Degli-Esposti</td>
<td>$173,000</td>
</tr>
<tr>
<td>NHMRC Project Grant</td>
<td>Preclinical in vivo evaluation of sFLT secretion gene therapy for retinal and choroidal neovascularisation.</td>
<td>PE Rakoczy, M Degli-Esposti, C-M Lai</td>
<td>$163,000</td>
</tr>
<tr>
<td>NHMRC Project Grant</td>
<td>Host-virus interactions that define the outcome of anti-viral T cell responses: relevance to viral persistence.</td>
<td>M Degli-Esposti, A Scalzo</td>
<td>$162,500</td>
</tr>
<tr>
<td>NHMRC Project Grant</td>
<td>How cytomegalovirus reduces host immunity by interfering with inflammatory responses.</td>
<td>A Scalzo, M Degli-Esposti</td>
<td>$152,500</td>
</tr>
<tr>
<td>NHMRC Principal Research Fellowship</td>
<td>Degli-Esposti Principal Research Fellowship.</td>
<td>M Degli-Esposti</td>
<td>$130,250</td>
</tr>
<tr>
<td>NHMRC Senior Research Fellowship</td>
<td>Kanagasingam Senior Research Fellowship.</td>
<td>Y Kanagasingam</td>
<td>$119,000</td>
</tr>
<tr>
<td>Grant Type</td>
<td>Title</td>
<td>Investigators</td>
<td>Amount</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>NHMRC CJ Martin Fellowship</td>
<td>Title: Analysis of CD8 T cell memory generation following cell mediated vaccination strategies.</td>
<td>M Estcourt</td>
<td>$68,500</td>
</tr>
<tr>
<td>NHMRC Project Grant</td>
<td>Title: Viral interference with apoptosis: defining the mechanisms and effects on viral pathogenesis</td>
<td>C Andoniou, D Huang, M Degli-Esposti</td>
<td>$179,950</td>
</tr>
<tr>
<td>NHMRC Project Grant</td>
<td>Title: The impact of interplays between viral immune evasion proteins and host cell surface receptors on viral pathogenesis</td>
<td>A Scalzo</td>
<td>$157,600</td>
</tr>
<tr>
<td>NHMRC Project Grant</td>
<td>Title: Defining the mechanisms that regulate effective long term anti-viral immunity</td>
<td>M Degli-Esposti, M Smyth</td>
<td>$178,650</td>
</tr>
<tr>
<td>NHMRC Program Grant</td>
<td>Title: Advanced new therapeutics and diagnostics in retinal diseases and glaucoma</td>
<td>D-Y Yu</td>
<td>$696,152</td>
</tr>
<tr>
<td>NHMRC Equipment Grant</td>
<td>Title: Tetramer Synthesis and Purification Apparatus</td>
<td>M Degli-Esposti et al</td>
<td>$35,625</td>
</tr>
<tr>
<td>NHMRC Development Grant</td>
<td>Title: New Ophthalmodynamometer</td>
<td>W Morgan</td>
<td>$171,825</td>
</tr>
<tr>
<td>RG Menzies Award</td>
<td></td>
<td>M Estcourt</td>
<td>$5,000</td>
</tr>
<tr>
<td>Centre of Excellence</td>
<td>Title: Centre of Excellence in Vision Science.</td>
<td>D-Y Yu</td>
<td>$150,000</td>
</tr>
<tr>
<td>Medical &amp; Health Infrastructure Fund - Round 10</td>
<td></td>
<td>PE Rakoczy</td>
<td>$148,178</td>
</tr>
<tr>
<td>Medical &amp; Health Infrastructure Fund - Round 10</td>
<td></td>
<td>D-Y Yu</td>
<td>$257,185</td>
</tr>
<tr>
<td>Medical &amp; Health Infrastructure Fund - Round 10</td>
<td></td>
<td>A Scalzo</td>
<td>$65,722</td>
</tr>
<tr>
<td>Medical &amp; Health Infrastructure Fund - Round 10</td>
<td></td>
<td>Y Kanagasingam</td>
<td>$68,060</td>
</tr>
<tr>
<td>Project Title</td>
<td>Funding Body</td>
<td>Amount</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Medical &amp; Health Infrastructure Fund - Round 10</td>
<td>Investigator: M Degli-Esposti</td>
<td>$137,656</td>
<td></td>
</tr>
<tr>
<td>Department of Health - State Health Research Advisory Council</td>
<td>Investigator: Y Kanagasingam</td>
<td>$150,000</td>
<td></td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>Investigator: PE Rakoczy</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Title: UWA Research Grant</td>
<td></td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>Investigator: F Reinholz</td>
<td>$68,926</td>
<td></td>
</tr>
<tr>
<td>Title: Safety Net Grant</td>
<td></td>
<td>$68,926</td>
<td></td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>Investigator: S Kumar</td>
<td>$81,403</td>
<td></td>
</tr>
<tr>
<td>Title: Alvina King Scholarship</td>
<td></td>
<td>$81,403</td>
<td></td>
</tr>
<tr>
<td>University of Western Australia</td>
<td>Investigator: S Kumar</td>
<td>$9,600</td>
<td></td>
</tr>
<tr>
<td>Title: Ekamper Fund</td>
<td></td>
<td>$9,600</td>
<td></td>
</tr>
<tr>
<td>Lions Save-Sight Foundation</td>
<td>Investigator: A Riono</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Title: Jack Hoffman Scholarship</td>
<td></td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Lions Save-Sight Foundation</td>
<td>Investigator: IJ Constable</td>
<td>$113,376</td>
<td></td>
</tr>
<tr>
<td>Title: Chair, Centre of Ophthalmology and Visual Science, University of Western Australia</td>
<td></td>
<td>$113,376</td>
<td></td>
</tr>
<tr>
<td>Lions Save-Sight Foundation</td>
<td>Investigator: PE Rakoczy</td>
<td>$73,105</td>
<td></td>
</tr>
<tr>
<td>Title: Research Support</td>
<td></td>
<td>$73,105</td>
<td></td>
</tr>
<tr>
<td>Lions Save-Sight Foundation</td>
<td>Investigator: A Riono</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Title: Jack Hoffman Scholarship</td>
<td></td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>DEST</td>
<td></td>
<td>$562,837</td>
<td></td>
</tr>
<tr>
<td>Title: Infrastructure Funding, Centre of Ophthalmology and Visual Science, University of Western Australia</td>
<td></td>
<td>$562,837</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$4,526,300</strong></td>
<td></td>
</tr>
</tbody>
</table>
# 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 31st December 2007 and details of Research Grant Funds.

## INCOME STATEMENT

**FOR THE YEAR ENDED 31 DECEMBER**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total income</td>
<td>11,184,261</td>
<td>11,761,207</td>
</tr>
<tr>
<td>Total expenditure</td>
<td>(10,281,465)</td>
<td>(10,193,592)</td>
</tr>
<tr>
<td>Operating profit</td>
<td>902,796</td>
<td>1,567,615</td>
</tr>
<tr>
<td>Significant items</td>
<td>-</td>
<td>989,402</td>
</tr>
<tr>
<td>Operating profit</td>
<td>902,796</td>
<td>2,557,017</td>
</tr>
<tr>
<td>Accumulated profit</td>
<td>16,499,232</td>
<td>13,942,215</td>
</tr>
<tr>
<td>Accumulated profit</td>
<td>17,402,028</td>
<td>16,499,232</td>
</tr>
</tbody>
</table>

## SIGNIFICANT ITEMS

Comprised of:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Special donations and distributions</td>
<td>-</td>
<td>989,402</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>989,402</td>
</tr>
</tbody>
</table>

## 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:

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research grant funds not yet spent</td>
<td>3,282,205</td>
<td>2,860,190</td>
</tr>
<tr>
<td>Endowment Fund</td>
<td>10,271,924</td>
<td>9,262,150</td>
</tr>
<tr>
<td>General cash reserves</td>
<td>853,504</td>
<td>962,363</td>
</tr>
<tr>
<td>Cash at bank and bequest funds</td>
<td>14,407,633</td>
<td>13,084,703</td>
</tr>
</tbody>
</table>

## STATISTICAL SUMMARY (2003 – 2007)

<table>
<thead>
<tr>
<th></th>
<th>Lions Eye Institute Ltd</th>
<th>LEI Inc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total income</td>
<td>$11,184,261</td>
<td>$12,750,609</td>
</tr>
<tr>
<td>Total expenditure</td>
<td>$10,281,465</td>
<td>$10,193,592</td>
</tr>
<tr>
<td>Net assets</td>
<td>$17,402,028</td>
<td>$16,499,232</td>
</tr>
<tr>
<td>Property, Plant &amp; Equip (net)</td>
<td>$7,054,370</td>
<td>$6,790,136</td>
</tr>
<tr>
<td>Average no. of FTE staff</td>
<td>69</td>
<td>69</td>
</tr>
</tbody>
</table>
BALANCE SHEET
AS AT 31 DECEMBER

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL FUNDS</td>
<td>$17,402,028</td>
<td>$16,499,232</td>
</tr>
<tr>
<td>Represented by:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash assets</td>
<td>4,468,821</td>
<td>4,421,158</td>
</tr>
<tr>
<td>Other assets</td>
<td>938,572</td>
<td>1,072,270</td>
</tr>
<tr>
<td>Other financial assets</td>
<td>9,964,354</td>
<td>8,689,087</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>7,054,370</td>
<td>6,790,136</td>
</tr>
<tr>
<td>TOTAL ASSETS</td>
<td>$22,426,117</td>
<td>$20,972,651</td>
</tr>
<tr>
<td>Payables</td>
<td>1,185,859</td>
<td>1,047,426</td>
</tr>
<tr>
<td>Research grant funds not yet spent</td>
<td>3,282,205</td>
<td>2,860,190</td>
</tr>
<tr>
<td>Provision for employee entitlements</td>
<td>556,025</td>
<td>565,803</td>
</tr>
<tr>
<td>TOTAL LIABILITIES</td>
<td>$5,024,089</td>
<td>$4,473,419</td>
</tr>
<tr>
<td>NET ASSETS</td>
<td>$17,402,028</td>
<td>$16,499,232</td>
</tr>
</tbody>
</table>

INCOME FOR THE YEAR ENDED 31 DECEMBER
EXCLUDING SIGNIFICANT ITEMS

- Clinic, Day Surgery & LASIK: A 54% 42%
- Donations & bequests: B 5% 6%
- Research grants: C 22% 23%
- Interest: D 8% 11%
- Optics Shop: E 4% 3%
- Other: F 7% 15%

EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER

- All staffing salaries, fees & oncosts: A 34% 40%
- Other research & clinical costs: B 51% 44%
- Equipment, depreciation & maintenance: C 11% 14%
- Other overheads: D 4% 2%

CURRENT YEAR RESULTS

The profit from ordinary activities after income tax amounted to $902,796.

Research funds received by the LEI are held in trust for application to the research projects for which they are received.
The Treasurer and Chairman for the Australian Foundation for the Prevention of Blindness Trust, Mr Carlo Manera, 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 2007.

**Income**

**For the Year Ended 31 December**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donations and subscriptions</td>
<td>1,250</td>
<td>2,050</td>
</tr>
<tr>
<td>Imputation credits</td>
<td>22,888</td>
<td>36,927</td>
</tr>
<tr>
<td>Interest &amp; investment income</td>
<td>324,819</td>
<td>172,165</td>
</tr>
<tr>
<td>Fair value adjustment of investment to market value</td>
<td>(148,787)</td>
<td>161,418</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200,170</td>
<td>372,560</td>
</tr>
</tbody>
</table>

**Less Expenditure**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit and accounting</td>
<td>1,500</td>
<td>1,700</td>
</tr>
<tr>
<td>Insurance</td>
<td>2,608</td>
<td>2,885</td>
</tr>
<tr>
<td>Bank and federal tax charges</td>
<td>212</td>
<td>222</td>
</tr>
<tr>
<td>Lions Eye Institute - Grant</td>
<td>-</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,320</td>
<td>34,807</td>
</tr>
</tbody>
</table>

**Excess for the Year**

Settled sum (establishing Trust) & accumulated funds at beginning of year

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,515,564</td>
<td>2,177,811</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,711,414</td>
<td>2,515,564</td>
</tr>
</tbody>
</table>

Represented by:-

**Current Assets**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash at bank</td>
<td>39,295</td>
<td>69,091</td>
</tr>
<tr>
<td>Other assets</td>
<td>1,512</td>
<td>2,097</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40,807</td>
<td>71,188</td>
</tr>
</tbody>
</table>

**Non-Current Assets**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments</td>
<td>2,672,407</td>
<td>2,446,376</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>2,713,214</td>
<td>2,517,564</td>
</tr>
</tbody>
</table>

**Current Liabilities**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other creditors</td>
<td>1,800</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,711,414</td>
<td>2,515,564</td>
</tr>
</tbody>
</table>