



Eye Research Australia

Annual Report for 2004

Includes a review of the activities of:

University of Melbourne Department of Ophthalmology

Centre for Eye Research Australia

Eye Research Australia Foundation



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Includes a review of the activities of the Centre for Eye Research Australia, University of Melbourne Department of Ophthalmology and the Eye Research Australia Foundation



Centre for Eye Research Australia

Vision, Mission and Goals

Vision

The elimination of vision loss and blindness in our community

Mission

To become the pre-eminent centre for eye research in Australia, renowned for our work in the prevention, treatment and rehabilitation of eye disease, vision loss and blindness, through our research and teaching

Goals

Conduct Quality Research

- Identify major factors leading to vision impairment
- Develop early detection of potential vision impairment
- Develop intervention strategies
- Develop models of optimum care

Application of Research into Best Practice

- Develop and promote preventative behaviours through community awareness to reduce the incidence and severity of eye disease
- Develop and promote screening activities for treatable eye diseases and other causes of vision loss
- Develop and promote models of best practice in the management of eye disease

Foster a Quality Learning Environment

- Promote a learning environment
- Undertake regular reviews of the range, objectives and structure of teaching
- Provide a positive environment for student recruitment, assessment and support

Effective and Efficient Management

- Develop and continuously improve management processes relating to:
 - People and Organization Development
 - Business Management and Marketing
 - Finance and Administration



Chairman's Report

Ms Tina McMeckan

In my role as Chairman of the Centre for Eye Research Australia, I am pleased to have the opportunity to reflect on the year that has passed and record a great sense of achievement and optimism.

A number of highlights stand out in 2004. We were thrilled to receive five important Commonwealth Government grants, specifically three National Health and Medical Research Council (NHMRC) project grants, an NHMRC Fellowship and an Australian Research Council Linkage Grant. Such tangible recognition of our research performance and strategies is a great accolade for our staff who strive so hard to obtain the means to continue their research into eye disease. In addition, we remain most grateful to the Victorian State Government for their continuing infrastructure support so crucial for the Centre's operation.

Another important milestone for 2004 was the launch of "Clear Insight: The Economic Impact and Cost of Vision Loss in Australia" in August. This report, undertaken in partnership with Access Economics, documents the enormous cost of vision loss to our community and rightly places vision loss and its prevention on the national health agenda. My congratulations to all those who made a contribution to this very significant document.

I have been fortunate to have a group of such committed and loyal stakeholders and Board Members with whom to work. The support we have received over the year from the University of Melbourne, Royal Victorian Institute for the Blind (RVIB), Vision Australia Foundation (VAF), Royal Victorian Eye and Ear Hospital, Christian Blind Mission International, Ansell Ophthalmology Foundation, Victorian Lions Foundation and Victorian branch of the Royal Australian and New Zealand College of Ophthalmologists has been extraordinary, and I am sure has helped make 2004 such a success for the Centre. At the end of the year, the merger of the RVIB and VAF into the one entity has meant that Mr Malcolm Daubney and Ms Rosanne Cunningham, representing the VAF

and RVIB respectively, will leave us in 2005, and I would like to thank them both for their valued contributions. I would also like to take this opportunity to convey our condolences to the family, friends and colleagues of our inaugural RVIB Director, Dr Trevor Anderson, who died in October.



Of course I would be remiss if I failed to mention the wonderful job Professor Taylor does as Managing Director of the Centre. He is dedicated to the cause of eliminating vision loss and blindness in our community and his enthusiasm and energy are contagious.

I look forward to 2005 with a great sense of excitement and anticipation. Thank you again to all our private and public benefactors for their generous support of our work, and to our many partners and collaborators for their continued relationship with the Centre.

Ms Tina McMeckan

Another important milestone for 2004 was the launch of "Clear Insight: The Economic Impact and Cost of Vision Loss in Australia" in August.



Managing Director's Report

Professor Hugh R. Taylor AC

We have a great team working at Eye Research Australia, of whom we are rightly proud.

Our job at the Centre for Eye Research Australia is clearly stated in our name and that is to do eye research. Our vision and mission are set out elsewhere in this report, and are both lofty goals and everyday gauges for our work.

To do our job, we need people, time and money. The short-term indicators that we are doing our job are published papers and presentations, and the longer-term indicators are the adoption of the new knowledge and changes in practice.

By all these measures, 2004 has been an outstanding year.

People

Our major resource without question is our people. We have a great team working at Eye Research Australia, of whom we are rightly proud. The fruits of their labour are reflected in this report. We were delighted to have Associate Professor Tien Wong join us full time at the start of the year, and he is rapidly building up a world-leading group in retinal imaging.

With the growth of the Centre, some organizational restructuring was advantageous and we grouped the Units together into Divisions. Some new Units were also formed. Dr Ecosse Lamoureux, last year's winner of the CERA Research Award, was appointed Head of the Health Services Research Unit and Dr Andreas Müller joined us as the Head of the Eye Health Promotion Unit. Both have done outstanding jobs.

Over the year we were pleased to welcome many new staff, each of whom has added significantly to our team effort, and it would be unfair to single out a few and difficult to succinctly mention all. However, recognition of the great job Janine Reid has done in Administration is well earned.

Our staff can only work their best in reasonable quarters. The lack of incisive direction in our public hospitals has held up refurbishing the

space we use, but we were delighted at the start of the year to open the newly renovated and reconfigured offices for Associate Professor Robyn Guymer and her team. At the end of the year, we were equally pleased to start the refurbishing of the McComas Family Laboratory for Dr Paul Baird and his group. We gratefully acknowledge the support from the Victorian Lions Foundation, the University of Melbourne and the Royal Victorian Eye and Ear Hospital that made both these projects possible.

Time

As I have mentioned before, there is the old adage that all you need for research is a good idea and running water. For a lot of our research, you can drop the running water. Our world-recognized staff are at the cutting edge of their respective fields and rarely lack a manifest of good ideas, what holds them back is the time to do everything. Obviously, an expanding workforce helps this, but in some ways we researchers are our own worst enemies because when we gain more resources we always want to start more research projects. We all need practice at saying "No!" and prioritizing our time.

However, to help with this process, we have spent a lot of effort in improving our management and administrative practices. Much of the preparation work started to pay off in 2004, and credit and thanks for this go to Clive Mitchell, and to Rod Watts and the Executive Management Team.

Money

It is sad that so often money seems to be the bottom line, although I know that the Centre much more often looks to the so-called "triple bottom line" and rightly so. However, without money we would not be here.

2004 has been an outstandingly successful year. The grants that were received are listed in detail elsewhere, but to obtain three National Health and Medical Research Council (NHMRC) Project Grants, an Australian Research Council (ARC) Linkage Grant, a National Institute of Health (USA) Grant, an NHMRC Fellowship, a second round Science Technology

Managing Director's Report

Infrastructure application, and 20 other grants from other groups is a wonderful achievement, and all involved deserve the warmest congratulations.

As detailed elsewhere, the Eye Research Australia Foundation gave significant support to Robyn Guymer's work, and we thank them and all the donors to the Foundation for their support and encouragement.

Collaboration

I have a saying on my wall that "There is no limit to what you can achieve if you do not care who gets the credit" (Robert Woodruff). There is so much work we need to do that to work collaboratively is both smart and essential.

Vision CRC

We highly value our partnership in the Vision Co-operative Research Centre (CRC). As outlined elsewhere in this report, we are proud to be one of four core partners in this highly important and exciting endeavour. It is a huge undertaking, but opens tremendous opportunities. Through the year Associate Professor Jill Keeffe was appointed Program Manager for the Vision Care Delivery Program in the Vision CRC.

University of Melbourne

The Centre works hand in glove with the University Department of Ophthalmology and the University is a key stakeholder in the Centre. We try hard to make this close, productive and mutually advantageous relationship work as seamlessly as possible, although there are times when the particular needs of one or other organization need to be addressed. We continue to recognize and appreciate the support we receive from so many quarters in the University, starting with the Dean, Professor James Angus.

Royal Victorian Eye and Ear Hospital

The Royal Victorian Eye and Ear Hospital is also a stakeholder in the Centre, and we treasure the close working relationship we have with the Hospital. We would not exist without the Hospital and the same may well be true. The mutual contributions we make to

support each other reflect the maturity and importance of the relationship led by Graeme Houghton and Rob Grogan.

Vision 2020 Australia

The Centre and the Foundation were founding partners of Vision 2020 Australia, and we are pleased and proud to continue our close working relationship. Vision 2020 Australia is finding its rightful recognition as the peak national body of all those working in vision in Australia and is gaining appropriate status.



Managing Director's Report

We hope that Clear Insight will help mobilize Governments and other groups and agencies to re-evaluate the priority given to vision loss.

Papers and Presentations

As I said in the introduction, these form the immediate indicators of us doing our job. These are listed in full at the end of this report, but one must not only look at the number but also the quality of the journal or the importance of the meeting in which the work is reported. We are doing world-class work.

In addition, the invitations that our staff receive to talk at national and international meetings, or to belong to or chair working groups, organizing committees, advisory panels and so forth also testify to their international standing.

Changing Practice

Almost nothing gives me greater satisfaction than seeing something we worked on being incorporated into standard practice or behaviour. I have a few personal favourites, such as ivermectin and river blindness, some aspects of trachoma and the "QUIT" ads for macular degeneration.

Over the last year, there have been further examples; all of Jill Keefe's work on low vision being taken up by the World Health Organization and Vision 2020, the findings of the Melbourne Vision Impairment Project that form the basis for The Vision Initiative, the assessment of retinal images presented by Tien Wong, the assessment and treatment of age-related macular degeneration following Robyn Guymer's work, and the familial basis of glaucoma led by Associate Professor David Mackey.

This adds substance to our claim that we want to make a difference in our community to eliminate unnecessary vision loss and not just turn wheels in an ivory tower.

Clear Insight

In some ways the single most important event for us in 2004 was the launch of our report with Access Economics "Clear Insight: The Economic Impact and Cost of Vision Loss in Australia". Although launched in the middle of the Athens Olympics and just before the Federal Election campaign, it received tremendous press and has sparked

considerable interest worldwide and is already being quoted in the world's literature.

This report accounts for the first time ever the full cost of vision loss to a community. In 2004, vision loss cost Australia nearly \$10 billion in total and almost \$2 billion in direct healthcare costs. Its impact is far greater than previously expected and far exceeds many other recognized health priorities. Again, three-quarters of vision loss could be prevented or treated. We hope that Clear Insight will help mobilize governments and other groups and agencies to re-evaluate the priority given to vision loss.

Acknowledgements

I must thank Ms Tina McMeckan for all her timely support as Chairman of the Centre's Board and each of the other Board Members. Tina and the Board bring great experience and new perspectives that really do help us to set and achieve the most appropriate targets. In addition to the Board Members, I want to thank all those who serve on the Finance and Audit Committee, the Research Committee and the other internal committees we have within the Centre.

The Eye Research Australia Foundation report is at the end of this report, but I do want to say how much we appreciate the work and support the Foundation does under the leadership of its Chairman, Professor John Funder AO and its Executive Director, Ms Laurie Staub. Their fundraising enables us to start some of the most important and innovative new projects, and is critical to our success. Through them I also want to thank all the donors and supporters of the Foundation. I would also like to recognize the contribution made by Miss Elizabeth Douglas, who retired through the year.

Finally, I would like to thank and congratulate all the staff for their hard work and their great successes throughout the year. I know they are not resting on their laurels and are already working to make 2005 even more successful.

Professor Hugh R. Taylor AC

Awards for 2004

Research Award: Ms Pam Garoufalis

Ms Pam Garoufalis is the recipient of the 2004 CERA Research Award in acknowledgement of her excellent work on the Genes in Myopia (GEM) Study that is being undertaken as part of the Vision CRC. Pam's key role is the recruitment, follow up and co-ordination of patient subjects that to date number nearly 500.



Ms Pam Garoufalis



Dr Matt Chamberlain

Travel Award: Dr Matt Chamberlain

Dr Matt Chamberlain is the recipient of the 2004 CERA Travel Award. This will allow him to present his results from a twin study investigating the heritability of age-related macular degeneration at the Annual Research in Vision and Ophthalmology Meeting in Fort Lauderdale in May 2005.

Administration Award: Mr Colin Miles

Mr Colin Miles is the recipient of the 2004 CERA Administration Award in recognition of his undying enthusiasm for the world of computers and IT and his ability to manage cheerfully the numerous requests made of him without disappointing anyone. His role as IT Manager carries enormous responsibilities that he approaches with great skill and professionalism. His work touches everyone in the Centre and without him we would cease to function.



Mr Colin Miles

Eye Research Australia's major resource, without question, is its people.



Activities as a World Health Organization Collaborating Centre

Another key function of the Centre's role as a WHO Collaborating Centre is the training of personnel from overseas, particularly from developing countries.



Ms Jenny Hassell and Dr Ji Won Kwon

The Centre for Eye Research Australia was originally designated a WHO Collaborating Centre for the Prevention of Blindness in 1992. In 2002, this designation was renewed for a third time, to 14 August 2006.

The terms of reference of the Centre are to:

- participate actively in the development of activities for the prevention of blindness
- provide facilities for the training of personnel at different professional levels, especially from developing countries
- conduct applied field research on the epidemiology, management and operational aspects of avoidable blindness
- foster a multidisciplinary approach to the promotion of eye health and to the delivery of eye care, including rehabilitation, to all
- participate in the collection, elaboration and distribution of pertinent information.

During 2004, the Centre undertook a wide range of WHO-related activities for the prevention of blindness. Included in this category are the global initiative for the elimination of blindness described next in this report, and the work that Associate Professor Jill Keeffe and her Prevention of Blindness Unit undertake on behalf of the WHO Low Vision Working Group that she chairs. In addition, Professor Taylor is an adviser to the WHO Alliance for the Global Elimination of Trachoma.

Another key function of the Centre's role as a WHO Collaborating Centre is the training of personnel from overseas, especially from developing countries. Dr Liu Ming, an ophthalmologist from the People's Republic of China, worked with Professor Keeffe and her team from September 2003 to February 2004. Also in 2004, Professor Keeffe's Population Health Division hosted Dr Graziella Pereira, an ophthalmologist from Sao Paulo, Brazil, Mr Gok Ratnarajan, a medical student from University College London and Dr Ji Won Kwon, an ophthalmologist from the Seoul National University Hospital in South Korea.



Global Initiative for the Elimination of Blindness

WHO has established that in 2002, globally there were 37 million people who were blind and an additional 124 million people who had low vision. Vision 2020: The Right to Sight, a global initiative to eliminate avoidable blindness by the year 2020, was launched in 1999. This initiative builds on the alliance between WHO and the International Agency for the Prevention of Blindness (IAPB).

Dr Richard Le Mesurier is the Regional Co-ordinator for the Western Pacific for Vision 2020 and Professor Taylor is the Regional Chairman.

Highlights in this area for 2004 included:

- successful National Planning Meetings for Fiji (February), Mongolia (April), Cambodia (May) and the Philippines (August)
- the 5th Inter-Country Workshop for Indo-China held in Korat in July that both Professor Taylor and Dr Le Mesurier attended
- the IAPB 7th General Assembly in Dubai in September that Professor Taylor, Associate Professor Jill Keeffe and Dr Le Mesurier attended, as did the Hon. Dr Barry Jones AO in his capacity as Vision 2020 Australia Chairman
- the Fred Hollows Foundation Vision 2020 Fiji workshop held in October that both Associate Professor Keeffe and Dr Le Mesurier attended



Dr Le Mesurier and Mongolian colleague

- the Vietnam Non-Government Organization Co-ordination Meeting held in December in Hanoi that both Professor Taylor and Dr Le Mesurier convened

World Sight Day was celebrated widely throughout the Western Pacific Region and there has been steady progress during 2004. The massive earthquake and tsunami of 26 December has indirectly involved many countries in the Region, with repercussions to be felt for many years to come.

V I S I O N
2020
THE RIGHT TO SIGHT



Participants at The National Sight Plan: 5 Year Planning Workshop, Manila, August 2004



Vision 2020

The Right to Sight Australia

Vision 2020: The Right to Sight Australia was launched in October 2000 by the Director-General of WHO, Dr Grö Brundtland, and then Federal Minister for Health, the Hon. Dr Michael Wooldridge. Vision 2020 Australia provides a platform for Australian eye health professionals to work together. It has three areas of interest; the Australian Community, Aboriginal and Torres Strait Islander Communities, and Global Eyecare.

A two day Vision 2020 Australia forum, held in Canberra in March, provided a useful opportunity for eye health professionals to workshop their ideas and liaise with Government bureaucrats.

Each year, Vision 2020 Australia participates in World Sight Day activities designed to promote awareness of the problem of global blindness. In 2004, World Sight Day was celebrated on 7 October.



Vision 2020 Australia is currently co-ordinating a tsunami disaster response alliance to aid the huge international assistance operation now in progress.

Further information on Vision 2020 Australia is available at: www.vision2020australia.org.au



*The Hon. Barry Jones AO,
Chairman, Vision 2020 Australia*



VISION 2020 AUSTRALIA

Working together to prevent avoidable blindness and improve vision care...



Our vision is the elimination of avoidable blindness & vision loss by the year 2020 & to ensure that blindness and vision impairment are no longer barriers to full participation in the community."

[» ENTER WEBSITE](#)



The Vision Initiative is Australia's first eye health promotion program. Administered by Vision 2020 Australia, this three year pilot program being undertaken in Victoria includes a major public awareness campaign."

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Vision 2020 Australia website: www.vision2020australia.org.au

The Vision Initiative

In October 2002, the Victorian Government granted \$1.8 million over three years to Vision 2020 Australia to fund The Vision Initiative, a program that grew directly out of the Centre for Eye Research Australia's research findings and public health and health promotion activities. It is a great example of our research findings being directly translated into the improved eye health of our community.



The Hon. Bronwyn Pike MP Minister for Health, Ms Sally Fearn and Ms Jennifer Gersbeck, Vision 2020 Australia and Professor Taylor with The Vision Initiative's Victorian Health Award for Program Excellence

The Vision Initiative promotes professional best practice and encourages ophthalmologists, optometrists, general practitioners, pharmacists and other vision specialists to put forward a consistent message to their community regarding eye care. The Vision Initiative is the world's first large-scale public eye health program committed to improving the vision of the community by health promotion and developing best professional practice for eye care services. The Vision Initiative complements CERA's partnership with Lions in the Lions Eye Health Program.

The Centre is monitoring and evaluating the impact of The Vision Initiative as part of its work in the Vision CRC. This is described in more detail later in the report.

On 8 November 2004, The Vision Initiative was announced as this year's winner of the Victorian Health Award for Program Excellence.



Promotional material featuring satirist John Clarke



The Vision Co-operative Research Centre (CRC)

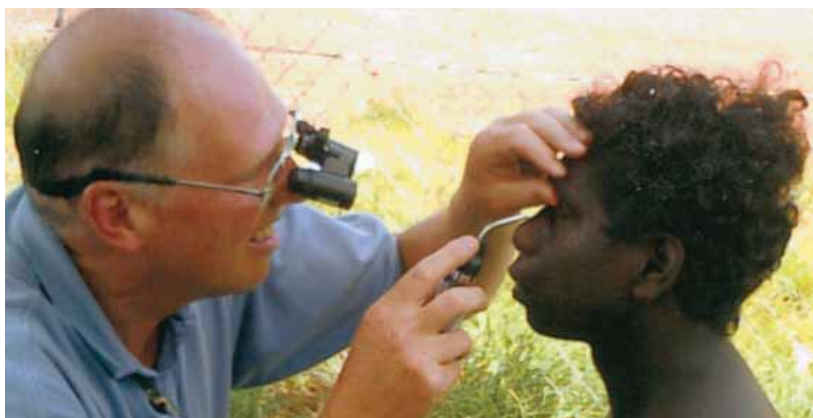


The Centre for Eye Research Australia is one of the four core participants in the Vision CRC, other core participants being the International Centre for Eyecare Education, LV Prasad Eye Institute (Hyderabad, India) and the Institute for Eye Research. In addition, there are over 20 supporting participants from around the world and eight industry participants.

The objectives of the Vision CRC are to become a leader in research, education and the delivery of vision correction; improve international eyecare; and maximize commercial opportunities. Ms McMeckan and Professor Taylor are members of the Board of the Vision CRC.



Associate Professor Debbie Sweeney, Mr Leon L'Huillier, Governor General His Excellency Major General Michael Jeffery AC, CVO, MC (Retd) and Professor Brien Holden OAM at a reception for the Vision CRC at Admiralty House, Kirribilli, Sydney, 22nd January, 2004



Professor Taylor examining an Aboriginal patient for trachoma at Maningrida, NT

The Centre is involved in five projects as part of the Vision CRC. These include:

- 1 The Genetics of Myopia
- 2 Monitoring and Evaluation of The Vision Initiative
- 3 Eye Care Delivery Models
- 4 Enabling Technology
- 5 Aboriginal Eye Health

Associate Professor Jill Keefe was appointed Program Director of the Vision Care Delivery Program in 2004. In this role, she has undertaken the direction of Projects 2 - 5 above.

Profile

Victorian Lions Foundation

In addition to being one of the stakeholders in the Centre, the Lions assist with the Lions Corneal Donation Service (Eye Bank), administer the Lions Eye Health Project, the Lions Low Vision Project and other work on diabetes performed by the Population Health Division.

As noted in last year's report, the Lions of District V2 donated the \$40,000 they raised on their 10th Annual Ride for Sight from Mallacoota to Melbourne to help us renovate new offices for the Macular Research Unit. The University of Melbourne Medical Faculty also contributed \$50,000 towards this work. The newly refurbished offices of the Macular Research Unit were officially opened on 9 March 2004.



Participants in the 10th Annual Lions Ride for Sight from Mallacoota to Melbourne

If this were not enough, in addition the Lions have undertaken to commit the proceeds of this year's Bike Ride towards a \$50,000 Research Fellowship that is to be awarded annually. The recipient of this year's Fellowship is Dr Ecosse Lamoureux, Head of the Health Services Research Unit, who was the winner of the 2003 CERA Research Award.



Launch of the Low Vision Online website: www.lowvisiononline.org

We used this occasion to launch the new Low Vision website, "low vision online", which can be accessed at www.lowvisiononline.org. This exciting new website was developed as part of the Lions Low Vision Initiative.

The Lions have committed a further \$50,000 towards the refurbishment of the Ocular Genetics Unit to accommodate its increasing number of staff and students. Work on this commenced late in 2004.



Basic Science Division – Director Professor Hugh R. Taylor AC

In 2004, much thought and discussion have gone into restructuring the Centre to reflect our focus on public health, clinical and basic ophthalmic research.

We created four Divisions to bring together our various Units.

Ocular Genetics Unit – Unit Head Dr Paul Baird

This Unit's research focuses on two major areas:

- the genetic basis of myopia
- the genetic basis of age-related macular degeneration (AMD)

Myopia

As part of the Vision CRC, a study was commenced in 2003 in collaboration with the Melbourne Excimer Laser Unit (MELG) to investigate the genetic basis of myopia.

1 Genetic analysis of myopia – the GEM Study

Individuals (index cases) with myopia have been identified and recruited through MELG. Family members of these index cases are being identified and examined with the aim of identifying genes involved in myopia. To date, over 245 families have been identified with myopia of <-3.0D and have agreed to take part in the study. Other family members are currently being recruited, with 489 individuals so far examined. Gene identification using linkage analysis on some of the larger families is due to begin soon.

years have undertaken a questionnaire, had a full eye exam and a blood sample taken for DNA analysis. Additional family members are also being recruited and families that exhibit a history of myopia are recruited into the GEM Study.

Age-related Macular Degeneration

Three major studies were undertaken in 2004:

1 Do AMD and Alzheimer's disease share common proteins?

Donor eyes and eye sections determined to have AMD were tested utilizing a range of antibodies against proteins typically associated with other neurodegenerative disorders including Alzheimer's disease. All eyes showed evidence of staining with ubiquitin and apolipoprotein (Apo)E, however only one AMD eye showed evidence of staining with β -amyloid, a protein typically associated with Alzheimer's disease.

2 Genetic analysis of AMD

(i) Analysis of the common allelic variants of the ApoE gene and progression of AMD was investigated in DNA extracted from 254 individuals (47% male, 53% female), aged between 51 to 89 years, recruited into Associate Professor Robyn Guymer's Cardiovascular Health and Age-related Maculopathy (CHARM) Study. Our results indicate a three- to four-fold increased risk of progression of AMD in individuals who present with the ϵ 2 variant of apoE relative to the other variants of this gene.

(ii) AMD families as well as sibling pairs from our repository have been analyzed for their apoE variant status in order to investigate segregation of these genetic variants with disease. Data analysis is currently underway.

(iii) A collaboration has been undertaken with Professor John Hopper at the Australian Twin Registry to examine features of AMD that are inherited. 280 Victorian twin pairs over the age of 50 years have so far been recruited and examined through the Registry, with a questionnaire and eye exam being administered to each twin pair and a DNA sample obtained.



Ms Andrea Richardson, Dr Paul Baird, Ms Kelly Pertile and Ms Pam Garoufalidis of the Ocular Genetics Unit

2 Gene – Environment Interaction – Twin Study

A twin study to investigate features of myopia that are inherited, as well as to better establish the heritability of previously described features, has commenced. To date, 280 twin pairs over the age of 50

In addition, recruitment of NSW twins over the age of 60 years is being undertaken.

(iv) Candidate gene analysis of AMD continues and we have begun to examine a series of genes (called fibulins) that have recently been implicated in AMD.

Corneal Research Unit – Unit Head Dr Graeme Pollock

This Unit incorporates the Lions Corneal Donation Service, the research activities of MELG, and Corneal Studies.

The Lions Corneal Donation Service

This is primarily a service provider, supplying donor corneal tissue, sclera and amniotic membrane to surgeons for transplantation procedures performed in Victoria, Tasmania and occasionally other states. Research activities are focused on issues relating to corneal transplantation and related procedures, and may be summarized as follows:

1 Marginalization of Eye Donation

This is a new direction that aims to examine from a sociological perspective issues surrounding donation for transplantation and the marginalization of eye donation. It is hoped this research will fully identify the consequences in regards to the delivery of eye donation services and what approaches need to be taken to circumvent the pathways.

2 Cultivation of Corneal Epithelia Cells

In patients with total limbal stem cell deficiency, severe vision loss is caused by invading vascularized conjunctiva, resulting in pain and photophobia. A healthy ocular surface can be reconstructed by grafting “stem cells”, grown on an amniotic membrane carrier, that have been cultivated and expanded from donor eyes.

Our research has resulted in the successful cultivation and maintenance of corneal epithelial stem cells for four weeks – the next step in making this a practical clinical tool is to investigate the use of a carrier amniotic membrane upon which the stem cells can be

seeded and grown. We have been on hold with this work awaiting clearance to continue to use amniotic membrane.

Excimer Laser Refractive Surgery Research

The Centre continues to have a role in the ongoing evaluation of Excimer laser procedures, both in the correction of refractive error and in the treatment of corneal disease. Although now regarded as a relatively mature procedure, the recent acquisition of a new Excimer laser technology has renewed interest in monitoring and evaluating the outcomes of procedures performed with this device.

Current projects include:

- 1 Evaluation of current treatment algorithms for LASIK using Bausch and Lomb 217z Excimer laser and use of aberrometry in the treatment of myopia, astigmatism and hyperopia.
- 2 Genetics of myopia.
- 3 The role of Excimer laser phototherapeutic keratectomy.
- 4 Evaluation of the new technology of wave-front guided laser refractive surgery.
- 5 The evaluation of quality of life pre- and post- refractive surgery.

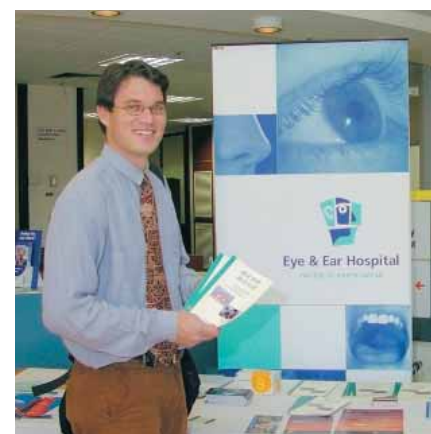
Corneal Studies

1 Bacterial Keratitis Clinical Trial

A clinical trial of three topical antibiotic regimes (Moxifloxacin versus Ofloxacin or a combination of Tobramycin/Cefazolin) for the treatment of microbial keratitis has been in progress since October 2002. Over 200 patients with the most severe corneal infections have been enrolled in this prospective randomised control trial. This study is expected to be completed by mid 2005.

2 Cyclosporin Clinical Trials

Two randomized clinical trials of Cyclosporin A are in progress, one in the management of acute corneal graft rejection that will recruit 125 patients, (82 have been enrolled to date), the other on treatment of steroid dependent atopic and vernal keratoconjunctivitis that has its full complement of 30 patients enrolled.



Corneal Fellow Dr Matt Oliva promoting corneal donation

Poster prepared by Ms Jo Ong to promote corneal donation



SHARE MORE THAN 15 MINUTES OF FAME.
GIVE THE
GIFT OF SIGHT



Clinical Epidemiology Division – Director Associate Professor Tien Wong

The new Retinal Vascular Imaging Centre will focus on the diagnostic analysis of retinal images for the purpose of predicting vascular disease.

Retinal Vascular Unit - Unit Head Associate Professor Tien Wong

Four major research programs are currently underway:

1 Retinal Vascular Disease: Epidemiology, Cardiovascular Risk and Significance

The objectives of this program are to determine the relationship of retinal vascular signs to risk of stroke and heart disease, to evaluate the use of retinal photography as a cardiovascular tool and to understand the clinical significance of hypertensive retinopathy. This research comprises four local and five international studies in three countries. Collaborating partners include the University of Wisconsin, Madison, USA, University of Sydney and National University of Singapore.



*Associate Professor
Tien Wong*

2 Epidemiology of Eye Diseases

The objectives of this research program are to study the epidemiology of major eye diseases such as myopia, angle-closure glaucoma, cataract and diabetic retinopathy. As with our research with Retinal Vascular Disease, this undertaking comprises local and international studies. One large study, the Singapore

Malay Eye Study (SIMES) will examine epidemiology of these diseases in Malay people in Singapore, the first in the world.

3 Clinical Treatment of Retinal Vascular Diseases

The objectives of this research program are to study the epidemiology and treatment of eye disease, in particular diabetic retinopathy. An NHMRC funded grant is supporting a clinical trial on diabetic retinopathy,

4 Retinal Vascular Imaging Centre

An application has been submitted to the Office of Science and Technology for Science Technology Infrastructure (STI) for funding to build the new Retinal Vascular Imaging Centre (RetVIC) that will focus on the diagnostic analysis of retinal images for the purpose of prediction of vascular diseases, including diabetes, stroke, hypertension and heart disease. If the goals of this proposal are achieved and clinical practice can be substantiated, then such predictive capability may significantly impact on these major causes of morbidity and mortality in middle-aged and elderly populations through earlier and more precise detection and treatment of these diseases.

Collaborating partners in RetVIC will include the Baker Medical Research Institute, BSC Electronics Pty Ltd, Centre for Vision Research – University of Sydney, Diabetes Australia, Eastern Clinical Research Unit, Monash University – Department of Epidemiology, National Heart Foundation, National Stroke Foundation, National Stroke Research Institute, Pfizer Pty Ltd, Royal Melbourne Hospital – Department of Neurology, Royal Victorian Eye and Ear Hospital and St. Vincent's Health – Department of Medicine.

The final proposal for our STI grant was submitted in January 2005.

Education Unit – Unit Head Associate Professor Deb Colville

The Department of Ophthalmology through the Standing Committee on Ophthalmology develops curriculum and co-ordinates teaching and assessment in ophthalmology in Semester 4, including clinical placements in ophthalmology, and clinical training in Semesters 8 – 9 Neurosciences block of the medical school degree. Evidence-based ophthalmology is also taught in the Semester 8 – 9 program. In addition, the Centre takes students for the Advanced Medical Science Year and gives them training in research.

Undergraduate training of Optometry students is performed in liaison with the Department of Optometry, and the Centre assists with the provision of lecturers and helps facilitate the clinical training in the clinics of the Royal Victorian Eye and Ear Hospital.

Postgraduate education in ophthalmology is conducted under the direction of the Hospital's Clinical School. The Centre assists with the teaching and occasional research projects generated by Hospital registrars.

Postgraduate research training is also an important component of the Centre's activities. It typically involves medical or science graduates in Masters or PhD courses and medical graduates in an MD course.

*Professor Taylor with a
visiting medical student*



Alcon Visiting Professor Program

Alcon Australia continued to fund a Visiting Professor Program in 2004. We are most grateful for their ongoing support of this important program. The three invited speakers listed below each spent a full day with us and Hospital staff. During this time, each gave two lectures on their particular area of speciality and participated in a grand round teaching session, ward rounds and public clinics.

June 2004 - Dr Dinesh Selva, Adelaide

September 2004 – Associate Professor
Glen Gole, Brisbane

October 2004 – Dr Stuart Graham,
Sydney, (centre right)



Clinical Research Division – Director Associate Professor Robyn Guymer

Macular Research Unit – Unit Head Associate Professor Robyn Guymer

The Macular Research Unit focuses on age-related macular degeneration (AMD), the most common cause of irreversible visual loss in our society. The Unit has a multi-faceted approach to investigation of this disease, as is evidenced by the various projects currently being undertaken.

1 Determination of the Genetic Components of AMD

This research concentrates on the collection and maintenance of AMD cases and families, thereby allowing us to study genes that might influence AMD, described previously in the work of the Ocular Genetics Unit.

Also referred to earlier in relation to the Ocular Genetics Unit, a twin study has been undertaken to investigate features of AMD that may be inherited. This study will produce novel information about the inherited characteristics of retinal appearance and function and provide us with information as to the genetic impact on macular functions and diseases.

2 Understanding Epidemiological Risk Factors in AMD

One aspect of our research focuses on interpretation of the data obtained following our investigation of the association between cardiovascular health and AMD.

In another approach to this question, we are utilizing participants from the Melbourne Collaborative Cohort Study that was set up in the early 1990s to investigate the role of diet and other lifestyle factors in causing common chronic diseases in middle-aged Australians. These recruits are now aged between 51 and 80 years and we are currently in the process of simultaneously investigating dietary, genetic and other protective / risk factors for AMD in this group.

3 Delaying the Progression of AMD

We have embarked on an intervention study that aims to determine whether or not statin treatment for three years, administered to people with high risk fundus changes, can slow the progression of AMD. The observation that statins can improve retinal function suggested that they may limit the decline in function caused by high fat diets.



Associate Professor Robyn Guymer, as pictured in an article published in "The Australian" newspaper, September 2004

To investigate this further, a rat model has been developed that is hoped will mimic a model of compromised Bruch's membrane that may reflect AMD changes.

4 A Functional Predictive Test of AMD

A major study in progress is the investigation of retinal functional tests that will produce a more sensitive and specific indicator of disease risk and progression towards end-stage disease.

5 Pathogenesis of AMD

The Macular Research Unit continues to help co-ordinate the collection of eyes for research so that retinæ can be used to study the pathogenesis of AMD. Predicated on a link between Alzheimer's disease and AMD, this research has been described previously in the Ocular Genetics Unit Report.

6 International Drug Trials

Four international drug company sponsored intervention studies in AMD (two Alcon, one Pfizer and one Novartis) are currently being undertaken by the Unit.

Glaucoma Unit - Unit Head Dr Julian Rait

Two clinical trials continue in this Unit, one a five year post marketing study of Latanoprost (Xalatan) compared to usual care (Pfizer), the other a five year trial of a neuroprotector (Allergan). In addition, a Computerised Decision Support System for the Management of open-angle glaucoma is being developed. The aim of this project, funded by Allergan, is to improve the visual functioning and quality of life of people with open-angle glaucoma.

Clinical Genetic Studies - Unit Head Associate Professor David Mackey

Research in this Unit focuses on the identification of genes responsible for glaucoma and identification of risk factors for this disease.

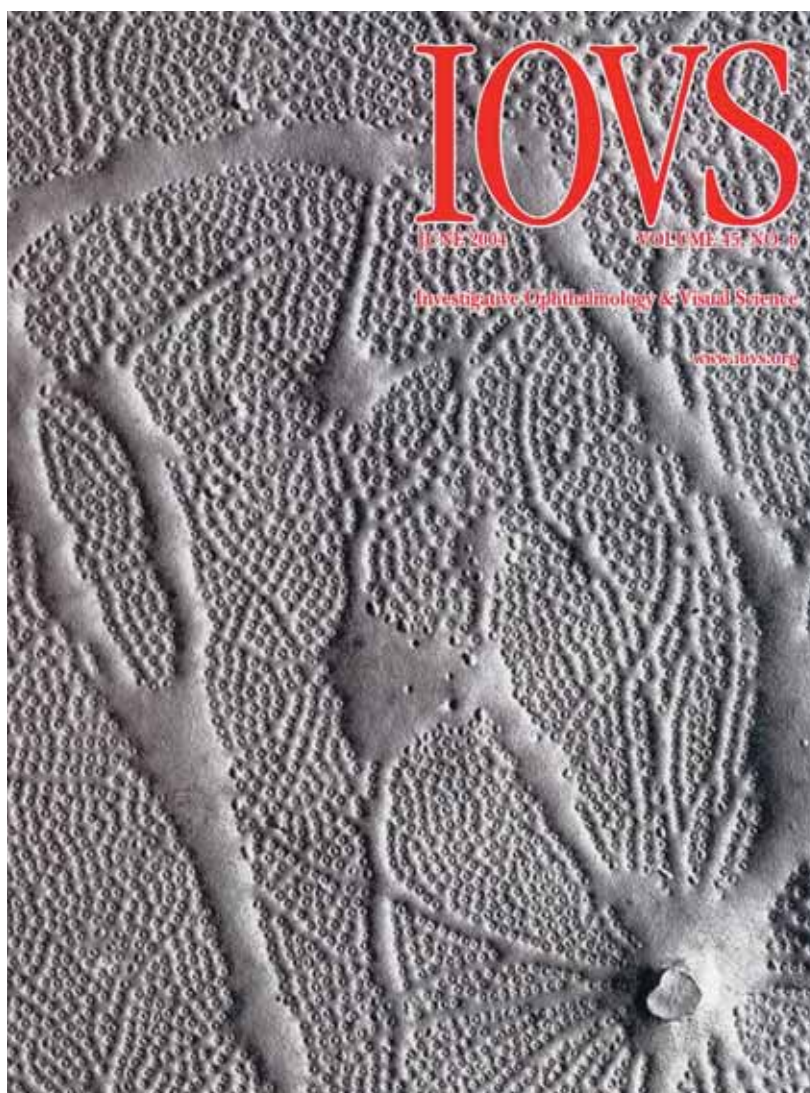
To this end, a collaborative study based on the examination of 1,000 sets of twins will be

undertaken to identify new glaucoma genes. In addition, by capitalising on over a decade's worth of clinical information and DNA from 400 families and 5,000 individuals from the Glaucoma Inheritance Study in Tasmania, further genes for glaucoma will be identified, as will better regimes for treatment and screening.

Paediatric Studies - Unit Head Dr Wendy Marshman

Research in this area focuses on the anatomy of extraocular muscles as a cause of squints in children.

The observation that statins can improve retinal function suggested that they may limit the decline in function caused by high fat diets.



Cover of June 2004 Investigative Ophthalmology and Visual Sciences journal featuring an image of Bruch's membrane supplied by Associate Professor Guymer

Population Health Division – Director Associate Professor Jill Keefe



*Dr Ecosse Lamoureux,
Head of the Health Services
Research Unit*

The mission of this Division is the prevention of vision loss and blindness and reduction of its impact. The streams of research include health services especially in low vision and diabetic retinopathy, outcomes research measured as quality of life, use of appropriate technology, health economic measures and costs, Aboriginal eye health, and development and evaluation of eye health promotion activities.

Eye Health Promotion Unit - Unit Head Dr Andreas Müller

Core research in this Unit focuses on The Vision Initiative (TVI), a comprehensive public health program designed to prevent avoidable blindness and to reduce the impact of vision impairment on individuals and the community.

The Centre is conducting evaluation of the health promotion activities. Prior to the launch of TVI, baseline data on eye disease, knowledge and use of services were collected from older Victorians from randomly selected suburbs. Field work and data collection for the first stage were completed at the end of 2003. The second identically designed stage will commence in 2005.

A second research priority within the Unit is the Lions Eye Health Program-Australia (LEHP-Australia), the objective of which is to prevent vision loss and blindness from diabetic eye disease and glaucoma through a community based health promotion program.

During 2004, the LEHP-Australia National Committee has developed objectives and implementation strategies for the next phase of the program that will include expansion of the eye health promotion messages and transition to a self sustaining Australian Lions sponsored initiative.

Health Services Research Unit – Unit Head Dr Ecosse Lamoureux

1 Burden of Eye Disease - Impact of Vision Impairment:

This study was designed to determine the vision-specific rehabilitation needs of people with vision impairment and to measure the outcomes of vision rehabilitation programs.

To accomplish this, a 32-item questionnaire, the Impact of Vision Impairment (IVI), was developed. Statistical analysis of the data obtained from this study is in progress and a detailed database and manual have been constructed. In addition, a database has been completed for the Guide Dogs' Victoria IVI Project that has been investigating quality of life following sudden acquired vision loss.

2 Economic Evaluation of Rehabilitation Programs for People with Impaired Vision:

This year saw the Vision and Quality of Life Index (VisQoL) project in its main phase, with 360 "time-trade-off" interviews being conducted, half on participants recruited from the general community, the other half on patients recruited from the Hospital's Special Eye Clinic with vision <6/12. This will allow us to determine whether this measure would prove a useful add-on dimension to the existing generic quality of life utility instrument, AQoLII. VisQoL was also used as a tool to measure quality of life among people with refractive error. The findings indicate that it is sensitive to vision-related changes to life quality due to refractive error, and hence is suitable to use in developing a vision utility value. The personal costs for people with vision impairment study moved into its final phase in 2004. Cost data have been analyzed from participants who have returned completed diaries for 12 months, and the results indicate that people with impaired vision experience significant vision related expenditure but with a large range.

Future projects within this Unit include:

- (i) a randomized control trial of different types of low vision care comparing usual care with one that has a self-management aspect, to empower individuals to manage their low vision effectively.
- (ii) a study to investigate the relationship between visual impairment and gait with the aim of developing an intervention program to improve mobility and reduce falls.

Prevention of Blindness Unit - Unit Head Associate Professor Jill Keeffe

Research in this Unit concentrates on the development of effective models of vision care delivery.

1 Diabetic Retinopathy Screening – Use of the Polaroid Non-mydratic Camera versus the Digital Non-mydratic Camera:

In the past two decades, non-mydratic retinal cameras have become an important tool for diabetic retinopathy screening. In 2004, data were collected and analyzed that indicated that screening for diabetic retinopathy with the Polaroid camera is as effective in detecting people needing referral as screening with the digital camera.

2 Development for commercialization of a new Non-mydratic Fundus Camera:

In collaboration with Vision Instruments, a prototype for a non-mydratic retinal camera is being developed that is optimized for retinal screening in public health, developing countries and remote areas. This camera will be portable, have a uniquely intuitive operator interface and will be available at less than half the price of existing bench mounted digital retinal cameras.

3 Evaluation of Environmental Health Initiatives for the Elimination of Trachoma:

The Centre is working with the Northern Territory Government to conduct a health impact study in selected Aboriginal communities where swimming pools are



Ms Melanie Larizza with a participant from the Vision and Quality of Life Index (VisQoL) project

to be constructed. A survey is to be designed to measure health-related behaviour associated with use of swimming pools to evaluate changes in the prevalence of trachoma, ear and skin infections.

4 Development of Low Vision and Eye Care Programs for Fiji:

In this project, eye care services, especially for low vision and diabetic retinopathy, will be developed as services integrated into the eye and health care system in Fiji. These models of service will be evaluated from an economic perspective and with culturally appropriate outcome measures.

5 Development of a Model of Low Vision Care for Children:

Globally, 90% of school age children with vision impairment are unable to receive a school education. In this project, the needs of children with low vision will be assessed and categorised into three levels so that the requirements for human resources, equipment and infrastructure can be incorporated into national Vision 2020 and Education for All 2015 plans.

Research

Postgraduate Research Training

Postgraduate research training is an important component of the Centre's activities. The following students are currently enrolled.

Degrees Awarded in 2004

Doctor of Medicine

Dr Anthony Chiu: "The role of cholesterol-lowering medications ("statins") in the progression of age-related macular degeneration."

Dr Niro Narendran: "Genetics of age-related macular degeneration."

Advanced Medical Science

Mr Shane Battye: Project related to protein analysis of donor age-related macular degeneration tissue.

Ms Sing Pey Chow: Project related to diabetic retinopathy studies.

Ms Cheryl Leung: Project related to vision and quality of life measurements.

Ms Kar Yan Lo: Project related to monitoring and evaluation of The Vision Initiative.

Theses Submitted in 2004

Doctor of Philosophy

Dr Reuben Phiri: "Diabetic retinopathy screening; use of the Polaroid non-mydratic camera versus the digital non-mydratic camera."

Master of Medicine

Dr Amy Cohn: "Autosomal Dominant Optic Atrophy: Correlating Disease Severity and Optic Disc Appearances."

Theses in Progress

Doctor of Philosophy

Dr Christine Chen: "Identification of genes in myopia."

Ms Shiao-Lan Chou: "Economic evaluation of rehabilitation programs for people with impaired vision."

Ms Gillian Cochrane: "The development of a model of care for children with vision impairment."

Mr Peter Dimitrov: "Predicting progression of age-related macular degeneration."

Mr Mohamed Dirani: "The use of twins to measure refractive error and establish both genetic and environmental components of disease."

Dr Van Lansingh: "Primary health care approach to trachoma control."

Doctor of Medicine

Dr Matthew Chamberlain: "Heritability of features of early age-related macular degeneration: a twin study."

Dr Claire Hooper: "Does cataract surgery precipitate choroidal neovascular membranes in susceptible eyes?"

Master of Medicine

Dr Heathcote Wright: "Trachoma in Northern Australia: a public health problem?"

Advanced Medical Science

Ms Julia Kuchinsky: "Implications for ophthalmic education from a gender analysis of Melbourne Visual Impairment Project statistics."



Advanced Medical Science student Ms Kar Yan Lo

Clear Insight

The Economic Impact and Cost of Vision Loss in Australia

Unlike many other diseases, the economic impact of vision loss on the Australian community had never been thoroughly assessed, nor had the impact on the people who are visually impaired and their families.

With this in mind, we commissioned Access Economics Pty Limited to prepare a report on the economic impact and cost of vision loss in Australia. We gratefully acknowledge the unrestricted grant from Alcon Australia and the support of its Managing Director, Mr Warwick Kitt, that enabled this work.

The report we produced, "[Clear Insight: the Economic Impact and Cost of Vision Loss in Australia](#)", was launched at the Victorian State Library on 19 August by Professor John Funder AO, Eye Research Australia Foundation Chairman, Ms Tina McMeckan, Centre Chairman, Hon. Dr Michael Wooldridge, Hon. Dr Barry Jones AO, Vision 2020 Australia Chairman and Professor Taylor. The launch was further supported by the Vision CRC, RANZCO Eye Foundation and Vision 2020 Australia.

Research documented in the Clear Insight report has revealed that the real impact of visual impairment in Australia has been overlooked:

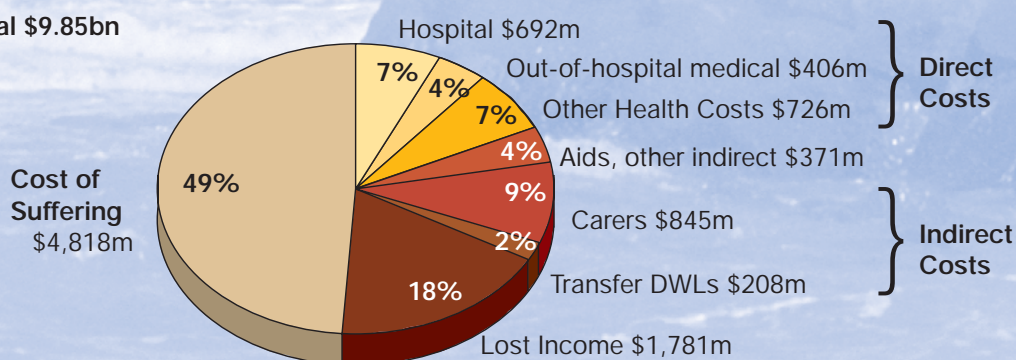
- The total cost of vision disorders in Australia was estimated to be \$9.85 billion in 2004.
- By 2024 the number of Australians with visual impairment or blindness may increase to nearly 800,000.
- Costs of eye care will continue to increase faster than the population because of the increasing proportion of older people.

- The direct health costs of treating eye disease are extremely large - \$1.8 billion in 2004. They have increased by \$1 billion over the last 10 years and will increase by another \$1 – 2 billion over the next 10 years.
- Visual impairment has significant socio-economic costs. The indirect costs to the community of visual impairment are \$3.2 billion.
- The direct costs for vision disorders are more than the cost of coronary heart disease, stroke, arthritis or depression and that of diabetes and asthma combined.
- Three quarters of visual impairment is unnecessary. It can be either prevented or treated and prevention is often more cost-effective than treatment
- The years of life lost due to disability (YLD) from visual disorders is 2.7% of the national total, similar to that of diabetes and coronary heart disease and significantly greater than the disability burden for breast cancer, prostate cancer, melanoma or HIV/AIDS.

To reverse the projected prevalence, cost and burden of vision loss we must have:

- appropriately resourced, long-term eye health promotion initiatives to reduce avoidable vision loss
- adequate funding for eye care services for treatable conditions and for low vision support services
- a substantial increase in research into causes of vision loss and blindness that cannot be prevented or treated at present.

Total \$9.85bn



Composition of total costs, vision disorders, 2004



Eye Research Australia
Clear Insight

The Economic Impact and Cost
of Vision Loss in Australia

A Report prepared by Access Economics Pty Limited



This Report can
be accessed at
the Centre's
website:

www.cera.org.au

In 2005, we have
commissioned a
second report
based on further
analysis that
will identify the
cost of various
intervention
strategies to elim-
inate avoidable
vision loss and
compare this to
the savings that
would flow to
Government and
the community.



Centre for Eye Research Australia Board Centre and University Staff

Over the year we were pleased to welcome many new staff, each of whom has added significantly to our team effort.

Centre for Eye Research Australia Board of Directors

Ms Tina McMeckan, Chairman
Professor Hugh R. Taylor AC,
Managing Director
Professor James Angus
Ms Rosanne Cunningham
Mr Malcolm Daubney
Professor John Funder AO
Mr Graeme Houghton
Mr John Jeffries
Hon. Dr Barry Jones AO
Mr Philip Molyneux, Treasurer
Mr David Welsh
Dr Robert West
Hon. Dr Michael Wooldridge
Company Secretary: Mr David Doyle

Finance and Audit Committee

Mr Philip Molyneux, Chairman
Ms Tina McMeckan
Professor Hugh R. Taylor AC
Mr David Welsh

Investment Committee

Mr Charles Macek
Mr Philip Molyneux

Research Committee

Associate Professor Justin O'Day AM,
Chairman
Professor James Angus
Professor John Funder AO
Mr Philip Molyneux
Professor Terence Nolan
Professor Hugh R. Taylor AC

Vision CRC Research Advisory Committee

Professor Hugh R. Taylor AC, Chairman
Professor James Angus
Professor John Funder AO
Associate Professor Jill Keefe
Professor Terence Nolan
Associate Professor Justin O'Day AM



Professor Funder, Ms McMeckan, Professor Taylor, the Hon. Dr Jones and the Hon. Dr Wooldridge at the launch of the Clear Insight report

Centre for Eye Research Australia Board Centre and University Staff

Head of Department and Ringland Anderson Professor of Ophthalmology

Professor Hugh R. Taylor AC

Basic Science Division

Professor Hugh R. Taylor AC, Division Director

Ocular Genetics Unit

Dr Paul Baird, Unit Head

Ms Pam Garoufalis, Research Co-ordinator

Mr Nicholas Johnson, Data Analyst

Mrs Teresa Liistro, Administrative Assistant

Ms Kelly Pertile, Research Assistant
(from February 2004)

Ms Andrea Richardson, Research Assistant

Postgraduate Students

Dr Matthew Chamberlain

Dr Christine Chen

Mr Mohamed Dirani

Advanced Medical Science Student

Mr Shane Battye

Undergraduate Summer Student

Ms Debbie Farrell (Jan – Feb, 2004)

Corneal Research Unit

Dr Graeme Pollock, Manager, Lions Corneal
Donation Service

Mr Anthony Carnicelli, Transplant Co-ordinator,
Lions Corneal Donation Service
(until September 2004)

Mr Marios Constantinou, Clinical Trial
Co-ordinator and Orthoptist

Dr Mark Daniell, Senior Lecturer
(from July 2004)

Dr Prema Finn, Transplant Co-ordinator,
Lions Corneal Donation Service

Mr David Shearer, Transplant Co-ordinator,
Lions Corneal Donation Service
(from December 2004)

Dr Grant Snibson, Senior Lecturer, Medical
Director, Lions Corneal Donation Service

Melbourne Excimer Laser Group

Mr Terry Couper, Unit Manager

Ms Kate Craig, Orthoptist

Ms Caroline Gibbs, Orthoptist

Ms Ilona Probyn, Receptionist



*Hector Maclean scholarship winner Ms Debbie Farrell
with Associate Professor Hector Maclean*

Clinical Epidemiology Division

Associate Professor Tien Wong,
Division Director

Retinal Vascular Unit

Associate Professor Tien Wong, Unit Head

Dr Helena Cilliers, Retinal Fellow

Ms Theresa Dolphin, Research
Assistant/Retinal Photographer

Dr Alex Harper, Senior Lecturer

Ms Rachel McIntosh, Clinical Trials
and Grants Co-ordinator

Ms Sophie Rogers, Epidemiologist/Statistician

Ms Irene Tam, Photographer/Grader

Ms Fulya Torun, Executive Assistant

Research Students

Ms Ekaterina Alibrahim

Ms Kristin De Haseth

Education Unit

Associate Professor Deb Colville, Unit Head

Advanced Medical Science Student

Ms Julia Kuchinsky



Centre for Eye Research Australia Board Centre and University Staff



*Ms Joanna Ong,
Visual Communications Unit*

Clinical Research Division

Associate Professor Robyn Guymer,
Division Director

Macular Research Unit

Associate Professor Robyn Guymer, Unit Head
Dr Penny Allen, Senior Fellow
Dr Khin Zaw Aung, Research Assistant
Ms Melinda Cain, Research Nurse
Mr Anthony Carnicelli, Research Assistant
(until September 2004)
Mr Peter Dimitrov, Research Assistant
Ms Theresa Dolphin, Research Assistant
Dr Alex Harper, Senior Fellow
Ms Nicola Hunt, Research Assistant
Ms Amanda Lancaster, Administrative
Assistant (from September 2004)
Dr Lyndell Lim, Research Fellow
Dr Salmaan Qureshi, Fellow
Dr Liubov Robman, Senior Researcher
Ms Gabriella Tikellis, Research Assistant
Ms Amanda Lancaster, Administrative
Assistant (from September 2004)
Mrs Fulya Torun, Administrative Assistant
(until July 2004)
Ms Mary Varsamidis, Research Assistant

Glaucoma Unit

Dr Julian Rait, Unit Head
Dr Richard Clark, Research Fellow
Ms Danielle Healey, Research Co-ordinator
Ms Rachel McIntosh, Orthoptist

Clinical Genetic Studies

Associate Professor David Mackey, Unit Head

Postgraduate Student

Dr Amy Cohn

Paediatric Studies

Dr Wendy Marshman, Unit Head

Corporate Services Division

Mr Rod Watts, Division Director

Finance and Administration Unit

Ms Janine Reid, Manager (from May 2004)
Mr Peter Coates, Finance Officer
Ms Irina Kalpakidis, Finance Officer
Ms Anna Giannios, Administrative Assistant
Ms Amanda Lancaster, Administrative
Assistant (from September 2004)
Ms Jennifer Marshallsea, Manager
(until March 2004)
Ms Fiona Warden, Grants Administration
Officer

Visual Communications Unit

Ms Joanna Ong, Unit Head
Ms Sarah Squire, Technical Assistant



*Members of the Macular Research Unit at the opening of their
newly refurbished offices*

Postgraduate Students

Dr Matthew Chamberlain
Mr Peter Dimitrov
Dr Claire Hooper



Mr Rod Watts, Director, Corporate Services Division

Centre for Eye Research Australia Board Centre and University Staff



Members of the Population Health Division

IT Unit

Mr Colin Miles, Manager

Head of Department

Ms Judith Carrigan, Communications
Co-ordinator and Personal Assistant
to Professor Taylor

Ms Phyllis Halliday, Administrative Assistant
and Clinical Receptionist (from July 2004)

Ms Amanda Lancaster, Administrative
Assistant and Clinical Receptionist
(until July 2004)

Strategic and Business Planning

Mr Rod Watts

Population Health Division

Associate Professor Jill Keefe,
Division Director

Eye Health Promotion Unit

Dr Andreas Müller, Unit Head
(from March 2004)

Mr Marios Constantinou, Research Assistant

Mr John Ferraro, Field Co-ordinator

Mrs Leanne Mazzoni, Research Assistant

Mr John Simpson, Program Manager

Health Services Research Unit

Dr Ecosse Lamoureux, Unit Head

Ms Sharon Amira, Research Assistant

Ms Jennifer Hassell, Research Assistant

Ms Melanie Larizza, Research Assistant

Dr RoseAnne Misajon, Research Fellow

Ms Betty Tellis, Research Assistant

Dr Elaine Wong, Research Associate

Prevention of Blindness Unit

Associate Professor Jill Keefe, Unit Head

Dr Alex Harper, Senior Lecturer

Mr Nicholas Johnson, Data Analyst

Dr Richard Le Mesurier, IAPB/Vision 2020

Regional Co-ordinator

Ms Jessica Towers, Administrative Assistant

Dr Hien Vu, Statistician

Postgraduate Students

Ms Shiao-Lan Chou

Ms Gillian Cochrane

Dr Van Lansingh

Dr Reuben Phiri

Dr Heathcote Wright

Advanced Medical Science Students

Ms Sing Pey Chow

Ms Cheryl Leung

Ms Kar Yan Lo

The mission of the
Population Health
Division is the
prevention of vision
loss and blindness
and reduction of
its impact.



Attendance at Conferences and Meetings in 2004

The invitations that our staff receive to talk at national and international meetings testify to their world renowned standing.

Overseas

Cost of Blindness Symposium, Toronto, Canada, January/February

Professor Hugh Taylor

32nd International Agency for the Prevention of Blindness (IAPB) Executive Committee and Task Force, Geneva, Switzerland, February

Professor Taylor

8th Meeting of the WHO Alliance for the Global Elimination of Blinding Trachoma, Geneva, Switzerland, March

Professor Taylor

44th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, American Heart Association, San Francisco, USA, March

Associate Professor Tien Wong

Associate Professor Tien Wong

Awarded the 2004 Sandra Daugherty Award for Excellence in Cardiovascular Disease and Hypertension Epidemiology

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

Professor Taylor, Associate Professors Jill Keefe, David Mackey and Wong, Drs Paul Baird, Amy Cohn, RoseAnne Misajon, Luba Robman, Hien Vu, Mr Peter Dimitrov, Ms Sing Pey Chow, Ms Shiao-Lan Chou, Ms Joanna Ong

Royal College of Ophthalmologists Annual Congress, Manchester, UK, May

Dr Niro Narendran

Indonesian Ophthalmologists Association Annual Meeting, Indonesia, June

Associate Professor Keefe

International Myopia Meeting, Cambridge, UK, July

Dr Baird

5th Inter-Country PBL Workshop for Indo-China, Korat, Thailand, July

Professor Taylor, Dr Richard Le Mesurier

Vision 2020 Philippines Meeting, Manila, Philippines, July/August

Professor Taylor, Dr Le Mesurier

15th Singapore National Eye Centre (SNEC) International Meeting, Singapore, September

Associate Professor Wong

European Association for Vision and Eye Research (EVER) Meeting, Vilamoura, Portugal, September

Associate Professor Wong

IAPB 7th General Assembly and 18th ISGEO Meeting, Bahrain, Dubai, September

Professor Taylor, Associate Professor Keefe, Dr Le Mesurier

American Academy of Ophthalmology Meeting, New Orleans, USA, October

Professor Taylor

Low Vision Group Meeting, Oslo, Norway, October

Associate Professor Keefe

National Institute of Health MacTel Research Project, Baltimore, USA, October

Associate Professor Robyn Guymer

11th Asian and Oceanic Congress of Neurology, Singapore, November

Associate Professor Wong

SNEC Diabetic Retinopathy Symposia, November

Associate Professor Wong

Vietnam NGO Co-ordinating Meeting, Hanoi, Vietnam, December

Professor Taylor, Dr Le Mesurier



Attendance at Conferences and Meetings in 2004

Australia

**Deans and Heads Conference,
Lorne, February**
Professor Taylor

9th Proteomics Symposium, Lorne, February
Dr Baird

**21st Cornea and Eye Bank Meeting,
Melbourne, March**
Professor Taylor, Drs Mark Daniell, Graeme Pollock and Grant Snibson

Vision 2020 Australia Forum, Canberra, March
Professor Taylor, Associate Professor Keeffe, Drs Lamoureux and Misajon, Mr Rod Watts, Ms Laurie Staub

**Vision CRC Postgraduate Review Meeting,
Sydney, April**
Associate Professor Keeffe, Drs Christine Chen, Lamoureux, Reuben Phiri and Heathcote Wright, Mr Mohamed Dirani, Ms Chou, Ms Gillian Cochrane

**Australian Institute of Health and Welfare
Meeting, Canberra, June**
Professor Taylor



Associate Professor Tien Wong



Dr RoseAnne Misajon at the ARVO conference, Fort Lauderdale, USA, May 2004

**14th Annual Scientific Meeting of the
Melbourne Ophthalmic Alumni Club,
Melbourne, July**

Professor Taylor, Associate Professors Colville, Guymer, Keeffe and Wong, Drs Khin Aung, Matthew Chamberlain, Helena Cilliers, Chou, Cohn, Alex Harper, Lamoureux, Lyndell Lim, Misajon, Andreas Müller, Phiri and Robman, Messrs Dimitrov and Dirani, Ms Pam Garoufalas, Ms Jennifer Hassell, Ms Nicola Hunt

**16th International Congress for Eye
Research (ICER) Sydney, August/September**
Professor Taylor, Associate Professors Guymer, Mackey and Wong, Drs Baird and Christine Chen, Mr Dirani, Ms Garoufalas

**Myopia Down Under: Satellite Meeting
of the 16th ICER, September**
Ms Garoufalas

**Australian Society for Microbiology Meeting,
Sydney, September**
Professor Taylor

**RANZCO 36th Annual Scientific Congress,
Melbourne, November**
Professor Taylor, Associate Professors Guymer, Mackey and Wong, Drs Penny Allen, Baird, Chen, Cilliers, Richard Clark, Cohn, Harper, Wendy Marshman, Salmaan Qureshi, Julian Rait and Snibson

Australia at Risk Meeting, November
Professor Taylor, Associate Professor Wong



Invited Lectures and Talks for 2004

Professor Hugh Taylor

Cost of Blindness Symposium, Toronto, Canada, January/February

The impact of vision loss in Australia

21st Cornea and Eye Bank Meeting, Melbourne, March

Myopia research and the Vision CRC

ARVO Meeting, Fort Lauderdale, USA, April

Gender differences in blindness and the need to target services

16th ICER, Sydney, August/September

Trachoma

Research priorities for Vision 2020

IAPB 7th General Assembly, Bahrain, Dubai, September

Prevention of corneal blindness

Australian Society of Microbiology Meeting, Sydney, September

What we know and what we don't know about trachoma

American Academy of Ophthalmology Meeting, New Orleans, USA, October

What experience has taught me – do not miss glaucoma

Progress in improving vision worldwide

RANZCO 36th Annual Scientific Congress, Melbourne, November

Economic effect of vision loss

Associate Professor Robyn Guymer

Country Women's Association Annual Meeting, Shepparton, February

Age-related Macular Degeneration

RANZCO 36th Annual Scientific Congress, Melbourne, November

New treatments in AMD

Associate Professor Jill Keefe

National Vision Forum, Canberra, March

www.lowvisiononline.org

ARVO Meeting, Fort Lauderdale, April

Impact of age-related macular degeneration on quality of life

Indonesian Ophthalmologists Association Annual Meeting, Indonesia, June

Challenges in community ophthalmology: low vision

IAPB 7th General Assembly, Bahrain, Dubai, September

Vision 2020: low vision care

Low Vision Group Meeting, Oslo, Norway, October

WHO/Lions Childhood Blindness Training Course, Hong Kong, November

Low Vision Lecture, Hospital Selayang, Kuala Lumpur, Malaysia, December



Associate Professor Keefe outlines the Low Vision Online website during its launch

Invited Lectures and Talks for 2004

Associate Professor Tien Wong

**Kyoto Prefectoral University of Medicine,
Kyoto, Japan, January**

Clinical significance of retinal arteriolar signs in the non-diabetic patient – is hypertensive retinopathy still useful for cardiovascular risk stratification?

**Yamagata Frontiers of Ophthalmology
Lecture. Yamagata University, Yamagata,
Japan, January**

Hypertensive retinopathy: new insights from population-based studies

**Singhealth Research Forum, Singapore
General Hospital, Singapore, February**
Epidemiological research in ophthalmology

16th ICER, Sydney, August/September
Is the age-related decrease in myopia due to age or cohort effects?

**15th SNEC International Meeting,
Singapore, September**
Current concepts in the epidemiology of diabetic retinopathy
Effectiveness in management of systemic risk factors in reducing retinopathy

**European Association for Vision and Eye
Research Meeting, Vilamoura, Portugal,
September**
Myopia and associated ocular morbidity

**Victorian College of Optometry,
Melbourne, October**
Current concepts and classification of hypertensive retinopathy

**Singapore Eye Research Institute,
Singapore, October**
Recent advances in hypertensive retinopathy

**11th Asian and Oceanic Congress of
Neurology, Singapore, November**
Is a retinal assessment useful for stroke risk prediction?

**Singapore National Eye Centre Diabetic
Retinopathy Symposia, November**

The epidemiology of diabetes and diabetic retinopathy

Dr Paul Baird

**ARVO/ISER International Advocacy
Workshop, Fort Lauderdale, USA, April**

Government regulation of scientific research – the Australian viewpoint

**International Myopia Meeting, Cambridge,
UK, July**

Genes in myopia study

**RANZCO 36th Annual Scientific Congress,
Melbourne, November**

The alleles of the apolipoprotein gene are associated with AMD

Dr Amy Cohn

University of Bologna, Italy, October
Autosomal dominant optic atrophy in Australia

Dr Andreas Müller

University of the Third Age, Geelong, November
Vision loss is not a necessary consequence of ageing



Dr Amy Cohn



Dr Andreas Müller



Visitors in 2004

	<p>March Launch of Low Vision Online and Opening of New Offices of the Macular Research Unit Mr Scott Anderson, Telematics Trust Mr David Welsh, Victorian Lions Foundation, CERA Director Mr George Barnard, Lions Victorian LEHP Co-ordinator Mrs Norma Barnard, Lions District Governor, 201 V3 Mr Eric Black, Lions Low Vision Initiative Committee Mr Ian de Bruyn, Chairman, Lions Ride for Sight Committee Ms Shirley Higman, Lions Ride for Sight Committee Mr Ross Larsen, Lions Ride for Sight Committee Ms Kathy O'Connell, Secretary, Lions Ride for Sight Committee Ms Yvonne von Hartel and Mr Firdaus Kartika, peckvonhartel Mr Chris Edwards, Royal Victorian Institute for the Blind Mr David Gerrard and Dr Robert Grogan, Royal Victorian Eye and Ear Hospital Mr Graeme Houghton, Royal Victorian Eye and Ear Hospital, CERA Director Ms Diana Halmarick, Vision Australia Foundation Ms Carley Nicholls, Executive Director, Vision 2020 Australia Ms Tamara Pollard, Department of Human Services</p> <p>Dr Peter Rose, Department of Primary Health Care, University of Oxford</p> <p>April Hon. David Davis MLC, Shadow Minister for Health Mr Brian Jones, Business Management Ltd, Mr John Reid AO, Australian Graduate School of Management, Dr Gregg Suaning, School of Engineering, University of Newcastle and Associate Professor Nigel Lovell, Graduate School of Biomedical Engineering, UNSW Mr Alan Roche, Adviser to the Hon. Tony Abbott MP, Minister for Health and Ageing</p> <p>May Mr Michael Braham and Ms Beverley Lindsell, Glaucoma Australia</p>	<p>Mr Jeff Dalman and Ms Misha Stavris, Multipurpose Taxi Program, Department of Infrastructure Mr Les Donovan, Vision CRC Mr Warwick Kitt, Managing Director, Alcon Australia</p> <p>Seventh Annual General Meeting and Publication of 2003 Annual Report Professor James Angus, Dean, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, CERA Director Messrs Frank and Louis Brettell Mrs Phyllis Connor Dr Xavier Csar, Manager, Biomedical Research, Department of Innovation, Industry and Regional Development Mr David Doyle, CERA Company Secretary Professor John Funder AO, Chairman, Eye Research Australia Foundation (ERAF) Dr Dick Galbraith Mrs Sylvia Gelman Mr Graeme Head, Victorian Lions Foundation Mr Graeme Houghton, Chief Executive Officer, Royal Victorian Eye and Ear Hospital, CERA Director Mr John Jeffries, National Director, Christian Blind Mission International, CERA Director Mr Ronald Krongold Mr Ian and Mrs Nelle Lees Mr Rod and Mrs Margaret McDonald Ms Tina McMeckan, Chairman, CERA Commander Tony Murphy, Metropolitan Fire Brigade Mr Peter Nankivell, Herbert Geer and Rundle, ERAF Trustee Drs Genevieve Napper and Suit May Ho, Victorian College of Optometry Dr Simon Rabl, Manager, Neurosciences Victoria Monash Node Mr David Rath, ERAF Trustee Mr Alan Roberts, Victorian Lions Foundation Mr Andrew Skinner, Skinner Advertising Services Pty Ltd Ms Joan Smith Mrs Lola Stewart Ms Jennifer Thompson, Vision 2020 Australia Mrs Yvonne von Hartel, peckvonhartel Mr David Welsh, Victorian Lions Foundation, CERA Director</p>
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June

Mr Peter Allen, Anglia Polytechnic University, Cambridge
 Mr Keith Gardner, Australian Ambassador to Nepal
 Dr Bill Ketelbey, Senior Medical Director, Pfizer Australia
 Dr Dinesh Selva, Royal Adelaide Hospital
 Dr Serina Stretton, Vision CRC

July

Dr Sven-Erik Bursell, Director, JVN TeleHealth Programs, Joslin Vision Network, Beetham Eye Institute, Boston
 Dr Eric Papas, Vision CRC
 Dr Len Goldschmidt, Medical Director, Telemedicine and Medical Informatics, US Department of Veteran Affairs, Palo Alto, California
 Ms Paris Kostakos, Adviser to the Hon. Tony Abbott MP, Minister for Health and Ageing
 Ms Kelley Mirabello, Marketing Manager, Bausch & Lomb
 Ms Gillian King Rodda, Senior Adviser, Office for an Ageing Australia

August

Ms Kirrily Burgess, Trust Manager, Equity Trustees and Mr Philip Molyneux
 Mr Adrian Cooke, Alcon Australia
 Dr Jonathon Crowston, Hamilton Glaucoma Centre, University of California, San Diego
 Mr John Hilton, TechStar, Associate Professor Nigel Lovell, Graduate School of Biomedical Engineering, UNSW, Mr Datuk Yahya Baba, Malaysian Industry-Government Group for High Technology and Professor Dato Dr Khalid Abdul Kadir
 Professor John McNeil, Department of Epidemiology and Preventive Medicine, Monash University
 Professor Colin Masters, Department of Pathology, University of Melbourne
 Associate Professor Debbie Sweeney and Dr Eric Papas, Vision CRC

September

Dr Subhabrata Chakrabarti, LV Prasad Eye Institute, Hyderabad
 Mr James Guest, Ms Robyn Reeves and Mr Kem Mayberry, Jack Brockhoff Foundation

Professor Glen Gole, Chairman of the Department of Ophthalmology, Royal Children's Hospital, Brisbane
 Dr Tilman Ruff, University of Melbourne

October

Professor James Angus, Dean, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne
 Associate Professor Kerry Bennett, Chief Executive Officer, Ian Potter Foundation
 Messrs Wolfgang Fischer and John Jeffries, Christian Blind Mission International
 Ms Jennifer Gersbeck, Executive Director, Vision 2020 Australia
 Dr Stuart Graham, Sydney
 Messrs Graeme Innes and Doug Kent, Royal Blind Society NSW. Royal Victorian Institute for the Blind. Vision Australia Foundation



Dr Len Goldschmidt, right, Medical Director, Telemedicine and Medical Informatics, US Department of Veteran Affairs, a visitor to Eye Research Australia in July

November

Mr David Abrahams, Cass Foundation
 Dr Susan Hurley, Ms Lisa Gropp and Ms Helen Owens, Australian Government Productivity Commission
 Dr Imre Lengyel, Moorfields Eye Hospital, London
 Dr Tunde Peto, Moorfields Eye Hospital, London
 Mrs Margaret Ross AM, John T. Reid Charitable Trusts
 Professor Graeme Ryan AC and Mr Graeme Houghton, Royal Victorian Eye and Ear Hospital



Research Grants for 2004

Basic Science Division

Ocular Genetics Unit

Commonwealth Government CRC	\$264,000
Myra Stoicesco Charitable Trust	\$65,000
Helen Macpherson Smith Trust	\$50,000
L.E.W. Carty Charitable Trust	\$50,000
The Joan & Peter Clemenger Trust	\$50,000
RVEEH Research Committee	\$6,564

Corneal Research Unit

Allergan Australia	\$16,050
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Clinical Research Division

Macular Research Unit

Alcon Australia	\$225,000
NHMRC	\$124,903
Royal Victorian Institute for the Blind	\$90,909
PPD Development	\$89,079
Novotech (Australia)	\$73,631
Novartis Pharmaceuticals	\$70,000
Ophthalmic Research Institute of Australia	\$54,000
Macular Vision Loss Support Society	\$16,491
RVEEH Research Committee	\$6,209

Glaucoma Research Unit

Allergan Australia	\$185,339
Pfizer Australia	\$7,425
Alcon Australia	\$2,700

Population Health Division

Commonwealth Government CRC	\$379,750
Dorothy Edols Trust	\$193,373
Wagstaff Fellowship	\$159,090
Victorian Dept of Human Services	\$135,000
Vision Australia Foundation	\$132,000
International Agency for Prevention of Blindness	\$111,756
Lions Clubs International Foundation	\$108,623
Christian Blind Mission	\$100,000
Brockhoff Foundation	\$50,000
Ophthalmic Research Institute of Australia	\$29,000
Australian Research Council	\$11,943
RVEEH Research Committee	\$8,029
William Angliss Charitable Fund	\$2,000

Other Research

Dept of Innovation, Industry & Regional Development	\$237,126
Ansell Ophthalmology Foundation	\$120,000
Ophthalmic Research Institute of Australia	\$119,750
Commonwealth Government CRC	\$56,250
Victorian Dept of Human Services	\$50,000
Novartis Pharmaceuticals	\$35,000
Alcon Australia	\$25,000
RANZCO	\$20,000
Vision CRC	\$16,000
Leon Mow Nominees	\$15,000
F J Wiseman Estate	\$13,000

Clinical Epidemiology Division

Ian Potter Foundation	\$100,000
Sylvia & Charles Viertel Charitable Foundation	\$55,000
Harold & Cora Brennen Benevolent Trust	\$45,000
National Institute of Health	\$36,884
Singapore National Eye Centre	\$27,402
International Diabetes Institute	\$15,000
Eastern Clinical Research	\$10,000
Simpson Pty Ltd	\$10,000
University of NSW	\$4,500



Novartis representative Mr Chris Pangilinan presents Professor Taylor, Dr Lyndell Lim and Associate Professor Guymer with the Novartis Fellowship

Publications in 2004

Refereed Publications in Scientific Journals

1 Anderson KL, Mitra SM, Salouti R, Pham TA, Taylor HR. Fungal keratitis caused by *Paeilomyces lilacinus* associated with a retained intracorneal hair. *Cornea* 2004; 23: 516-521.

2 Baird PN, Chu D, Guida E, Vu HTV, Guymer RH. Association of the M55L Q192R paraoxonase gene polymorphisms with age-related macular degeneration. *Am J Ophthalmol* 2004; 138: 665-666.

3 Baird PN, Guida E, Chu DT, Vu HTV, Guymer RH. The E2 and E4 alleles of the apolipoprotein gene are associated with age-related macular degeneration. *Invest Ophthalmol Vis Sci* 2004; 45: 1311-1315.

4 Baird PN, Richardson AJ, Craig JE, Mackey DA, Rochtchina E, Mitchell P. Analysis of optineurin (OPTN) gene mutations in subjects with and without glaucoma: the Blue Mountains Eye Study. *Clin Experiment Ophthalmol* 2004; 32: 518-522.

5 Burdon KP, Wirth MG, Mackey DA, Russell-Eggitt IM, Craig JE, Elder JE, Dickinson JL, Sale MM. A novel mutation in the connexin 46 gene causes autosomal dominant congenital cataract with incomplete penetrance. *J Med Genet* 2004; 41: 1-4.

6 Burdon KP, Wirth MG, Mackey DA, Russell-Eggitt IM, Craig JE, Elder JE, Dickinson JL, Sale MM. Investigation of crystallin genes in familial cataract, and report of two disease associated mutations. *Br J Ophthalmol* 2004; 88: 79-83.

7 Bylsma GW, Le A, Mukesh BN, Taylor HR, McCarty CA. Utilization of eye care services by Victorians likely to benefit from eye care. *Clin Experiment Ophthalmol* 2004; 32: 573-577.

8 Congdon N, O'Colmain B, Klaver CC, Klein R, Munoz B, Friedman DS, Kempen J, Taylor HR, Mitchell P; Eye Diseases Prevalence Research Group. Causes and prevalence of visual impairment among adults in the United States. *Arch Ophthalmol* 2004; 122: 477-485.

9 Congdon N, Vingerling JR, Klein BE, West S, Friedman DS, Kempen J, O'Colmain B, Wu SY, Taylor HR; Eye Diseases Prevalence Research Group. Prevalence of cataract and pseudophakia/aphakia among adults in the United States. *Arch Ophthalmol* 2004; 122: 487-494.

10 Crewther DP, Luu CD, Kiely PM, Kowal L, Crewther SG. Clinical application of the multifocal visual evoked potential. *Clin Exp Optom* 2004; 87: 163-170.

11 Essex RW, Snibson GR, Daniell M, Tole DM. Amniotic membrane grafting in the surgical management of primary pterygium. *Clin Experiment Ophthalmol* 2004; 32: 501-504.

12 Friedman DS, Wolfs RC, O'Colmain BJ, Klein BE, Taylor HR, West S, Leske MC, Mitchell P, Congdon N, Kempen J; Eye Diseases Prevalence Research Group. Prevalence of open-angle glaucoma among adults in the United States. *Arch Ophthalmol* 2004; 122: 532-538.

13 Gragoudas ES, Adamis AP, Cunningham ET, Feinsod M, Guyer DR, for the VEGF Inhibition Study in Ocular Neovascularization Clinical Trials Group. Pegaptanib for neovascular Age related Macular Degeneration. *N Eng J Med* 2004; 351, 2805 - 2816.

14 Guymer RH, Bird AC, Hageman GS. Cytoarchitecture of choroidal capillary endothelial cells. *Invest Ophthalmol Vis Sci* 2004; 45: 1660-1666.

15 Healey DL, Craig JE, Wilkinson CH, Stone M, Mackey DA. Attitudes to predictive DNA testing for myocilin glaucoma. Experience with a large Australian family. *J Glaucoma* 2004; 13: 304-311.

16 Keeffe JE. Vision assessment and prescription of low vision devices. *Community Eye Health* 2004; 17: (49): 3-4.

17 Kempen JH, Mitchell P, Lee KE, Tielsch JM, Broman AT, Taylor HR, Ikram MK, Congdon NG, O'Colmain BJ; Eye Diseases Prevalence Research Group. The prevalence of refractive errors among adults in the United States, Western Europe, and Australia. *Arch Ophthalmol* 2004; 122: 495-505.

18 Kempen JH, O'Colmain BJ, Leske MC, Haffner SM, Klein R, Moss SE, Taylor HR, Hamman RF; Eye Diseases Prevalence Group. The prevalence of diabetic retinopathy among adults in the United States. *Arch Ophthalmol* 2004; 122: 552-563.

19 Klein R, Klein BEK, Moss SE, Wong TY, Hubbard LD, Cruickshanks KJ, Palta M. The Relation of Retinal Vessel Caliber to the Incidence and Progression of Diabetic Retinopathy XIX: The Wisconsin Epidemiologic Study of diabetic retinopathy. *Arch Ophthalmol* 2004; 122: 76-83.

20 Klein R, Klein BEK, Tomany SC, Wong TY. The relation of retinal microvascular characteristics to age-related eye disease: the Beaver Dam Eye Study. *Am J Ophthalmol* 2004; 137: 435-444.

21 Knudtson MD, Klein BEK, Klein R, Wong TY, Hubbard LD, Lee KE, Meuer SM, Bulla CP. Variation associated with measurement of retinal vessel diameters at different points in the pulse cycle. *Br J Ophthalmol* 2004; 88: 57-61.

22 Kowal L, Gajus MA, Kornberg AJ. Anti-GMI antibodies: the cause of otherwise unexplained ophthalmoplegias. *Clin Experiment Ophthalmol* 2004; 32: 411-414.

Papers and presentations form the immediate indicators of the members of Eye Research Australia doing their job.



- 23** Lam DSC, Leung YL, Chiu TYH, Fan DSP, Cheung EYY, Wong TY, Lai JSM, Tham CCY. Pressure phosphene self-tonometry: a comparison with Goldmann tonometry in glaucoma patients. *Invest Ophthalmol Vis Sci* 2004; 45: 3131-3136.
- 24** Lamoureux EL, Hassell JB, Keeffe JE. The determinants of participation in activities of daily living in people with impaired vision. *Am J Ophthalmol* 2004; 137: 265-270.
- 25** Lamoureux E, Hassell JB, Keeffe JE. The impact of diabetic retinopathy on participation in daily living. *Arch Ophthalmol* 2004; 122: 84-88.
- 26** Leung H, Wang JJ, Rochtchina E, Wong TY, Klein RK, Mitchell P. Impact of current and past blood pressure on retinal arteriolar diameter in an older population. *J Hypertens* 2004; 22: 1543-1549.
- 27** Liao D, Wong TY, Klein R, Jones D, Hubbard LD, Sharrett AR. Relationship between carotid artery stiffness and retinal arteriolar narrowing in healthy middle-aged persons. *Stroke* 2004; 35: 837-842.
- 28** Lim L, Guymer RH. Treatment and prevention of age-related macular degeneration. *Journal of Pharmacy Practice and Research* 2004; 34: 53-57.
- 29** MacKinnon JR, Giubilato A, Elder JE, Craig JE, Mackey DA. Primary glaucoma in an Australian population. *Clin Experiment Ophthalmol* 2004; 32: 14-18.
- 30** McNeil JJ, Robman L, Tikellis G, Sinclair MI, McCarty CA, Taylor HR. Vitamin E Supplementation and Cataract randomised Controlled Trial. *Ophthalmology* 2004; 111: 75-84.
- 31** Mukesh BN, Dimitrov P, Leikin S, Wang JJ, Mitchell P, McCarty CA, Taylor HR. Five-year incidence of age-related maculopathy: the Visual Impairment Project. *Ophthalmology* 2004; 111: 1176-1182.
- 32** Müller A, Craig JP, Grupcheva CN, McGhee CNJ. The effects of corneal parameters on the assessment of endothelial cell density in the elderly eye. *Br J Ophthalmol* 2004; 88: 325-330.
- 33** Oliva MS, Taylor HR. Imminent complications of corneal transplant - diagnosis and management - Part 1. *Highlights of Ophthalmology* 2004; 32: 3-7.
- 34** Oliva MS, Taylor HR. Imminent complications of corneal transplant - diagnosis and management - Part 2. *Highlights of Ophthalmology* 2004; 32: 8-10.
- 35** Phipps JA, Dang TM, Vingrys AJ, Guymer RH. Flicker perimetry losses in age-related macular degeneration. *Invest Ophthalmol Vis Sci* 2004; 45: 3355-3360.
- 36** Pizzarello L, Abiose A, Ffytche T, Duerksen R, Thulasiraj R, Taylor H, Faal H, Rao G, Kocur I, Resnikoff S. VISION 2020: The Right to Sight: a global initiative to eliminate avoidable blindness. *Arch Ophthalmol* 2004; 122: 615-620.
- 37** Robman L, McNeil J, Dimitrov P, Dowrick A, Tikellis G, Nicolas C, Cameron J, Guymer R, McGrath B, McCarty C. Methodology of the Cardiovascular Health and Age-Related Maculopathy (CHARM) Study. *Ophthalmic Epidemiol* 2004; 11: 161-179.
- 38** Saw SLC, Wong, TY. Is it possible to slow the progression of myopia? *Ann Acad Med Singapore* 2004 ;33:4-6.
- 39** Shankar A, Klein R, Moss SE, Klein BEK, Wong TY. The relationship between albuminuria and hypercholesterolemia. *J Nephrol* 2004; 17: 658-665.
- 40** Smith W, Wang JJ, Wong TY, Rochtchina E, Klein R, Leeder SR, Mitchell P. Retinal arteriolar narrowing is associated with 5-year incident severe hypertension. The Blue Mountains Eye Study. *Hypertension* 2004; 44: 442-447.
- 41** Tapp RJ, Zimmet PZ, Harper CA, de Courten MP, Balkau B, McCarty DJ, Taylor HR, Welborn TA, Shaw, JE; Australian Diabetes Obesity and Lifestyle Study Group. Diabetes care in an Australian population: frequency of screening examinations for eye and foot complications of diabetes. *Diabetes Care* 2004; 27: 688-693.
- 42** Taylor HR, Vu HTV, McCarty CA, Keeffe JE. The need for routine eye examinations. *Invest Ophthalmol Vis Sci* 2004; 45: 2539-2542.
- 43** Toomes C, Bottomley HM, Jackson RM, Towns KV, Scott S, Mackey DA, Craig JE, Jiang L, Yang Z, Trembath R, Woodruff G, Gregory-Evans CY, Gregory-Evans K, Parker MJ, Black GC, Downey LM, Zhang K, Inglehearn CF. Mutations in LRP5 or FZD4 underlie the common familial exudative vitreo-retinopathy locus on chromosome 11q. *Am J Hum Genet* 2004; 74: 721-730.
- 44** Toomes C, Bottomley HM, Scott S, Mackey DA, Craig JE, Appukuttan B, Stout JT, Flaxel CJ, Zhang K, Black GC, Fryer A, Downey LM, Inglehearn CF. Spectrum and frequency of FZD4 mutations in familial exudative vitreo-retinopathy. *Invest Ophthalmol Vis Sci* 2004; 45: 2083-2090.
- 45** Wang JJ, Mitchell P, Rochtchina E, Tan AG, Wong TY, Klein R. Retinal vessel wall signs and the 5 year incidence of age related maculopathy: the Blue Mountains Eye Study. *Br J Ophthalmol* 2004; 88:104-109.
- 46** Wong EYH, Guymer RH, Hassell JB, Keeffe JE. The experience of age-related macular degeneration. *J Vis Imp Blind* 2004; 98: 629 - 641.

47 Wong EYH, Keeffe JE, Rait JL, Vu HTV, Le A, McCarty CA, Taylor HR. Detection of undiagnosed glaucoma by eye health professionals. *Ophthalmology* 2004; 111: 1508-1514.

48 Wong TY, Chee SP. Risk factors of acute endophthalmitis after cataract extraction: a case-control study in Asian eyes. *Br J Ophthalmol* 2004; 88: 29-31.

49 Wong TY, Chee SP. The epidemiology of acute endophthalmitis after cataract surgery in an Asian population. *Ophthalmology* 2004; 111: 699-705.

50 Wong TY, Coresh J, Klein R, Muntner P, Couper DJ, Sharrett AR, Klein BEK, Heiss G, Hubbard LD, Duncan BB. Retinal microvascular abnormalities and renal dysfunction: the Atherosclerosis Risk in Communities Study. *Am J Nephrol* 2004; 15: 2469-2476.

51 Wong TY, Duncan BB, Golden SH, Klein R, Couper DJ, Klein BEK, Hubbard LD, Sharrett AR, Schmidt MI. Associations between the metabolic syndrome and retinal microvascular signs: the Atherosclerosis Risk in Communities Study. *Invest Ophthalmol Vis Sci* 2004; 45: 2949-2954.

52 Wong TY, Klein R, Sharrett AR, Duncan BB, Couper DJ, Klein BEK, Hubbard LD, Nieto FJ. Retinal arteriolar diameter and risk for hypertension. *Ann Internal Med* 2004; 140: 248-255.

53 Wong TY, Knudtson MD, Klein R, Klein BEK, Hubbard LD. A prospective cohort study of retinal arteriolar narrowing and mortality. *Am J Epidemiol* 2004; 1;159: 819-825.

54 Wong TY, Knudtson MD, Klein R, Klein BEK, Meuer SM, Hubbard LD. Computer-assisted measurement of retinal vessel diameters in the Beaver Dam Eye Study. Methodology, correlation between eyes, and effect of refractive errors. *Ophthalmology* 2004; 111: 1183-1190.

55 Wong TY, Mitchell P. Hypertensive retinopathy. *N Engl J Med* 2004; 351: 2310-2317.

56 Wong TY, Shankar A, Klein R, Klein BEK. Retinal vessel diameters and the incidence of gross proteinuria and renal insufficiency in people with Type 1 diabetes. *Diabetes* 2004; 53: 179-184.

57 Wong TY, Shankar A, Klein R, Klein BEK, Hubbard LD. Prospective cohort study of retinal vessel diameters and risk of hypertension. *Br J Ophthalmol* 2004; 1: 1-2.

58 Wong TY, Wang JJ, Rochtchina E, Klein R, Mitchell P. Does refractive error influence the association of blood pressure and retinal vessel diameters? The Blue Mountains Eye Study. *Am J Ophthalmol* 2004; 137: 1050-1055.

59 Yamada K, Chan WM, Andrews C, Bosley TM, Sener EC, Zwaan JT, Mullaney PB, Ozturk BT, Akarsu AN, Sabol LJ, Demer JL, Sullivan TJ, Gottlob I, Roggenkaemper P, Mackey DA, De Uzcategui CE, Uzcategui N, Ben-Zeev B, Traboulsi EI, Magli A, de Berardinis T, Gagliardi V, Awasthi-Patney S, Vogel MC, Rizzo JF 3rd, Engle EC. Identification of KIF21A mutations as a rare cause of congenital fibrosis of the extraocular muscles type 3 (CFEOM3). *Invest Ophthalmol Vis Sci* 2004; 45: 2218-2223.

Letters/Reviews/Editorials

60 Keeffe JE. Childhood vision impairment. *Br J Ophthalmol* 2004; 88: 728-729.

61 Kowal L. TIC disorders in children with frequent eye blinking. *J AAPOS* 2004; 8: 594.

62 Lim L, Guymer RH. AMD: to supplement or not? *Clin Experiment Ophthalmol* 2004; 32: 341-343.

63 Man PYW, Howell N, Mackey DA, Norby S, Rosenberg T, Turnbull DM, Chinnery PF. Mitochondrial DNA haplogroup distribution within Leber hereditary optic neuropathy pedigrees. *J Med Genet* 2004; 41: 1-5.

64 Narendran N, Guymer RH, Cain M, Baird PN. Identification of a Mutation in the PKD2 Gene in a Family With Age-Related Macular Degeneration. *Am J Med Genet* 2004; 127A: 208-210.

65 Taylor HR. Patients must be told of links between smoking and eye disease. *Ocular Surgery News* 2004; 22: 65-67.

66 Wong TY. Is retinal photography useful in the measurement of stroke risk? *The Lancet Neurology* 2004; 3: 179-183.

67 Wong TY, Saw SM. Issues and Challenges for Myopia Research. *Ann Acad Med Singapore* 2004; 33: 1-3.

Book

68 Clark, RB. *Health care and notions of risk*. Melbourne: Therapeutic Guidelines Limited, 2004.



Eye Research Australia Foundation Report

We at the Foundation have a responsibility to communicate to the community at large the extent and cost of eye disease to the community.

We are pleased to report that the year 2004 was a year of growth in funding for the Eye Research Australia Foundation. Contributions were up from individuals, increasing the number of first time donors. The average contribution was also increased by 23% over the same period as the previous year. We thank everyone who contributed.

Because of this generosity, the Foundation supported the work led by two of the Centre for Eye Research Australia's scientists, Dr Paul Baird and Associate Professor Robyn Guymer. We are grateful to The Paul Newman Foundation that also supported Associate Professor Guymer's work with age-related macular degeneration.

J & J Printing very generously printed the Foundation's newsletter, Vision, which is written in-house. By printing almost 100,000 copies of Vision, J & J Printing have made a huge contribution, ensuring that many thousands of people have had the opportunity to learn about the work of Eye Research

Australia and the on-going need for funding of research into eye diseases. The Foundation was able to give more money to the Centre's scientists because J & J picked up the printing tab!! Thank you!

At the Foundation we have an added responsibility to communicate the magnitude and cost of eye disease to the community. The release of the report Clear Insight - The Economic Impact and Cost of Vision Loss in Australia heightened public awareness of the need to substantially increase funding for research in to eye diseases. And the public responded. This Access Economics report, commissioned by Eye Research Australia, identified the cost (almost \$10 billion in 2004!) and economic impact of vision impairment in Australia.

Our pledge to our donors and supporters is to ensure that their donations actually do support the work of the scientists at the Centre for Eye Research Australia. Accountability is our mantra. The Foundation's sole purpose is to support the Centre's research into the diagnosis, prevention and cure of eye disease.



Eye Research Australia Foundation Special Events, Fundraising and Marketing Committee. From left: Associate Professor Elizabeth Dax, Mr Andrew Skinner, Mr David Rath, Professor Hugh Taylor, Mr Peter Nankivell and Chief Fire Officer Tony Murphy

Eye Research Australia Foundation Report



*Foundation Chair,
Professor John Funder AO*

Tours

One of the many highlights of the work we undertake at the Foundation is to provide the opportunity for our donors and supporters to meet Professor Hugh Taylor AC and the Centre's scientific staff. These tours enable our guests to learn and see first hand the vital work we undertake in pursuit of the diagnosis, prevention and treatment of eye disease. Our sincere thanks are extended to Professor Taylor and the staff for their willingness to meet and talk with those who support their work.

Committees

The aim of the Foundation is to grow strategically and minimize operational costs so that monies raised go straight to the Centre's research.

To assist us in this aim we worked closely with, and extend special thanks to, the Special Events, PR and Marketing Committee, chaired by Mr Peter Nankivell. Under Peter's leadership the Committee was re-structured to better ensure its long-term effectiveness. We also extend sincere thanks to Mr Andrew Skinner for obtaining the pro bono services of McPhersons Public

Relations, and for his co-ordination, donation and production of the stage setting for the launch of the Clear Insight report.

Long standing Committee members Barbara Inglis and Associate Professor Robyn Guymer resigned at the end of 2004. Both women made wonderful contributions and we are appreciative.

The Committee's main fundraising event for 2004 was the Asics Melbourne Marathon. The majority of the Eye Research Australia team of 73 runners completed either the 10.9km marafun and the half marathon, whilst 18 were brave enough to attempt - and complete! - the full 42.2km marathon.

Through the efforts of Committee member Chief Fire Officer Tony Murphy, the Marathon team was supported by the Melbourne Metropolitan Fire Brigade, who fielded a number of runners. The Committee extended its thanks to all the MFB staff, who with Centre staff led Eye



*Foundation Executive Director Ms Laurie Staub,
right, and her assistant Ms Kelly Mallia*

Research Australia to be the winning charity in every results category. Rookie Firefighter Sandy Hearn took up the challenge to be trained by marathon legend Robert deCastella to do the half marathon in less than 1 hour 38 minutes, in an attempt to raise \$5000 for the Foundation from major marathon sponsor Asics. Congratulations, Sandy!



Eye Research Australia Foundation Report

The Committee hosted the Marathon Volunteer Hospitality Marquee. Nudie Foods Australia and Brumby's South Melbourne were most generous in their donations of drink and food to help nourish in excess of 600 volunteers on the day - thank you! Masseurs Rhonda Hill and Jillian Niven generously donated their time, professional skills and sheer hard work to provide a cool down massage to each of the Eye Research Team members. Thanks and appreciation were extended to the Year 10 girls from Methodist Ladies College, Eye Research Australia staff and all the other "friends of friends and family" who dutifully rose before dawn to volunteer for the early shift.



Melbourne Fire Brigade's Chief Fire Officer Tony Murphy, firefighter Sandy Hearn and Professor Taylor

Trustees

The Foundation is governed by a Board of Trustees, Chaired by Professor John Funder AO. This year we welcomed solicitor Mr Peter Nankivell as a Trustee. Peter has been a great supporter of our work for many years and we are delighted with his appointment! Early in 2004, we acknowledged the resignation of Mrs Annie Grindrod and extended thanks for her contribution as a Trustee.

Each of the Trustees has been a great support to the Foundation on both an individual and group basis. We very much appreciate their

accessibility and time and thank them for their continued support.

Administration

This was a year of change for the Foundation and we have quickly seen some positive results.

I commenced as Executive Director in February 2004 and "hit the deck running" as they say.

Everyone has been enormously supportive and I especially thank Professor Hugh Taylor and Professor John Funder for their guidance and support during the year. It has been great and I am enormously appreciative.

We were pleased to appoint Kelly Mallia as Executive Assistant to the Foundation. Kelly was previously with the Royal Australasian College of Surgeons for five years as Conference and Events Organiser. Since arriving in September, Kelly has shown herself to be a tremendous asset to the team and we are appreciative of all her contributions!

We are indebted to the Foundation's Bequest Officer, Elizabeth Douglas, for her effective establishment and management of the Foundation's Bequest Program. Elizabeth retired in July 2004. This program, which was handled by Elizabeth in the most sensitive manner, has set a foundation to better ensure income in the future to support the work of the Centre for Eye Research Australia. Elizabeth's retirement was a great loss to the organization and we thank her for her contributions and wish her well in her retirement.

Our team was further supported by casual Jude Sebastian and we extend thanks for his contributions.

During the year we worked closely with the Centre for Eye Research Australia's Administration to implement new administrative procedures to minimize

Eye Research Australia Foundation Report

administration overheads. We appreciate their support and patience.

Being housed in the Royal Victorian Eye and Ear Hospital, it is important that relations between the fundraising areas of both organizations are healthy at best. We extend special thanks to the Chief Executive Officer of the Royal Victorian Eye and Ear Hospital and CERA Board member, Mr Graeme Houghton, who has been very supportive of joint initiatives. The Hospital's Fundraising Co-ordinator, Mr Jayson Hanrahan, the Public Relations Officer, Ms Lerna Avakian and Grants Officer, Ms Anju Shrestha for their openness in developing joint initiatives to benefit us all.

We wish to thank everyone within the Centre for Eye Research Australia for their support of our fundraising and communication efforts. Literally, everyone has made a contribution to the Foundation's success...from the Ophthalmologists, to the scientific researchers, to the receptionist, the PA's ...the lot. We are grateful and most appreciative. Thank you

Fundraising is an enormous task when raising funds for medical research. The Eye Research Australia Foundation has an enviable support base from which to grow financially. Strategic marketing, planning, relationship development, communication and innovation will all play a part in the Foundation's future fundraising activities. Until we find the causes, preventative measures and treatment for those eye diseases we cannot currently prevent or treat... the Eye Research Australia Foundation has its work cut out for it.

Laurie Staub Executive Director

If you would like to know more about making a bequest or contribution, volunteer your time for Eye Research Australia, or to be placed on our newsletter mailing list, please contact the Foundation on +61 3 9929 8705 or via email at kmallia@unimelb.edu.au.

Eye Research Australia Foundation

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(from February 2004)

Ms Elizabeth Douglas, Bequests Manager
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Ms Laurie Staub

Professor Hugh R. Taylor AC

Mr Rod Watts



*Ms Elizabeth Douglas with the
Four Professors - Professors
Graeme Ryan, Hugh Taylor,
John Funder and Gerard Crock
- at her retirement in July*



Centre for Eye Research Australia

Abridged Financial Statements

for the year ended 31 December 2004

Income and Expenditure	2004 \$	2003 \$
Revenue		
Federal Government	801,250	281,860
State Government	442,929	291,782
Charitable Contributions	2,020,366	2,315,579
	3,264,545	2,889,221
Less Expenditure	3,527,833	2,884,419
Surplus (Deficit) for the year*	(263,288)	4,802
Balance Sheet		
Current Assets	1,085,092	1,429,515
Non-Current Assets	389,492	266,220
Total Assets	1,474,584	1,695,735
Current Liabilities		
Payables	288,921	610,183
Provisions	280,593	75,328
Other	432,694	274,563
Total Current Liabilities	1,002,208	960,074
Non-Current Liabilities	-	-
Total Liabilities	1,002,208	960,074
Net Assets	472,376	735,661
Total Equity	472,376	735,661

* The Centre for Eye Research Australia Limited is operated as a not for profit organisation. Accordingly, accumulated surpluses are held in the form of working capital and fixed assets to support committed and planned research projects.

Eye Research Australia Foundation

Abridged Financial Statements

for the year ended 31 December 2004

Income and Expenditure	2004 \$	2003 \$
Revenues from ordinary activities	570,284	327,692
Less: Expenditure	391,039	323,518
Profit from ordinary activities	179,245	4,174
Less: Distribution to CERA	80,000	-
Net Surplus (Deficit) for the year	99,245	4,174
Balance Sheet		
Current Assets	406,470	265,057
Non-Current Assets	0	0
Total Assets	406,470	265,057
Total Liabilities	68,441	26,273
Net Assets	338,029	238,784
Funds and Reserves	338,029	238,784



Acknowledgements

Mr Bill Fazio, Herbert Geer & Rundle

Mr John Flynn, J & J Printing

Mrs Bernadette Funnell, McPherson Promotions

Mr Tony Hill, Capital Hill Consulting

Mr Peter Jovic, KPMG

Mr Bill Karanatsios, VMIA

Ms Jenni Lightowlers, Partner, Francis Abourizk Lightowlers

Mr John Macdonald, Designinc

Mr Banjo McLachlan, Allens Arthur Robinson

Mr James McPherson, McPherson Promotions

Mr Ashley Midalin, Allens Arthur Robinson

Mr Peter Nankivell, Herbert Geer & Rundle

Ms Sarah Nesbitt, Access Economics Pty Ltd

Ms Lynne Pezzullo, Access Economics Pty Ltd

Mr Tony Pyman, Allens Arthur Robinson

Mr Andrew Skinner, Skinner Advertising Services

Ms Yvonne von Hartel and staff, peckvonhartel



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