



**SIGHT MATTERS
ANNUAL REPORT
2012/2013**



Singapore will witness an unprecedented challenge with the dawn of the silver tsunami i.e. number of seniors tripling by 2030, resulting in age related eye diseases, that directly impacts on our nation's healthcare facilities, people and resources.



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The Singapore Eye Research Institute (SERI) is Singapore's national research institute for ophthalmic and vision research. With a faculty of 213, encompassing clinician scientists, scientists, fellows, students, support staff, as well as a distinguished adjunct faculties of more than 100 members, SERI is one of the largest research institutes in Singapore, & the largest eye research institute in Asia-Pacific. As of Dec 2013, SERI has churned out 1,941 scientific papers; peer-reviewed competitive grants worth \$53 million; 285 national & international awards and 82 patents. It is the research arm of the Singapore National Eye Centre, and affiliated to the National University of Singapore and the Duke-NUS Graduate Medical School. SERI further undertakes eye research in collaboration with local & international ophthalmic medical centres and

ABOUT US

research institutions, which has ensured a high level of research competency & skills transfer. Notably, SERI's research has translated to actual patient success stories & significant improvements in eye care delivery. Today, SERI is recognized, not only as the pioneer of eye research in Singapore, but more importantly, as one of the preminent pacesetters of eye research in Asia, & globally.



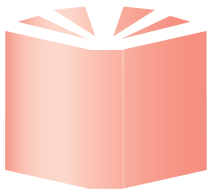
MORE THAN **213**
STAFF
AS ONE OF THE LARGEST
RESEARCH INSTITUTES IN
SINGAPORE AND
ASIA - PACIFIC



MORE THAN **82**
PATENT
APPLICATIONS
SUBMITTED



MORE THAN **285**
PRIZES
NATIONAL AND
INTERNATIONAL



MORE THAN **283**
SCIENTIFIC
PAPERS
PUBLISHED IN 2013
A TOTAL OF 1,941
CUMULATIVE PUBLICATION



MORE THAN **1098**
STUDIES
ON ALL ASPECTS OF
EYE RESEARCH



MORE THAN **\$53**
MILLION
GRANT FUNDING IN 2013
\$168 MILLION
BETWEEN 1998 TO 2013



MORE THAN
150
MASTERS, PHD, AND
POSTDOCTORAL STUDENTS



CHAIRMAN'S
MESSAGE



I must firstly credit my predecessors and all pioneering leaders of SERI for their remarkable foresight, resoluteness and generous contributions in laying the integral foundation that has elevated SERI to its present position today - as the foremost eye research institute in Asia. I feel very privileged to witness and to be part of the resounding growth chapter of this progressive institution, which while still considered young in age, yet remains astute in vision.

SERI engages in a broad spectrum of ophthalmology and vision research that cuts across the entire continuum, encompassing basic, pre-clinical, translational and population health. Importantly, 95% of eye research in Singapore is undertaken by SERI. Since its inception in 1997, it has impressively attained a total of 1,941 scientific publications and 82 patent applications, as well as secured 141 external peer-reviewed competitive grants worth S\$168 million, all of which serve as a testament of SERI's high level of competitiveness. What SERI has achieved over the years is the culmination of multiple success factors: its state-of-the-art research facilities, visionary leadership, a supportive environment for strong clinician-scientist interactions, premeditated and strategized talent development roadmap, and well-supported by robust governance and organizational effectiveness.

While true to its remit as the national eye research institute, SERI is cognizant of the need for diversity, and thus has always advocated an open door policy and welcomes talents and collaborators from across the world. Such strategic collaboration and partnership is integral towards the continued success of biomedical research, which involves complex and systemic themes that necessitates diversity, multi-disciplinary, and multi-national efforts.

Notwithstanding the accomplishments achieved thus far, I urge the SERI faculty to continuously harness their drive and passion in pursuing research excellence, so as to deliver innovations that directly benefit our patients. It is only through such impactful research that the causes of eye diseases and visual impairments may be unraveled and new treatment strategies derived. I am confident that SERI will continue in its upward trajectory of success in eye research!



Professor Donald Tan
Chairman



EXECUTIVE
DIRECTOR'S
MESSAGE



At SERI, we strongly believe that research is the foundation to discover new and better approaches for the prevention and treatment of eye diseases. We are committed to conduct eye research of clinical relevance and translational value, with our patients always being the key focus and the ultimate beneficiary.

Through concerted and sustained efforts, SERI has consistently scored research breakthroughs of clinical applicability and earned an international reputation as a pacesetter in ophthalmology and vision research. Among our research highlights is the establishment of a new treatment with ultra-low dose of atropine eye drops to effectively retard myopia progression. A novel drug delivery system for glaucoma was also invented using drug-loaded nanoliposomes with sustained release capabilities, that when injected into the subconjunctiva is able to effectively replace the application of daily eye drops. Our researchers further made a number of first-in-the-world discoveries of genes associated with glaucoma and keratoconus, leading to publications in the top scientific journal Nature Genetics, and thus paving the way for a more targeted treatment for patients with these diseases.

Amid the intensely competitive environment, SERI has achieved commendable success in research funding. Most notably, we have secured our second \$25-million Translational Clinical Research (TCR) Flagship Programme Grant, i.e. the "Eye Surgery and Innovative Technologies (EyeSITE)", which seeks to develop novel and innovative approaches for the diagnosis and treatment of corneal diseases and glaucoma, major causes of blindness in Asia and globally. The \$18-million Centre Grant awarded by the National Medical Research Council (NMRC) Singapore has also provided a strategic boost to strengthen our core capabilities and infrastructure at SERI, integral in supporting our full spectrum of basic to translational research.

All of these accomplishments would not have been possible without our foremost asset – our people. Indeed, our people are the buttress propelling and sustaining our research to successful fruition, and ensuring our preeminent position in global ophthalmology research. In this regard, SERI will continue to actively engage in the nurturing of talents, thereby ensuring a sustained pipeline of prolific researchers and clinician scientists, to bolster our research capacity in existing and new domains.

By 2014, the six different physical sites of SERI will be consolidated under one roof at Academia in Outram campus, thus creating a new hub for cutting-edge eye research in Singapore. A consolidated SERI will be a novel paradigm that would allow for the centralization and maximization of investment (i.e. in terms of resources, pool of patient database, manpower and expertise) and will serve as a nexus for academic-industry collaboration and co-location in Ophthalmology. It will pave the way for international high-profile and high impact collaborations, thus attracting major industry players in vision and eye care, thus ultimately leading to research innovation and excellence, positioning Singapore firmly on the global Ophthalmology road-map.

Indeed, these are exciting times for SERI - let us continue to push the envelope and pursue truly innovative and ground-breaking eye research for the benefit of our patients.



Prof Wong Tien Yin
Executive Director



INSTITUTIONAL
REPORT

BACKGROUND

The SINGAPORE EYE RESEARCH INSTITUTE (SERI), affiliated to the Singapore National Eye Centre, the National University of Singapore, and the Duke-NUS Graduate Medical School is a non-profit charitable organization tasked to lead and conduct research into vision and eye diseases based in Singapore and focused on Asia. It further works in collaboration with Ophthalmology departments of the various public healthcare entities and biomedical research institutions, as well as major eye centers and research institutes throughout the world. SERI has developed a world-leading reputation in broad-based clinical translational research and epidemiological programs for many eye diseases, specifically eye diseases endemic to Asia, such as myopia, angle closure glaucoma, and corneal diseases.

KEY PERFORMANCE INDICATORS

- SERI is one of the largest research institutes in Singapore and the largest eye research institute in the Asia-Pacific, with a faculty of 213, encompassing clinician scientists, scientists, fellows, students, support staff.
- SERI has successfully secured external peer-reviewed competitive grant funding worth approximately S\$53 million this year, and a cumulative quantum of approximately S\$168 million.
- SERI continues its leading performance in publication, with 283 scientific papers published in 2013, and with a cumulative publication quantum of 1,941 scientific papers.
- As of December 2013, the SERI faculty has received 285 national and international awards and 82 patent applications were filed during the same period.
- Since 1997, SERI has conducted 1,098 studies, encompassing the entire spectrum of eye research, from basic laboratory research, pre-clinical animal research, translational clinical research, and population health research. There are currently 309 ongoing research projects at SERI, of which approximately 52% cover clinical/translational research, 22% basic research and 26% epidemiology, imaging and health service research.
- SERI has further contributed to the training of research manpower, including over 100 Masters, PhD and post-doctoral students, many of whom are now working in hospitals, biomedical sciences industry, academic institutions and research institutes locally and overseas.

ACHIEVEMENTS AND INNOVATION

- Amid keen competition, SERI has successfully secured its second S\$25-million Translational Clinical Research (TCR) Flagship Program grant from the National Medical Research Council (NMRC). Building on the strengths of SERI's first TCR flagship programme – TRIOS (Translational Research Innovations in Ocular Surgery), the new EyeSITe (Eye Surgery and Innovative Technologies) programme leverages on the 5 most successful programs under TRIOS in terms of scientific impact, clinical outcomes and commercialization potential. EyeSITe aims to develop novel and innovative approaches to diagnose and treat corneal diseases and glaucoma.
- SERI has been awarded an S\$18-million Centre Grant from NMRC, which seeks to strategically strengthen and develop its core capabilities to support the entire spectrum of research into major eye diseases. These platforms will interact and provide support to the various research themes such as Ocular Therapeutics & Drug Delivery, Tissue Engineering & Stem Cell research, Eye Imaging, Ocular Inflammation, Genetics of Eye Diseases, Ocular Surface, Biomarkers of Eye Diseases and Health Service Research.
- SERI has discovered a way to retard myopia progression through the use of ultra-low dose of atropine eye drops. This has now been incorporated as part of the myopia intervention strategy at the Myopia Clinic of the Singapore National Eye Centre, and it is hoped that this preventative treatment may be used to treat patients on a broader level in Singapore and potentially throughout Asia in the near future.
- SERI, in collaboration with the Nanyang Technological University, has pioneered a novel sustained-release drug delivery vehicle for glaucoma, whereby the glaucoma drug is loaded onto a biodegradable liposomal nanocarrier, which can be injected painlessly into the subconjunctiva of the eye. This could potentially replace the current medication regime of daily eye drops, thus immediately improving patient compliance issues in the treatment of glaucoma.
- SERI in collaboration with the Genome Institute of Singapore (GIS) has become the first in the world to identify 3 genes associated with Primary Angle Closure Glaucoma (PACG), a leading cause of blindness in Chinese. The work culminated in an article published in the prestigious scientific journal, *Nature Genetics*.
- SERI has made a first-in-the-world discovery of genes associated with central corneal thickness that may cause potentially blinding eye conditions. The SERI team jointly led a multi-centre study involving 55 hospitals and research centres around the world and performed meta-analysis on over 20,000 individuals of European and Asian descent. Their findings were published in the prestigious scientific journal, *Nature Genetics*.
- SERI has further succeeded in identifying the link between the changes in retinal blood vessels and one's susceptibility to certain cardiovascular diseases. The studies suggest the potential of using retinal imaging as a predictive tool to assess the risks of stroke and cardiovascular diseases.

PERFORMANCE OVER PAST SIXTEEN YEARS

- SERI has seen a steady increase in staff strength over the years.

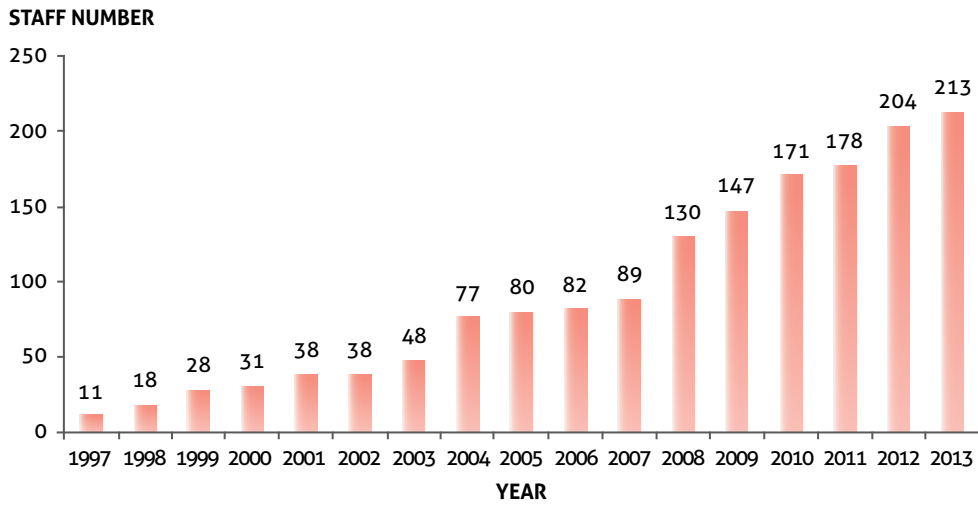


Figure 1: Number of staff members at SERI

- SERI boasts of a diverse and global faculty that serves as melting pot of ideas that propel innovation.



Figure 2: Nationalities of staff members at SERI

- SERI stands out as one of the most productive institutions and holds up well against global heavyweights in the field.

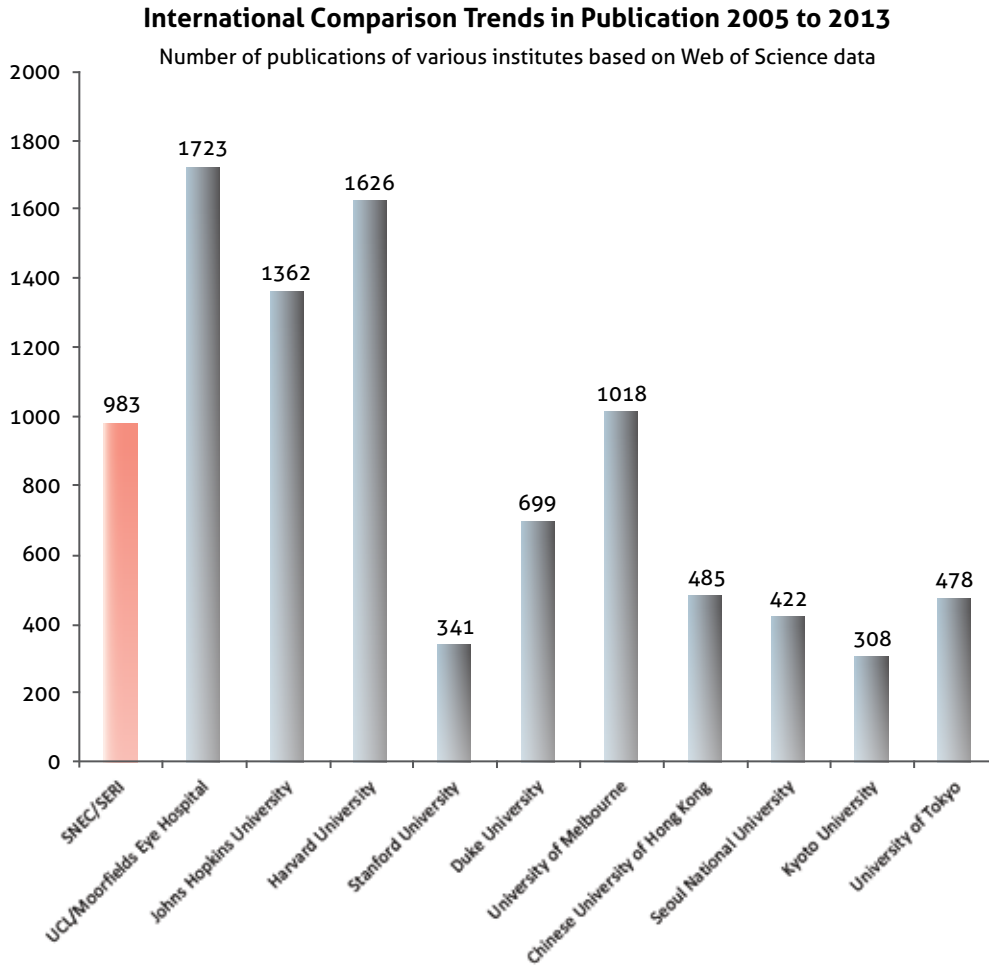


Figure 3: Number of publications by SERI and other institutions around the world, during the period of 2005- 2013

- The stellar achievements of SERI have been well endorsed with numerous international and local awards.

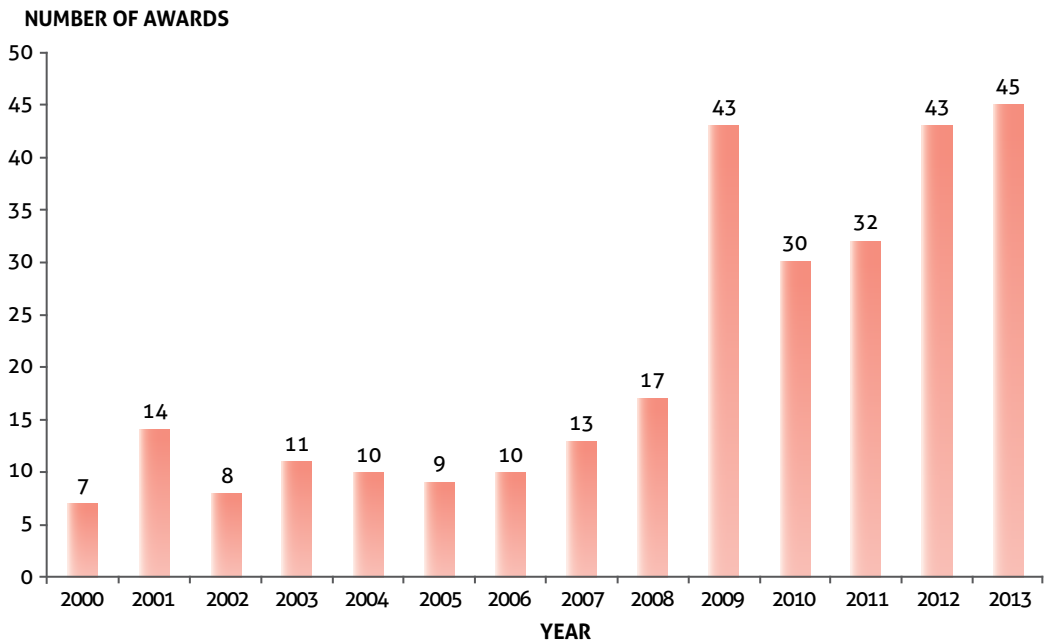
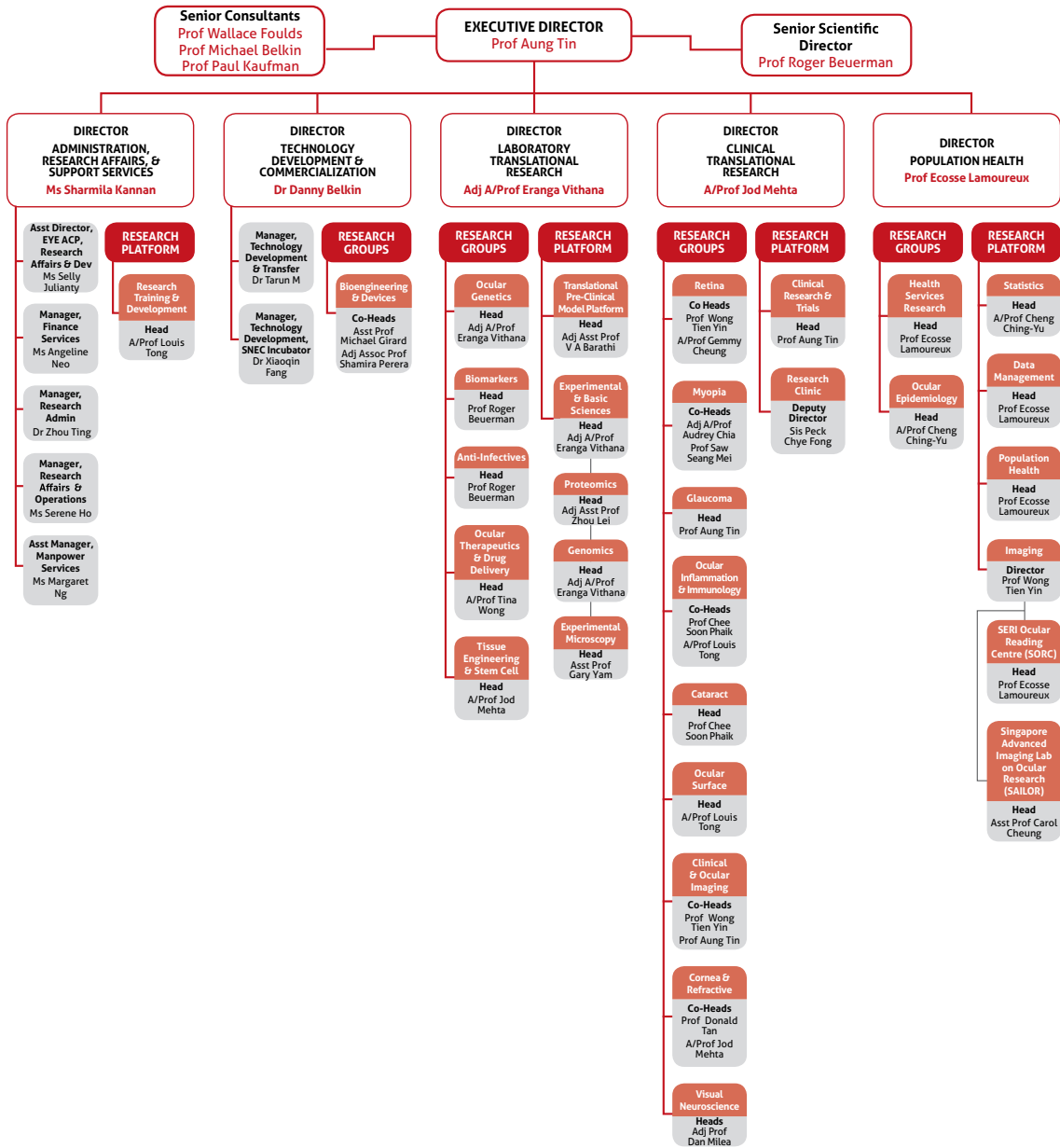


Figure 4: Number of awards received by SERI and its staff (Data from 1997-1999 are not available)

GOVERNANCE STRUCTURE (as of 1 January 2014)

SERI ORGANIZATIONAL CHART



APPRECIATION AND ACKNOWLEDGEMENT



SERI owes its success to its people – the honorable SERI Board of Directors, our eminent academic collaborators, the senior management, and clinicians of the Singapore National Eye Centre (SNEC), as well as, very importantly, the SERI faculty and staff members.

However, our greatest gratitude is reserved for our patients and their families. They are the driving force behind all that we do. Indeed, their journey and courage spur us on in our research endeavors and make us determined to make a positive difference to their vision and their lives.

SERI would also like to extend our appreciation to the National Medical Research Council, the Biomedical Research Council, the National Research Foundation, as well as our industry collaborators for their generous funding and support. It enables us to continue in our pursuit of impactful research with the ultimate aim to alleviate vision loss and blinding eye diseases.



OUR PEOPLE

SERI'S BOARD OF DIRECTORS *(Updated as of December 2014)*

SERI's Memorandum and Articles of Association stipulates that the SERI Board of Directors shall have at least one representative each from the Ministry of Health, the National University of Singapore and the Singapore National Eye Centre. Today, besides representation from the above three organizations, SERI's Board additionally has Directors from the Duke-NUS Graduate Medical School, as well as independent Directors from Tan Rajah & Cheah as well as M C Tong Cardiothoracic Surgery Pte Ltd.



Prof Wong Tien Yin
Medical Director,
Singapore National Eye Centre
Chairman,
Singapore Eye Research Institute



Dr Geh Min
Consultant Eye Surgeon,
M C Tong Cardiothoracic Surgery
Pte Ltd



Prof Ang Chong Lye
Deputy Group CEO
(Clinical Services & Informatics),
SingHealth
CEO,
Singapore General Hospital



Prof Wang Linfa
Program Director,
Emerging Infectious Diseases,
Duke-NUS Graduate Medical
School



Prof Donald Tan
Senior Advisor & Senior
Consultant,
Singapore National Eye Centre



Mr Pathmanaban Selvadurai
Consultant
(Lawyer),
Tan Rajah & Cheah



Prof Patrick John Casey
Senior Vice Dean
(Research),
Duke-NUS Graduate Medical
School



Dr Lim Eng Kok
Director
(Performance &
Technology Assessment),
Ministry of Health



Assoc Prof Yeoh Khay Guan
Dean, Yong Loo Lin
School of Medicine,
National University of Singapore



Prof Soo Khee Chee
Deputy Group CEO
(Research & Education),
SingHealth
Director,
National Cancer Centre Singapore



Prof Chia Kee Seng
Dean, Saw Swee Hock
School of Public Health,
National University of Singapore



Ms Ooi Chee Kar
Chartered Accountant
(Singapore)

SERI'S DIRECTORS/STRATEGIC PLANNING COMMITTEE *(Updated as of December 2014)*

The SERI Directors/Strategic Planning Committee serves as the highest governing body at SERI, working closely with the Executive Director, SERI to ensure the overall stewardship of the Institute; leading and promoting research within the Institute; ensuring sufficient funding to ensure its future viability; safeguarding overall governance and integrity of the Institute; and proactively increasing the visibility and broadening of research collaborations with national and international agencies.

**Prof Aung Tin***Executive Director***A/Prof Jodhbir Mehta***Director,
Clinical Translational Research***Prof Roger Beuerman***Senior Scientific Director***Prof Ecosse Lamoureux***Director,
Population Health***Ms Sharmila Kannan***Director,
Administration,
Research Affairs &
Support Services***Dr Danny Belkin***Director,
Technology Development &
Commercialization***Adj A/Prof Eranga Vithana***Director,
Laboratory Translational Research*

SERI'S MANAGEMENT COMMITTEE *(Updated as of December 2014)*

The SERI Management Committee serves as a principle body actively engaged in the review and implementation of SERI's research policies and strategies. It further plays an integral role in conceptualizing SERI's research framework, in consultation with the SERI Senior Leadership, as the Institute moves onwards to face new challenges in its strive for continued research excellence.



Prof Aung Tin
Executive Director



Dr Danny Belkin
*Director,
Technology Development &
Commercialization*



Prof Roger Beuerman
Senior Scientific Director



Prof Wong Tien Yin
*Group Director,
Research,
SingHealth*



Ms Sharmila Kannan
*Director,
Administration,
Research Affairs &
Support Services*



Sis Peck Chye Fong
*Deputy Director,
Research Clinic*



Adj A/Prof Eranga Vithana
*Director,
Laboratory Translational Research*



Ms Charity Wai
*Chief Operating Officer,
SNEC*



A/Prof Jodhbir Mehta
*Director,
Clinical Translational Research*



A/Prof Tina Wong
*Head,
Ocular Therapeutics &
Drug Delivery Research Group*



Prof Ecosse Lamoureux
*Director,
Population Health*



A/Prof Louis Tong
*Head,
Ocular Surface
Research Group*

SERI'S MANAGEMENT COMMITTEE *(Updated as of December 2014)*



Prof Saw Seang Mei
*Co-Head,
Myopia Research Group*



Adj Prof Dan Milea
*Head,
Visual Neuroscience
Research Group*



Adj A/Prof Audrey Chia
*Co-Head,
Myopia Research Group*



Prof Chee Soon Phaik
*Head,
Cataract Research Group*



A/Prof Cheng Ching-Yu
*Head,
Ocular Epidemiology
Research Group*



Adj Asst Prof Amutha Barathi
*Head,
Translational Pre-Clinical
Model Platform*



A/Prof Gemmy Cheung
*Co-Head,
Retina Research Group*



Dr Zhou Lei
*Head,
Proteomics Research Platform*



Asst Prof Michael Girard
*Co-Head,
Bioengineering &
Devices Research Group*

SNEC RESEARCH COMMITTEE *(Updated as of December 2014)*

Terms of reference:

- Plays a pivotal role in the review of research budgets, as well as the evaluation and endorsement of the appropriateness of research projects, including the scientific merit of such projects.
- Oversight over the review/approval of the SNEC HREF grants for research projects.
- Provides directions for the development of SERI's translational and clinical research capabilities.



Prof Aung Tin

*Executive Director, SERI
Head & Senior Consultant,
Glaucoma Service
(Research, Education &
Development), SNEC*



A/Prof Tina Wong

*Senior Consultant,
Glaucoma Service, SNEC
Head,
Ocular Therapeutics &
Drug Delivery Research Group,
SERI*



Adj A/Prof Lee Shu Yen

*Senior Consultant,
Vitreo-Retinal Service, SNEC
Adjunct Senior Clinician
Investigator, SERI*



A/Prof Jodhbir Mehta

*Head & Consultant (Research),
Cornea & External Eye
Disease Service, SNEC
Director,
Clinical Translational Research,
SERI*



Adj A/Prof Sharon Tow

*Head & Senior Consultant,
Neuro-Ophthalmology Service,
SNEC
Adjunct Senior Clinician
Investigator, SERI*



A/Prof Gemmy Cheung

*Senior Consultant,
Vitreo-Retinal Service, SNEC
Co-Head,
Retina Research Group, SERI*



Adj A/Prof Audrey Chia

*Head & Senior Consultant,
Paediatric Ophthalmology &
Strabismus Service, SNEC
Co-Head,
Myopia Research Group, SERI*



Adj Prof Dan Milea

*Visiting Senior Scientist,
Neuro-Ophthalmology Service,
SNEC
Head,
Visual Neuroscience
Research Group, SERI*



Adj A/Prof Shamira Perera

*Senior Consultant,
Glaucoma Service, SNEC
Co-Head,
Bioengineering &
Devices Research Group, SERI*



Dr Sunny Shen

*Deputy Head &
Consultant,
Oculoplastic Service, SNEC*

TEACHING & TRAINING

SERI has been actively hosting research seminars, courses and talks which serve as a platform for information transfer and idea sharing, as well as an effective networking conduit between our internal and external research communities. Besides serving as a fertile platform for the incubation of research ideas and generation of collaborative initiatives between the SERI faculty and external academics/researchers, these activities further promote research-talent development within SERI.

The talks presented via these channels at SERI offer discourses on scientific ideas and discoveries in ophthalmology and vision research, as well as in other biomedical disciplines, including bioengineering, genomics, tissue engineering, stem cell therapy and medtech, effectively blending basic sciences, pre-clinical, translational and population health approaches within diverse disciplines. These seminars have certainly played a role in the launch of many new collaborative projects between SERI and local as well as international academic/research entities.

This initiative serves as an ideal teaching platform for our junior faculty, paving the way for immense synergies as they work together to tackle emerging challenges in the field of ophthalmology.

DATE	TOPIC	SPEAKER
11 April 2012	On the path to curing the RPGR form of X-linked retinitis pigmentosa	A/Prof William Beltran <i>School of Veterinary Medicine, University of Pennsylvania</i>
1 August 2012	Collaboration is the future of research	Prof Phillip Della <i>Head of School of Curtin University of Nursing and Midwifery</i> <i>Western Australian Chairperson of the State Health Safety and Quality Council</i>
8 August 2012	Role of melanopsin and rod-cone photoreceptors in mediating papillary constriction and circadian light responses	Dr Joshua Gooley, PhD <i>A/Prof in Neuroscience and Behavioral disorder Program, Duke-NUS Graduate Medical School</i> <i>Principal Investigator of Chronobiology and Sleep Laboratory in Singhealth Investigational Medicine unit, SGH</i>
15 August 2012	Application of small molecules (lipidome) in disease management	Dr Kothandaraman Narasimhan, <i>A/Prof (Small Molecules Laboratory) and Functional Genomic Medicine Research, King Fahd Medical Research Centre</i>

DATE	TOPIC	SPEAKER
22 August 2012	The effects of dry eye on higher order aberrations	Dr Anuja Joshi <i>Research Scientist and Director of NOVEL (Vision Optics Lab) Cornea and refractive Surgery Unit in Narayana Nethralaya</i>
29 August 2012	Design of new biomaterial : A case of ultra-small amphiphilic peptides self-assemble to collagen-like fibrous scaffolds	Prof Charlotte Hauser <i>Team leader and Principal Research Scientist in Institute of Bioengineering and Nanotechnology Singapore</i>
26 September 2012	Fit and fat: Understanding the molecular basis of fat storage	Dr David Silver <i>A/Prof Duke-NUS, Editorial Board of Journal of Biological Chemistry</i>
3 October 2012	Discovering the eye seminar series biological clocks; Who is driving us?	Dr Shyam S. Chaurasia <i>Senior Research Scientist, SERI Adj. A/Prof, SRP in Neuroscience and Behavioral Disorders with Duke-NUS Graduate Medical School and Department of Ophthalmology, Yong Loo Lin School of Medicine</i>
17 October 2012	The antioxidant pathway mediated by p53-Glut9 pathway via uric acid transport	Dr Itahana <i>A/Prof in Cancer and Stemcell Biology Program, Duke-NUS Graduate Medical School</i>
24 October 2012	SF2/ASF-1 regulates pre-mRNA splicing in Tryptophan Hydroxylase-2	Dr Zhang XiaoDong <i>A/Prof in Neuroscience and Behavioral Disorders with Duke-NUS Graduate Medical School, Department of Psychiatry and Behavioral Science, Duke University Medical Center Adj. A/Prof, Department of Physiology, NUS</i>

DATE	TOPIC	SPEAKER
1 November 2012	Cell therapy of corneal diseases	Prof Winston Whei-Yang Kao <i>Ben and Lousie Tate Professor Director, Ophthalmic Research Laboratories and Crawley Vision Science Research Centre Ophthalmology, University of Cincinnati</i>
21 November 2012	Emerging treatments for diabetic retinopathy	Prof Paul M Dodson MD, FRCP, FRCOphth <i>Heart of England Diabetic Retinopathy Screening Centre Department of Ophthalmology And Diabetics, Birmingham Heartlands and University Hospitals</i>
28 November 2012	RHO GTPases and regulation of cell migration, polarization and adhesion proteins in human corneal epithelial cells	Dr Hou Ai Hua <i>Postdoctoral Research Fellow, SERI</i>
4 December 2012	The potential for vascular stem cell therapy for ischaemic retinopathies	Prof Alan Stitt <i>McCauley Chair of Experimental Ophthalmology in Queen's University Belfast Director of the Centre for Vision And Vascular Science (CVVS) in Queen's University Medical School</i>
11 December 2012	From murine genetics of blood pressure regulation to human genetics of familial mediterranean fever	Dr Frank Ong <i>Instructor of Biomedical Sciences, Cedars-Sinai Medical Center Professorial Series Medical Scientist, Dept. of Biomedical Sciences, Cedars-Sinai Medical Center Medical Consultant, Genophen, Inc Advisor in Healthcare Sector, Guidepoint Global</i>
12 December 2012	The business side of academic research: Commercialization, intellectual property and industry partnerships	Dr Danny Belkin <i>Director, Technology Development & Commercialization, SERI</i>

DATE	TOPIC	SPEAKER
9 January 2013	Retinal imaging in the management of hypertension: A critical reappraisal	Dr Andrea Grosso <i>University of Torino</i>
23 January 2013	High-throughput genomics: the road from base pairs to biomarkers	Asst. Prof Jayapal Manikandan <i>Head, Bioinformatics, Center of Excellence in Genomic Medicine Research, King Abdulaziz University</i> <i>Adj. Lecturer, The University of Western Australia</i>
6 February 2013	Genetics and stem cell based therapies for blindness	Dr Kang Zhang <i>Director, UCSD Institute for Genomic Medicine</i> <i>Professor of Ophthalmology and Human Genetics, University of California, San Diego</i>
18 February 2013	Survey on the development of electronic retinal prostheses	Prof Eberhart Zrenner <i>Chair-Professor for Ophthalmology at the Institute for Ophthalmic Research of the Centre for Ophthalmology at the University of Tuebingen</i>
27 February 2013	Lactoferrin and its effect on corneal wound healing	Dr Ushasree Pattamatta <i>Post Doctoral Fellow, Jawaharlal Nehru Centre for Advanced Scientific Research</i>



OUR COLLABORATIONS

Local Institutions

- Bioinformatics Institute
- Bioprocessing Technology Institute
- Changi General Hospital (Department of Ophthalmology)
- Citymed Health Associates Pte Ltd
- Community Eye Clinic
- Defense Medical & Environmental Research Institute
- DSO National Laboratories
- Duke-NUS Graduate Medical School
- Experimental Therapeutics Centre
- Genome Institute of Singapore
- Institute for Infocomm Research
- Institute of Bio-Nanotechnology
- Institute of Microelectronics (IME)
- Institute of Molecular and Cell Biology
- Khoo Teck Puat Hospital
- KK Women's and Children's Hospital (Department of Ophthalmology)
- Lions Home for the Elders
- Ministry of Health Holdings
- Nanyang Technological University
- National Cancer Centre
- National Healthcare Group Polyclinics
- National Heart Centre
- National Neuroscience Institute
- National University Health Systems
- National University Hospital
- National University Singapore
- Ngee Ann Polytechnic
- Novena Heart Centre
- Singapore Armed Forces
- Singapore Bioimaging Consortium
- Singapore General Hospital
- Singapore Immunology Network
- Singapore Institute for Clinical Sciences
- Singapore National Eye Centre
- Singapore Stem Cell Consortium
- Singapore-Stanford Biodesign
- SingHealth Polyclinics
- Tan Tock Seng Hospital

Overseas Institutions (Academic)

- Centre for Eye Research Australia, University of Melbourne, Australia
- Centre for Vision Research, University of Sydney, Australia
- Johns Hopkins University, USA
- Lions Eye Institute, Australia
- Max Planck Institute for Evolutionary Anthropology, Germany
- Moorfields Eye Hospital, UK
- Oregon Health and Science University, USA
- Save Sight Institute, Australia
- University College London, UK
- University of British Columbia, Canada
- University of York, UK
- West Virginia University Eye Institute (School of Public Health), USA
- Wilmer Eye Institute, USA

Industry Collaborations

- AcuFocus
- Alcon Research Ltd
- Allergan
- Angioblast Systems Inc
- AqueSys, Inc
- Astonix Life Science (S) Pte Ltd
- Bausch & Lomb
- Bayer
- Canon
- Carl Zeiss Pte Ltd
- Ceepro Pte Ltd
- GlaxoSmithKline
- KEIO-NUS CUTE Centre
- Kendle Pte Ltd
- Novartis
- Ocular Therapeutix, Inc
- Project Orbis
- Roche
- Santen Pharmaceutical
- Technolas Perfect Vision
- Welch Allyn





EVENTS

INTERNATIONAL & LOCAL ACTIVITIES

SERI staff and associates participated actively in both overseas and local conferences during the year to establish links with overseas institutes, meet up with overseas collaborators and to promote and enhance SERI's presence in the international scene.

Conferences/meetings participated includes:

International Activities

TOPIC	DATE	VENUE
Tear Film and Ocular Surface (TFOS) Asia	2-4 April 2012	Kamakura, Japan
The 116 th Annual Meeting of the Japanese Ophthalmological Society	5-8 April 2012	Tokyo, Japan
Asia-Pacific Academy of Ophthalmology (APAO)	13-16 April 2012	Busan, Korea
Gordon Research Conference - New Antibacterial Discovery & Development	15-20 April 2012	Lucca (Barga), Italy
RCN Annual International Nursing Research Conference	23-25 April 2012	London, UK
Public Health Research - Methods and Challenges	24-26 April 2012	Birmingham, UK
15 th Annual International Ocular Surface Society (IOSS) Meeting	5 May 2012	Florida, USA
Association for Research in Vision and Ophthalmology (ARVO)	6-9 May 2012	Fort Lauderdale, USA
The Royal College of Ophthalmologists Annual Congress	15-17 May 2012	Liverpool, UK
60 th American Society For Mass Spectrometry (ASMS) Conference On Mass Spectrometry And Allied Topics	20-24 May 2012	Vancouver, Canada

TOPIC	DATE	VENUE
Asia-Pacific Association of Cataract & Refractive Surgeons (APACRS) Annual Congress	21 May - 3 June 2012	Shanghai, China
XXI European Stroke Conference	22-25 May 2012	Lisbon, Portugal
World Congress on Medical Physics and Biomedical Engineering	26-31 May 2012	Beijing, China
50 th ISCEV Symposium	5-8 June 2012	Valencia, Spain
Third International Symposium on Antimicrobial Peptides	13-15 June 2012	Lille, France
10 th International Adenovirus Meeting	13-17 June 2012	Umeå, Sweden
6 th Asian Society Against Dementia Congress	14-16 June 2012	Kuala Lumpur, Malaysia
European Glaucoma Society (EGS) Congress	17-22 June 2012	Copenhagen, Denmark
2 nd International Conference on Proteomics & Bioinformatics	2-4 July 2012	Las Vegas, USA
Alzheimer's Association 2012 International Conference	14-19 July 2012	Vancouver, Canada
International Society for Eye Research (ISER) 2012 XX Biennial Meeting	21-25 July 2012	Berlin, Germany
BIT's 2 nd Annual World Congress of Microbes	30 July - 1 August 2012	Guangzhou, China
American Society of Retina Specialists (ASRS) 30 th Annual Meeting	25-29 August 2012	Las Vegas, USA
The 35 th Meeting of the European Strabismological Association (ESA)	2-5 September 2012	Bucharest, Romania

TOPIC	DATE	VENUE
3 rd Eucornea Congress	6-8 September 2012	Milan, Italy
12 th Euretina Congress	6-9 September 2012	Milan, Italy
2 nd World Congress of Pediatric Ophthalmology and Strabismus (WCPOS)	7-9 September 2012	Milan, Italy
XXX Congress of the ESCRS	8-12 September 2012	Milan, Italy
31 st European Society of Ophthalmic Plastic and Reconstructive Surgery (ESOPRS) Annual Meeting	13-15 September 2012	Tallinn, Estonia
III Orbital Society Symposium	14-15 September 2012	Buenos Aires, Argentina
2012 European VitreoRetinal Society (EVRS) Congress	15-18 September 2012	Dresden, Germany
24 th Scientific Meeting of the International Society of Hypertension	30 September - 4 October 2012	Sydney, Australia
8 th World Stroke Congress	10-13 October 2012	Brazil
8 th International Symposium on Uveitis by the International Uveitis Study Group	19-22 October 2012	Sani Resort, Greece
American Academy of Ophthalmology (AAO) 2012 Annual Meeting	10-13 November 2012	Illinois, Chicago
The 3 rd Biennial Asia Cornea Society Scientific Meeting	27-29 November 2012	Manila, Philippines

TOPIC	DATE	VENUE
The 1 st Asia Pacific Glaucoma Congress (APGC)	7-9 December 2012	Bali, Indonesia
The 8 th International Symposium of Ophthalmology - Hong Kong (ISO-HK)	14-16 December 2012	Hong Kong
The American Society for Cell Biology (ASCB) Annual Meeting	15-19 December 2012	San Francisco, USA

Conferences/ meetings participated includes:

Local Activities

TOPIC	DATE	VENUE
4 th International Singapore Lipid Symposium	13-16 March 2012	Singapore
5 th International Singapore Symposium of Immunology	7-8 June 2012	Singapore
28 th Singapore-Malaysia Joint Meeting in Ophthalmology in conjunction with XIX International Neuro-Ophthalmology Society Meeting (INOS)	15-18 June 2012	Singapore
SingHealth Duke-NUS Scientific Congress 2012	3-4 August 2012	Singapore
APSOPRS Oculoplastic Congress 2012	24-25 August 2012	Singapore
YLLSOM 2nd Annual Graduate Scientific Congress 2012	15 Sept 2012	Singapore
1 st Singapore International Public Health Conference 2012	1-2 October 2012	Singapore
NUHS Ophthalmology Research Day	25 October 2012	Singapore
NMRC Award Ceremony and TCR Symposium 2012	31 October - 1 November 2012	Singapore
Singapore International Conference on Dengue and Emerging Infections	21-23 November 2012	Singapore

GALA FUND-RAISING DINNER, THE EYE BALL 2013

The aim of SERI's Gala Fund-Raising dinner, i.e. "The EYE Ball", is to create an awareness of eye diseases and vision loss, the fragility of our sight and the important role of eye research in this regard. It concurrently serves as a conduit to raise funds so that SERI can continue in its strive to perform impactful research that directly benefits the community. The EYE Ball was held at The Fullerton Hotel on 24 October 2013. In conjunction, an auction was conducted to further raise funds for eye research. The Guest-of-Honor for this event was multi-talented extraordinaire, Mr. Dick Lee. 25 tables were sold and a total net sum of approximately \$322,060 was raised.

The success of the event can be partially attributed to SERI's partnership with the Singapore Tatler, which has helped SERI to raise the profile of this event among its exclusive clientele. SERI intends to leverage on the EYE BALL to continue to grow its profile, and to build upon the momentum of its fund-raising efforts in a sustained manner.



Lloyd Paul A



TIEN Y. WONG, MD, PhD
2014
THIRTY-SEVENTH ANNUAL
MAGULA SOCIETY MEETING



ACHIEVEMENT

OUR AWARDS

Local Awards

- Khoo Scholars Award [April 2012]
Dr Anna Tan, SNEC
- Duke-NUS Khoo Clinical Scholar Program [April 2012]
Dr Sabanayagam Charumathi, SERI
- National Medical Research Council, Ministry of Health: NMRC Transition Award [May 2012]
*"Novel biomarkers of kidney and eye diseases (Singapore Kidney Eye Study)"
Dr Sabanayagam Charumathi, SERI*
- National Medical Research Council, Ministry of Health: NMRC Clinician Scientist Award [May 2012]
*"Retinal vascular imaging study in transient ischemic attacks (REVISTA)"
Dr Kamran Ikram, SERI*
- National Medical Research Council, Ministry of Health: NMRC Clinician Scientist Award [May 2012]
*"Singapore age-related macular degeneration genetic architecture (SAGA) study: from population genomics to personalized medicine"
Dr Kamran Ikram, SERI*
- SingHealth Publish! Award (Medical Research) [June 2012]
*"Retinal vascular tortuosity, blood pressure, and cardiovascular risk factors"
Dr Carol Cheung, SERI*
- NUHS Harvard-BIDMC Seed Funding [June 2012]
*"Novel retinal vascular imaging and biochemical biomarkers for stroke: the cardiovascular health study"
Dr Kamran Ikram, SERI*
- Singapore Effie Awards 2012 [June 2012]
*Bronze in the Non-profit Category at the 2012 Singapore Effectiveness Award Competition
Singapore Eye Research Institute*
- Duke-NUS Khoo Clinical Scholars Pilot Award Clinical Scholar Program [July 2012]
*"Comparisons of retinal microvascular characteristics between patients with white coat hypertension and sustained hypertension - a pilot study"
Dr Carol Cheung, SERI*
- SingHealth DUKE-NUS Scientific Congress 2012: Best Oral Presentation (Clinical Research) [August 2012]
*"Randomized, controlled trial of a sustained delivery formulation of 5-fluorouracil for the treatment of failing blebs"
Dr Arun Kumar Narayanaswamy, SNEC*
- Singapore Health & Biomedical Congress 2012: Singapore Young Investigator Basic Science/Translation Research Bronze Medal [September 2012]
*"Impact of maternal body mass index on the retinal microvasculature in pregnancy"
Dr Queenie Li Ling Jun, SERI*

- Stars @ NUHS Awards Ceremony: Faculty Outstanding Researcher Award 2012 [November 2012]
In recognition of the excellent achievements as a researcher in the School of Medicine in the last academic year
Prof Aung Tin, SERI
- NHG Eye institute 4th International Ophthalmology Congress: Poster Merit Award [November 2012]
"A novel method of measuring tear evaporation rates using infrared thermography"
Dr Andrea Petznick, SERI
- National Medical Research Council, Ministry of Health: NMRC Transition Award [December 2012]
"Targeting the inflammatory in adenovirus infection and epidemic keratoconjunctivitis"
Dr Nobuyo Yawata, SERI
- National Medical Research Council, Ministry of Health: NMRC Clinician Scientist Award [December 2012]
"A translational clinical research program using novel technologies focusing on pathology and treatment of intrinsic and extrinsic subtypes of evaporative dry eye"
A/Prof Louis Tong, SERI
- Asia-Pacific Academy of Ophthalmology (APAO) 2012: Achievement Award [April 2012]
Dr Carol Cheung, SERI
- American Society of Cataract and Refractive Surgery (ASCRS) Symposium: Best Paper of Session 1-K Keratorefractive Lasik [April 2012]
"Visual outcomes of refractive lenticule extraction compared with femtosecond LASIK for myopia and myopic astigmatism"
Dr Cordelia Chan, SNEC
- American Society of Cataract and Refractive Surgery (ASCRS) 2012 Symposium on Cataract, IOL and Refractive Surgery: ASCRS Video 2nd Prize [April 2012]
Dr Chelvin Sng, SNEC
- The Association for Research in Vision and Ophthalmology (ARVO) 2012: Member in Training (MIT) Outstanding Poster Award [May 2012]
"Quantifying the disease-specific impact of vision impairment on vision-specific functioning: the Singapore Indian eye study"
Dr Peggy Chiang, SERI
- 24th Scientific Meeting of the International Society of Hypertension: Special Travel Grant [May 2012]
Ms Yip Wanfen, SERI
- The Association for Research in Vision and Ophthalmology (ARVO) 2012: Travel Grant Award [April 2012]
Mr Soh Yu Qiang Andrew, SNEC
- The Asian Pacific Society of Hypertension (APSAVD) and Hypertension Sydney 2012: Young Investigator Grant [May 2012]
Dr Kamran Ikram, SERI

International Awards

- 10th International Adenovirus Meeting: Best Poster Award [June 2012]
"Analyses of human natural killer cell responses in epidemic keratoconjunctivitis"
Dr Nobuyo Yawata, SERI
- 28th Singapore- Malaysia Joint Meeting in Ophthalmology: Merit Poster Award [June 2012]
Dr Queenie Li Ling Jun, SERI
- 2nd Joint International Congress - Refr@ctive.online & SICSSO: Best Paper of Session [June 2012]
"Refractive Lenticule Extraction"
Prof Donald Tan, SNEC
- 3rd Tissue Engineering and Regenerative Medicine International Society (TERMIS) World Congress Conference: TERMIS Poster Award (Third Best Poster Prize) [September 2012]
"Translational Research Innovations in Ocular Surgery (TRIOS) Programme: Biological tissue glue project"
Dr Pradeep Paul Panengad
- Global Ophthalmology Awards Program: Bayer Grant [September 2012]
A/Prof Gemmy Cheung, SNEC
- XXX Congress of the ESCRS: Best Paper of Session [September 2012]
"Femtosecond Keratoplasty"
Mr Romesh Agunawala
- Ophthalmology Research Day 2012: Postgraduate, Research Fellows & Resident Physicians Category [October 2012]
Best innovative research idea and outstanding charismatic speaker
Dr Peggy Chiang, SERI
- American Academy of Ophthalmology (AAO) 2012: Senior Achievement Award [November 2012]
Prof Donald Tan, SNEC
- 28th APAO Congress: APAO De Ocampo Lecture [January 2013]
Prof Aung Tin, SERI
- 28th APAO Congress: APAO Nakajima Award [January 2013]
A/Prof Jodhbir Metha, SNEC
- 28th APAO Congress: APAO Distinguished Service Award [January 2013]
Adj A/Prof Lee Shu Yen, SNEC
- 28th APAO Congress: APAO Outstanding Prevention of Blindness Award [January 2013]
A/Prof Gemmy Cheung, SNEC
- 28th APAO Congress: APAO Achievement Award [January 2013]
Prof Wong Tien Yin, SNEC
- 28th APAO Congress: APAO Achievement Award [January 2013]
Dr Doric Wong, SNEC
- 29th Malaysia-Singapore Joint Ophthalmic Congress 2013: Poster Award 2nd Prize [March 2013]
Dr Henrietta Ho, SNEC

OUR GRANTS

NMRC

- "Prophylactic laser iridotomy for eyes with narrow drainage angles: A randomized controlled trial"
Prof Aung Tin; S\$644,080.00
- "A human ocular surface disease constituted in mouse, from molecular targets to priming of human pterygium derived cells"
Dr Hou Ai Hua; S\$196,457.00
- "Novel biomarkers of kidney and eye diseases (Singapore Kidney Eye Study)"
Dr Charumathi Sabanayagam; S\$374,773.00
- "Applications of semiparametric regression models in prospective cohort studies"
A/Prof Li Jialiang; S\$667,284.50
- "Retinal vascular imaging study in transient ischemic attacks (REVISTA)"
Dr Mohammad Kamran Ikram; S\$675,000.00
- "Role of epigenetic regulation in the pathogenesis of diabetic retinopathy and potential for novel therapeutics"
Dr Su Xinyi; S\$199,997.00
- "Protein aggregation diseases: Clinical manifestations to biochemical characterization for the intervention of TGFBI-associated corneal dystrophies"
A/Prof Jodhbir Mehta; S\$778,810.00
- "A translational clinical research program using novel technologies focusing on pathology and treatment of intrinsic and extrinsic subtypes of evaporative dry eye"
A/Prof Louis Tong; S\$1,750,000.00

- "Targeting the inflammatory mechanisms in adenovirus infection and epidemic keratoconjunctivitis"
Dr Nobuyo Yawata; S\$375,000.00

BMRC

- "Bessel beam imaging of the irido-corneal angle with overlay of fluorescence emission distribution"
Prof Aung Tin; S\$83,600.00

A*Star/ Duke-NUS/ MOH/ Others

- "Glaucoma screening through automated cup-to-disc ratio (CDR) measurement"
A/Prof Cheng Ching-Yu; S\$1,000,190.00
- "Gaze tracking for visual field test"
Prof Aung Tin; S\$135,836.25
- "Retinal vascular caliber – A potential biomarker for early renal and retinal diseases?"
Prof Wong Tien Yin; £20,000
- "A predictive algorithm for indocyanine green angiography usage to differentiate polypoidal choroidal vasculopathy from age-related macular degeneration"
A/Prof Gemmy Cheung; S\$31,000.00

- "Living successfully with chronic eye diseases: the 'Living Successfully with Low Vision' (LSLV) Program – a randomized controlled trial of a self-management program for low vision"

Dr Peggy Chiang; S\$200,000.00

- "Comparison of retinal microvascular characteristics between patients with white coat hypertension and sustained hypertension – A pilot study"

Dr Carol Cheung; S\$24,964.00

SingHealth

- "A feasibility trial of cardiovascular disease screening using retinal vascular imaging in a primary care setting"

Dr Carol Cheung; S\$50,000.00

- "Optic nerve head changes following pan retinal photocoagulation"

Adj. A/Prof Shamira Perera; S\$138,000.00

- "Role of cytomegalovirus infection in cornea graft failures and the impact on corneal transplantation assessment"

Dr Anita Chan; S\$35,600.00

- "Comparison of retinal oximetry in primary angle closure glaucoma, normal tension glaucoma, primary open angle glaucoma, and healthy subjects"

Adj. A/Prof Shamira Perera; S\$138,000.00

Commercial

- "Tear proteomic profiles in dry eye patients with punctal occlusion"

A/Prof Louis Tong; S\$133,302.39

- "LUMINOUS: Study to observe the effectiveness and safety of lucentis through individualised patient treatment and associated outcomes"

A/Prof Gemmy Cheung; S\$297,326.25

- "Natural history and clinical course of age-related macular degeneration in Asians: Asian AMD Phenotyping Study"

A/Prof Gemmy Cheung; US\$100,000.00

- "Normative database collection using Canon OCT HS-100"

Dr Carol Cheung; S\$106,027.13

- "Survey study comparing contact lenses and LASIK for vision correction"

A/Prof Jodhbir Mehta; S\$6,000.00

- "A randomized control study to evaluate the efficacy of the Ceepto electronic glasses in reducing myopia progression in children"

Adj. A/Prof Audrey Chia; S\$269,341.34

OUR PUBLICATIONS

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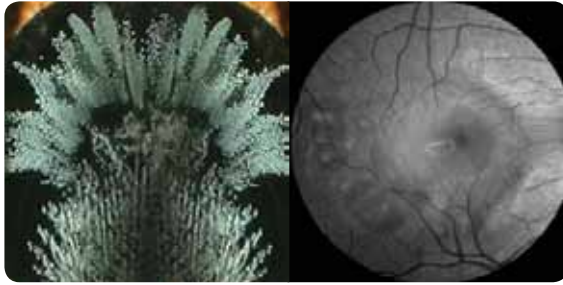
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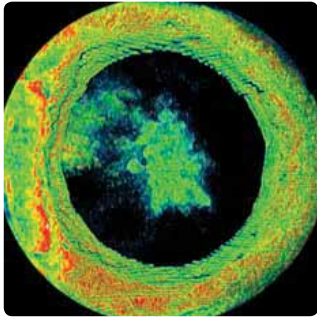
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FINANCIAL REPORT

YEAR ENDED 31 MARCH 2013

DIRECTORS' REPORT

We are pleased to submit this annual report to the member of the Company together with the audited financial statements for the financial year ended 31 March 2013.

Directors

The directors (who are also the charity trustees) in office at the date of this report are as follows:

- Professor Donald Tan Tiang Hwee
- Professor Wong Tien Yin
- Mr Wong Yew Meng
- Professor Patrick John Casey
- Doctor Lee Kim Hock Lionel
- Doctor Tong Mei Lin Philomena
- Associate Professor Yeoh Khay Guan (*Appointed on 21 September 2012*)
- Professor Chia Kee Seng (*Appointed on 21 September 2012*)
- Doctor Geh Min (*Appointed on 21 September 2012*)
- Professor Ang Chong Lye (*Appointed on 21 September 2012*)
- Professor Wang Linfa (*Appointed on 1 October 2012*)

Directors' interests

The Company has no share capital and its members' liability is limited by guarantee.

Neither at the end of, nor at any time during the financial year, was the Company a party to any arrangement whose objects are, or one of whose objects is, to enable the directors of the Company to acquire benefits by means of the acquisition of shares in or debentures of the Company or any other body corporate.

Except for salaries, bonus and fees and those benefits that are disclosed in this report and in note 22 in the financial statements, since the end of the last financial year, no director has received or become entitled to receive, a benefit by reason of a contract made by the Company or a related corporation with the director, or with a firm of which he is a member, or with a company in which he has a substantial financial interest, except for remuneration paid to a director in his capacity as an employee.

Share options

The Company does not have any share capital and accordingly has not issued any share options.

Auditors

The auditors, KPMG LLP, have indicated their willingness to accept re-appointment.

On behalf of the Board of Directors



Prof Donald Tan Tiang Hwee
Director



Prof Wong Tien Yin
Director

STATEMENT BY DIRECTORS

In our opinion:

- (a) the financial statements set out on pages FS1 to FS22 are drawn up so as to give a true and fair view of the state of affairs of the Company as at 31 March 2013 and the results and cash flows of the Company for the year ended on that date in accordance with the provisions of the Singapore Companies Act, Chapter 50, the Singapore Charities Act, Chapter 37 and Singapore Financial Reporting Standards; and
- (b) at the date of this statement, there are reasonable grounds to believe that the Company will be able to pay its debts as and when they fall due.

The Board of Directors has, on the date of this statement, authorised these financial statements for issue.

On behalf of the Board of Directors



Prof Donald Tan Tiang Hwee

Director



Prof Wong Tien Yin

Director

INDEPENDENT AUDITORS' REPORT

Member of the Company

Singapore Eye Research Institute

Report on the financial statements

We have audited the accompanying financial statements of Singapore Eye Research Institute ("the Company"), which comprise the balance sheet as at 31 March 2013, the statement of comprehensive income and statement of cash flow for the year then ended, and a summary of significant accounting policies and other explanatory information, as set out on pages FS1 to FS22.

Management's responsibility for the financial statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the provisions of the Singapore Companies Act, Chapter 50 (the Act), the Singapore Charities Act, Chapter 37 (the Charities Act) and Singapore Financial Reporting Standards, and for devising and maintaining a system of internal accounting controls sufficient to provide a reasonable assurance that assets are safeguarded against loss from unauthorised use or disposition; and transactions are properly authorised and that they are recorded as necessary to permit the preparation of true and fair profit and loss accounts and balance sheets and to maintain accountability of assets.

Auditors' responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Singapore Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements of the Company are properly drawn up in accordance with the provisions of the Act, the Charities Act and Singapore Financial Reporting Standards to give a true and fair view of the state of affairs of the Company as at 31 March 2013 and the results and cash flows of the Company for the year ended on that date.

Report on other legal and regulatory requirements

In our opinion, the accounting and other records required by the Act to be kept by the Company have been properly kept in accordance with the provisions of the Act.

KPMG LLP

*Public Accountants and
Chartered Accountants*

Singapore



FINANCIAL STATEMENTS

Balance sheet (as at 31 March 2013)

	Note	2013 \$	2012 \$
Non-current assets			
Property, plant and equipment	4	5,837,452	5,488,784
Intangible assets	5	162,794	256,435
		<u>6,000,246</u>	<u>5,745,219</u>
Current assets			
Trade and other receivables	6	9,022,902	9,923,084
Prepayments		35,341	-
Cash and cash equivalents	8	7,617,101	5,947,614
		<u>16,675,344</u>	<u>15,870,698</u>
Total assets		<u>22,675,590</u>	<u>21,615,917</u>
Accumulated fund			
	9	<u>4,072,892</u>	<u>3,204,682</u>
Non-current liability			
Deferred income	10	4,173,240	4,139,082
Employee benefits	11	-	123,734
		<u>4,173,240</u>	<u>4,262,816</u>
Current liabilities			
Trade payables	12	2,187,451	1,339,679
Other payables	13	10,105,487	10,934,477
Deferred income	10	1,426,714	1,388,472
Employee benefits	11	709,806	485,791
		<u>14,429,458</u>	<u>14,148,419</u>
Total liabilities		<u>18,602,698</u>	<u>18,411,235</u>
Total accumulated fund and liabilities		<u>22,675,590</u>	<u>21,615,917</u>

Statement of comprehensive income (Year ended 31 March 2013)

	Note	2013 \$	2012 \$
Operating expenditure grant	14	21,266,563	17,491,357
Capital expenditure grant	14	1,341,202	1,398,291
Other income	15	3,226,671	2,126,948
		<u>25,834,436</u>	<u>21,016,596</u>
Staff costs		(14,053,792)	(11,434,129)
Supplies and consumables		(6,336,223)	(3,955,011)
Depreciation of property, plant and equipment		(1,264,302)	(1,338,577)
Amortisation of intangible assets		(128,898)	(111,237)
Rental and utilities		(674,148)	(523,242)
Purchased and contracted services		(352,766)	(391,041)
Repairs and maintenance		(845,660)	(799,230)
Other operating expenses		(1,295,915)	(1,309,067)
Results from operating activities		<u>882,732</u>	<u>1,155,062</u>
Finance income		-	8,756
Finance expense		(14,522)	-
Net finance (costs)/income	16	<u>(14,522)</u>	<u>8,756</u>
Surplus before tax		868,210	1,163,818
Tax expense	17	-	-
Surplus for the year	18	<u>868,210</u>	<u>1,163,818</u>
Other comprehensive income for the year, net of income tax		-	-
Total comprehensive income for the year		868,210	1,163,818
Accumulated fund brought forward		3,204,682	2,040,864
Accumulated fund carried forward		<u><u>4,072,892</u></u>	<u><u>3,204,682</u></u>

The Company had no other changes in accumulated fund except for surplus for the year of \$868,210 for the financial year ended 31 March 2013.

FINANCIAL STATEMENTS

Statement of cash flows (Year ended 31 March 2013)

	Note	2013 \$	2012 \$
Cash flows from operating activities			
Surplus for the year		868,210	1,163,818
Adjustments for:			
Depreciation of property, plant and equipment		1,264,302	1,338,577
Interest income		-	(137)
Amortisation of deferred income		(1,341,202)	(1,398,291)
Amortisation of intangible assets		128,898	111,237
		920,208	1,215,204
Change in trade and other receivables		900,182	(3,103,098)
Change in prepayments		(35,341)	-
Change in trade and other payables		18,782	581,234
Change in employee benefits		100,281	349,635
Cash generated from/(used in) operations		1,904,112	(957,025)
Interest income received		-	137
Net cash from/(used in) operating activities		1,904,112	(956,888)
Cash flows from investing activities			
Purchase of property, plant and equipment		(1,612,970)	(1,012,829)
Purchase of intangible assets		(35,257)	(250,446)
Donations for capital expenditure		1,413,602	1,181,885
Net cash used in investing activities		(234,625)	(81,390)
Cash flows from financing activity			
Loan from immediate holding company		-	3,000,000
Net cash from financing activity		-	3,000,000
Net increase in cash and cash equivalents			
Cash and cash equivalents at beginning of the year		5,947,614	3,985,892
Cash and cash equivalents at end of the year	8	7,617,101	5,947,614

During the year, the Company acquired property, plant and equipment and intangible assets with an aggregate cost of \$1,648,227 (2012: \$1,263,275), of which \$1,413,602 (2012: \$1,181,885) was acquired using donated funds.

NOTES TO THE FINANCIAL STATEMENTS

These notes form an integral part of the financial statements.

The financial statements were authorised for issue by the Board of Directors on 30 August 2013.

1. Domicile and activities

Singapore Eye Research Institute (the Company) is incorporated in the Republic of Singapore. The address of the Company's registered office is 31 Third Hospital Avenue, #03-03 Bowyer Block, Singapore 168753.

The principal activities of the Company are to carry out eye-related medical research projects.

The immediate, intermediate holding companies and ultimate holding party during the financial year are Singapore National Eye Centre Pte Ltd, Singapore Health Services Pte Ltd and MOH Holdings Pte Ltd, and Minister for Finance respectively. These companies were incorporated in the Republic of Singapore.

The Company, limited by guarantee, has been registered as a Charity, under the Charities Act, Cap. 37 with effect from 27 November 2002.

2. Basis of preparation

2.1 Statement of compliance

The financial statements have been prepared in accordance with Singapore Financial Reporting Standards (FRS).

2.2 Basis of measurement

The financial statements have been prepared on the historical cost basis except for certain financial assets and liabilities which are measured at fair values.

2.3 Functional and presentation currency

The financial statements are presented in Singapore dollars, which is the Company's functional currency.

2.4 Use of estimates and judgements

The preparation of financial statements in conformity with FRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

Information about critical judgements in applying accounting policies that have the most significant effect on the amounts recognised in the financial statements and information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial year are included in note 19.

3. Significant accounting policies

The accounting policies set out below have been applied consistently to all periods presented in these financial statements, and have been applied consistently by the Company.

3.1 Foreign currency

Transactions in foreign currencies are translated to the functional currency of the Company at the exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the end of the reporting period are retranslated to the functional currency at the exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortised cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the year, and the amortised cost in foreign currency translated at the exchange rate at the end of the year.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items in a foreign currency that are measured in terms of historical cost are translated using the exchange rate at the date of the transaction. Foreign currency differences arising on retranslation are recognised in surplus or deficit.

3.2 Financial instruments

Non-derivative financial assets

The Company initially recognises loans and receivables and deposits on the date that they are originated. All other financial assets (including assets designated at fair value through profit or loss) are recognised initially on the trade date at which the Company becomes a party to the contractual provisions of the instrument.

The Company derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Company is recognised as a separate asset or liability.

Financial assets and liabilities are offset and the net amount presented in the balance sheet when, and only when, the Company has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

Loans and receivables

Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Such assets are recognised initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, loans and receivables are measured at amortised cost using the effective interest method, less any impairment losses.

Loans and receivables comprise trade and other receivables (notes 6 and 7) and cash and cash equivalents (note 8).

Cash and cash equivalents comprise cash and bank balances.

Non-derivative financial liabilities

The Company initially recognises financial liabilities on the trade date at which the Company becomes a party to the contractual provisions of the instrument.

The Company derecognises a financial liability when its contractual obligations are discharged or cancelled or expire.

Financial assets and liabilities are offset and the net amount presented in the balance sheet when, and only when, the Company has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

The Company classifies non-derivative financial liabilities into other financial liabilities category.

Such financial liabilities are recognised initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest method.

Other financial liabilities comprise: employee benefits (note 11), trade payables (note 12) and other payables (note 13).

3.3 Property, plant and equipment

Recognition and measurement

Items of property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes:

- the cost of materials and direct labour;
- any other costs directly attributable to bringing the asset to a working condition for its intended use;
- when the Company has an obligation to remove the asset or restore the site, an estimate of the costs of dismantling and removing the items and restoring the site on which they are located; and
- capitalised borrowing costs.

Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

Low value assets costing less than \$1,000 individually are written off in the period of outlay.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

The gain or loss on disposal of an item of property, plant and equipment is determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and is recognised net within other income/other expense in surplus or deficit.

Subsequent costs

The cost of replacing a component of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the component will flow to the Company, and its cost can be measured reliably. The carrying amount of the replaced component is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in surplus or deficit as incurred.

Depreciation

Depreciation is calculated based on the cost of an asset, less its residual value. Significant components of individual assets are assessed and if a component has a useful life that is different from the remainder of that asset, that component is depreciated separately.

Depreciation is recognised in surplus or deficit on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment.

Depreciation is recognised from the date that the property, plant and equipment are installed and are ready for use, or in respect of internally constructed assets, from the date that the asset is completed and ready for use.

The estimated useful lives for the current and comparative periods are as follows:

Building improvements	3 to 10 years
Medical and laboratory equipment	3 to 8 years
Computers	3 years
Office equipment	5 years
Furniture and fittings	8 years

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

3.4 Intangible assets

Computer software, which is not an integral part of the related hardware, is accounted for as an intangible asset and is stated at cost less accumulated amortisation and impairment losses.

Research

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in surplus or deficit as incurred.

Subsequent expenditure

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognised in surplus or deficit as incurred.

Amortisation

Amortisation of computer software is recognised in surplus or deficit on a straight-line basis over its estimated useful life of 3 to 5 years, since this most closely reflects the expected pattern of consumption of the future economic benefit embodied in the asset.

Amortisation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

3.5 Impairment

Non-derivative financial assets

A financial asset not carried at fair value through profit or loss is assessed at the end of each reporting date to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had had a negative effect on the estimated future cash flows of that asset that can be estimated reliably.

Objective evidence that financial assets are impaired can include default or delinquency by a debtor, restructuring of an amount due to the Company on terms that the Company would not consider otherwise, indications that a debtor or issuer will enter bankruptcy or economic conditions that correlate with defaults.

Loans and receivables

The Company considers evidence of impairment for loans and receivables at both a specific asset and collective level. All individually significant loans and receivables are assessed for specific impairment. All individually significant loans and receivables found not to be specifically impaired are then collectively assessed for any impairment that has been incurred but not yet identified. Loans and receivables that are not individually significant are collectively assessed for impairment by grouping together loans and receivables with similar risk characteristics.

In assessing collective impairment, the Company uses historical trends of the probability of default, the timing of recoveries and the amount of loss incurred, adjusted for management's judgement as to whether current economic and credit conditions are such that the actual losses are likely to be greater or less than suggested by historical trends.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the asset's original effective interest rate. Losses are recognised in surplus or deficit and reflected in an allowance account against loans and receivables. Interest on the impaired asset continues to be recognised. When a subsequent event causes the amount of impairment loss to decrease, the decrease in impairment loss is reversed through surplus or deficit.

Non-financial assets

The carrying amounts of the Company's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the assets' recoverable amounts are estimated. An impairment loss is recognised if the carrying amount of an asset or its related cash-generating unit (CGU) exceeds its estimated recoverable amount.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or CGU.

Impairment losses are recognised in surplus or deficit. Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the CGU (group of CGUs), and then to reduce the carrying amounts of the other assets in the CGU (group of CGUs) on a *pro rata* basis.

In respect of other assets, impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

3.6 Employee benefits

Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognised as an employee benefit expense in surplus or deficit in the periods during which services are rendered by employees.

Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognised for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

3.7 Income recognition

Jobs Credit Scheme

Cash grants received from the government in relation to the Jobs Credit Scheme are recognised as income upon receipt.

Donation income

Donations, other than those specified below, are recognised in surplus or deficit in the period of receipt.

Property, plant and equipment and cash donation received, which is designated for property, plant and equipment purchases whose individual value of more than \$1,000 is taken to deferred income in the period of receipt. The deferred income is amortised over the useful life of the property, plant and equipment by crediting to the surplus or deficit an amount so as to match the related depreciation expense. Cash donation which is designated for specific

use other than for property, plant and equipment purchases is taken to donation fund account in the period of receipt. The donation income is recognised in the surplus or deficit when the relevant expenditure is incurred.

Grant income

Grant income designated for research purposes is recognised in surplus or deficit when the relevant qualifying costs are incurred.

Sponsorships

Sponsorships which are designated for specific events are taken to a sponsorships fund account. Sponsorship income is recognised in the surplus or deficit when relevant expenditures have been incurred. Net surplus or deficit is only taken to statement of comprehensive income when the relevant event is completed.

3.8 Lease payments

Payments made under operating leases are recognised in surplus or deficit on a straight-line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

3.9 Finance income and finance costs

Finance income comprises interest income on funds invested and net foreign currency gains that are recognised in surplus or deficit. Interest income is recognised as it accrues, using the effective interest method.

Finance costs comprise net foreign currency losses that are recognised in surplus or deficit.

Foreign currency gains and losses are reported on a net basis as either finance income or finance cost depending on whether foreign currency movements are in a net gain or net loss position.

3.10 Tax

Tax expense comprises current and deferred tax. Current tax and deferred tax are recognised in surplus or deficit except to the extent that it relates to items recognised directly in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss.

The measurement of deferred taxes reflects the tax consequences that would follow the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

In determining the amount of current and deferred tax, the Company takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. The Company believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Company to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

The Company has been registered as a Charity, under Charities Act, Cap. 37 with effect from 27 November 2002. No provision for taxation has been made in the financial statements as the Company is a registered charity with income tax exemption.

3.11 New standards and interpretations not adopted

A number of new standards, amendments to standards and interpretations are effective for annual periods beginning after 1 April 2012, and have not been applied in preparing these financial statements. None of these are expected to have a significant effect on the financial statements of the Company.

4. Property, plant and equipment

	Building improvements \$	Medical & laboratory equipment \$	Computers \$	Office equipment \$	Furniture & fittings \$	Total \$
Cost						
At 1 April 2011	1,106,235	10,975,065	770,191	92,253	620,504	13,564,248
Additions	-	693,960	131,410	12,630	174,829	1,012,829
Disposals	-	(84,138)	(3,027)	-	-	(87,165)
At 31 March 2012	1,106,235	11,584,887	898,574	104,883	795,333	14,489,912
Transfers	-	9,800	(9,800)	-	-	-
Additions	-	1,469,960	106,415	9,794	26,801	1,612,970
Disposals	-	(387,289)	(13,378)	-	-	(400,667)
At 31 March 2013	1,106,235	12,677,358	981,811	114,677	822,134	15,702,215
Accumulated Depreciation						
At 1 April 2011	927,440	5,596,378	579,557	84,309	560,415	7,748,099
Depreciation charge for the year	105,124	1,076,018	128,075	4,541	24,819	1,338,577
Disposals	-	(82,521)	(3,027)	-	-	(85,548)
At 31 March 2012	1,032,564	6,589,875	704,605	88,850	585,234	9,001,128
Depreciation charge for the year	14,224	1,091,921	114,169	6,507	37,481	1,264,302
Disposals	-	(387,289)	(13,378)	-	-	(400,667)
At 31 March 2013	1,046,788	7,294,507	805,396	95,357	622,715	9,864,763
Carrying Amounts						
At 1 April 2011	178,795	5,378,687	190,634	7,944	60,089	5,816,149
At 31 March 2012	73,671	4,995,012	193,969	16,033	210,099	5,488,784
At 31 March 2013	59,447	5,382,851	176,415	19,320	199,419	5,837,452

5. Intangible assets

	\$
Cost	
At 1 April 2011	397,551
Additions	250,446
At 31 March 2012	<u>647,997</u>
Additions	35,257
At 31 March 2013	<u><u>683,254</u></u>
Accumulated amortisation	
At 1 April 2011	280,325
Amortisation charge for the year	111,237
At 31 March 2012	<u>391,562</u>
Amortisation charge for the year	128,898
At 31 March 2013	<u><u>520,460</u></u>
Carrying amounts	
At 1 April 2011	<u>117,226</u>
At 31 March 2012	<u>256,435</u>
At 31 March 2013	<u><u>162,794</u></u>

6. Trade and other receivables

	Note	2013 \$	2012 \$
Deposits and other receivables	7	8,775,483	9,734,915
Trade amounts due from:			
• Immediate holding company		110,539	169,254
• Intermediate holding company		115,890	18,427
• Related corporations		20,990	488
		<u>9,022,902</u>	<u>9,923,084</u>

The Company's exposure to credit and currency risks are disclosed in note 20.

7. Deposits and other receivables

	Note	2013 \$	2012 \$
Deposits		893	813
Receivables from funding bodies		8,014,613	7,771,532
Sundry receivables		759,977	1,962,570
	6	<u>8,775,483</u>	<u>9,734,915</u>

Receivables from funding bodies are non-interest bearing and are generally on 30 to 60 days credit term.

8. Cash and cash equivalents

	2013	2012
	\$	\$
Cash at bank and in hand	<u>7,617,101</u>	<u>5,974,614</u>

9. Accumulated fund

The Company is limited by guarantee and has no share capital. In the event of a winding up of the Company, the liability of each member of the Company is limited to such amount as may be required, but not exceeding the sum of one hundred dollars (\$100). The accumulated fund represents the cumulative surplus of the Company.

The Company's reserve policy is to maintain funds at a minimum sufficient to cover budgeted operating and capital cost for the current fiscal year.

10. Deferred income

	2013	2012
	\$	\$
At cost	<u>15,729,754</u>	<u>14,714,892</u>
Less: Accumulated amortisation:		
At 1 April	9,187,338	7,874,595
Amortisation for the year	1,341,202	1,398,291
Disposal of donated assets	(398,740)	(85,548)
At 31 March	<u>10,129,800</u>	<u>9,187,338</u>
	<u>5,599,954</u>	<u>5,527,554</u>
Non-current	4,173,240	4,139,082
Current	<u>1,426,714</u>	<u>1,388,472</u>
	<u>5,599,954</u>	<u>5,527,554</u>

Deferred income relates to government grant received for the purchase of property, plant and equipment (PPE) and PPE which are donated to the Company. Deferred income is amortised over the periods necessary to match the depreciation of the PPE purchased with the related grants as well as the donated PPE.

11. Employee benefits

	2013	2012
	\$	\$
Liability for talent scheme	183,345	247,467
Liability for short-term accumulating compensated absences	526,461	362,058
	<u>709,806</u>	<u>609,525</u>
	-	123,734
Non-current	709,806	485,791
Current	<u>709,806</u>	<u>609,525</u>

12. Trade payables

	2013	2012
	\$	\$
Trade payables	1,655,797	1,296,409
Amounts due to:		
• Ultimate holding company (trade)	36,952	-
• Immediate holding company (trade)	231,992	-
• Intermediate holding company (trade)	220,660	-
• Related corporations (trade)	42,050	43,270
	<u>2,187,451</u>	<u>1,339,679</u>

The Company's exposure to currency and liquidity risks related to trade payables is disclosed in note 20.

13. Other payables

	2013	2012
	\$	\$
Accrued operating expenses	2,385,053	1,722,095
Loans from immediate holding company	6,000,000	6,000,000
Research grants received in advance from government	362,783	564,169
Research grants received in advance from third parties	1,214,821	2,520,907
Refundable deposits	940	1,060
Sundry payables	141,890	126,246
	<u>10,105,487</u>	<u>10,934,477</u>

Loans from immediate holding company is unsecured, interest-free and repayable on demand.

The Company's exposure to currency and liquidity risks related to other payables is disclosed in note 20.

14. Operating/Capital Expenditure Grants

These grants are received mainly from National Medical Research Council, Biomedical Research Council, Singhealth Foundation, Singapore Health Services Pte Ltd, Singapore National Eye Centre Pte Ltd and SNEC-Health Research Endowment Fund for research projects.

15. Other income

	2013	2012
	\$	\$
Research grant and service income	3,158,432	1,969,500
Conference fee	-	45,060
Other miscellaneous income	68,239	112,388
	<u>3,226,671</u>	<u>2,126,948</u>

16. Finance costs and income

	2013	2012
	\$	\$
Interest income	-	137
Exchange gain	-	8,619
Finance income	-	8,756
Exchange loss (net)	(14,522)	-
Finance costs	(14,522)	-
Net finance (costs)/income	<u>(14,522)</u>	<u>8,756</u>

17. Income tax

The Company is a non-profit organisation registered with the Commissioner of Charities under the Charities Act. With effect from Year of Assessment 2008, all registered and exempt charities will enjoy automatic income tax exemption. Thus, no provision for taxation will be made in the financial statements.

18. Surplus for the year

The following items have been included in arriving at surplus for the year:

	2013	2012
	\$	\$
Amortisation of deferred income	1,341,202	1,398,291
Temporary occupation license (TOL) and other operating lease expense	(441,647)	(348,202)
Contributions to defined contribution plan included in staff costs	<u>(1,291,139)</u>	<u>(1,039,625)</u>

19. Accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The selection of critical accounting policies, the judgements and other uncertainties affecting application of those policies and the sensitivity of reported results to changes in condition and assumptions are factors to be considered when reviewing the financial statements. The Company believes the following critical accounting policies involve the most significant judgements and estimates used in the preparation of the financial statements.

Useful lives of property, plant and equipment and intangible assets

Property, plant and equipment and intangible assets are stated at cost and are amortised on a straight-line basis over their estimated useful lives. The estimated useful lives represent our estimate of the periods that management expects to derive economic benefits from these assets. In estimating these useful lives and in determining whether subsequent revisions to useful lives are necessary, the management considers the likelihood of technical obsolescence arising from changes in technology and intended use.

20. Financial risk management

Overview

The Company has exposure to the following risks from its use of financial instruments:

- credit risk
- liquidity risk
- market risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk, and the Company's management of capital.

Risk management framework

Risk management is integral to the whole business of the Company. The Company has a system of controls in place to create an acceptable balance between cost of risks and the cost of managing the risks. The management continually monitors the Company's risk management process to ensure that an appropriate balance between risk and control is achieved. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company's activities.

Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, arises principally from the funding bodies and related parties, as and when they fall due.

The carrying amount of financial assets in the balance sheet represents the Company's respective maximum exposure to credit risk, before taking into account any collateral held. The Company does not hold any collateral in respect of its financial assets.

Cash and fixed deposits are placed with financial institutions which are regulated.

At the reporting date, there is no significant concentration of credit risk.

The maximum exposure to credit risk for trade and other receivables of the Company at the reporting date (by type of debtor) is:

	2013	Company 2012
	\$	\$
Funding bodies	8,014,613	7,771,532
Corporations	1,008,289	2,151,552
	<u>9,022,902</u>	<u>9,923,084</u>

Impairment losses

The ageing of trade and other receivables at the reporting date is:

	Gross 2013 \$	Impairment losses 2013 \$	Gross 2012 \$	Impairment losses 2012 \$
Company				
No credit terms	8,388,633	-	8,312,807	-
Not past due	525,612	-	79,370	-
Past due 1 – 30 days	29,666	-	472,408	-
Past due 31 – 150 days	62,477	-	1,016,391	-
Past due over 150 days	16,514	-	42,108	-
	9,022,902	-	9,923,084	-

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due under normal and stressed conditions without incurring unacceptable losses or risking damage to the Company's reputation.

The Company's operation is funded primarily from grants from National Medical Research Council and loan from immediate holding company. As such, the Company's exposure to liquidity risk is minimised.

The Company monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Company's operations and to mitigate the effects of fluctuations in cash flows.

The following are the contractual maturities of financial liabilities, including estimated interest payments and excluding the impact of netting agreements:

	Note	Carrying Amount \$	Cash flows		
			Total contractual cash flows \$	Within 1 year \$	Within 1 to 5 years \$
2013					
Trade payables	12	2,187,451	(2,187,451)	(2,187,451)	-
Other payables*	13	8,527,883	(8,527,883)	(8,527,883)	-
Employee benefits	11	709,806	(709,806)	(709,806)	-
		11,425,140	(11,425,140)	(11,425,140)	-
2012					
Trade payables	12	1,339,679	(1,339,679)	(1,339,679)	-
Other payables*	13	7,849,400	(7,849,400)	(7,849,400)	-
Employee benefits	11	609,525	(609,525)	(485,791)	(123,734)
		9,798,604	(9,798,604)	(9,674,870)	(123,734)

*Excludes research grants received in advance from third parties

Interest rate risk

The company has no significant exposure to interest rate risk.

Foreign currency risk

The financial assets and liabilities of the Company are primarily denominated in Singapore dollars.

The Company has no significant exposure to foreign currency risk.

Capital management

The capital managed is defined as the accumulated fund of the Company. The Company's operation is funded primarily from grants from various funding bodies and loan from immediate holding company. There was no change in the Company's approach to capital management during the year. The Company is not subject to externally imposed capital requirements.

Estimation of fair values

Fair value versus carrying amounts

The fair values of recognised financial assets and liabilities together with the carrying amounts shown in the balance sheet, are as follows:

	Note	Loans and receivables \$	Other financial liabilities \$	Total carrying amount \$	Fair value \$
31 March 2013					
Cash and cash equivalents	8	7,617,101	-	7,617,101	7,617,101
Trade and other receivables	6	9,022,902	-	9,022,902	9,022,902
		<u>16,640,003</u>	<u>-</u>	<u>16,640,003</u>	<u>16,640,003</u>
Trade payables	12	-	(2,187,451)	(2,187,451)	(2,187,451)
Other payables	13	-	(10,105,487)	(10,105,487)	(10,105,487)
Employee benefits	11	-	(709,806)	(709,806)	(709,806)
		<u>-</u>	<u>(13,002,744)</u>	<u>(13,002,744)</u>	<u>(13,002,744)</u>
31 March 2013					
Cash and cash equivalents	8	5,947,614	-	5,947,614	5,947,614
Trade and other receivables	6	9,923,084	-	9,923,084	9,923,084
		<u>15,870,698</u>	<u>-</u>	<u>15,870,698</u>	<u>15,870,698</u>
Trade payables	12	-	(1,339,679)	(1,339,679)	(1,339,679)
Other payables	13	-	(10,934,477)	(10,934,477)	(10,934,477)
Employee benefits	11	-	(609,525)	(609,525)	(609,525)
		<u>-</u>	<u>(12,883,681)</u>	<u>(12,883,681)</u>	<u>(12,883,681)</u>

Other financial assets and liabilities

The notional amounts of financial assets and liabilities with a maturity of less than one year (including trade and other receivables, cash and cash equivalents, trade payables, other payables and employee benefits) are assumed to approximate their fair values because of the short period to maturity.

21. Commitments

	2013	2012
	\$	\$
Capital commitments:		
• authorised but not contracted for	413,735	-

At 31 March 2013, the Company has commitments for future minimum lease payments under non-cancellable operating leases (including those under Temporary Occupation License) as follows:

	2013	2012
	\$	\$
Within 1 year	245,208	385,321
After 1 year but within 5 years	18,428	260,840
	<u>263,636</u>	<u>646,161</u>

The operating lease commitments mainly relate to the lease of space and office equipment. The leases run for a period of one to five years with an option to renew the lease after that date.

22. Related parties

Collectively, but not individually significant transactions

The Company charges its immediate holding company for manpower services provided and purchases services from its intermediate holding company, immediate holding company and related corporations.

Other related party transactions

Other than disclosed elsewhere in the financial statements, the transactions with related parties are as follows:

	2013	2012
	\$	\$
Sale of manpower services		
Immediate holding company	877,467	730,519
Sale of supplies and consumables		
Immediate holding company	2,860	-
Related corporations	-	1,052
Sale of other services		
Related corporation	28,510	-
Purchase of manpower services		
Ultimate holding company	36,952	-
Related corporations	51,850	-
Purchase of other services		
Intermediate holding company	724,977	556,501
Immediate holding company	294,548	125,842
Related corporations	137,815	191,881
Purchase of supplies and consumables		
Immediate holding company	1,420	-
Related corporations	-	227
Other expenses paid/payable		
Intermediate holding company	311,619	234,468

The Company occupies space at the premises of its intermediate and immediate holding companies. The current year rental of \$462,648 (2012: \$462,648) is waived by the immediate holding company.

No remuneration was paid to the Board of Directors during the year except the amount of \$90,000 (2012: \$90,000) to the Institute Director in his capacity as an employee.

Other than above, key management personnel compensation comprised:

	2013	2012
	\$	\$
Short-term employee benefits	896,769	854,540
Contribution to defined contribution plan	26,738	26,424
	923,507	880,964

The number of key personnel whose remuneration exceeded \$50,000 during the year were as follows:

	2013	2012
	\$	\$
Number of personnel in bands:		
• \$50,001 to \$100,000	-	-
• \$100,001 to \$200,000	1	1
• \$200,001 to \$300,000	1	1
• \$300,001 to \$400,000	-	-
• \$400,001 to \$500,000	1	1
• \$500,001 to \$600,000	-	-
	-	-



***Every five seconds one person
in our world goes blind. Every
minute a child goes blind. For the
vast majority of those people,
their blindness was preventable.***



