

SIGHT MATTERS

Annual Report FY2019/2020

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ABOUT US

Established in 1997, the Singapore Eye Research Institute (SERI) is Singapore's national research institute for ophthalmic and vision research. It is the research arm of the Singapore National Eye Centre, and affiliated to the National University of Singapore and the Duke-NUS Medical School. In two decades, SERI has grown from a team of 5 to over 235 staff, encompassing clinician scientists, scientists, fellows, students, support staff, as well as more than 229 distinguished adjunct faculty members to become the largest eye research institute in the Asia-Pacific region. As of Mar 2020, SERI has published 4,003 peer-reviewed papers supported by S\$328 million in competitive research grants. SERI has trained more than 204 current and past graduate students; and has been conferred over 619 national & international awards and 135 patents. SERI further undertakes eye research in collaboration with local & international ophthalmic medical centres and 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 as a pioneering center for high quality eye research in Asia, with breakthrough discoveries that has translated to significant paradigm shift in eye care delivery.

CHAIRMAN'S MESSAGE



The financial year 2019-2020 has been a landmark year in all our lives. Let me begin, by congratulating the SERI team on securing competitive grant funding worth S\$20 million and publishing 367 scientific papers this year.

It's a very proud moment for all of us that Singapore's highest technical honour, The President's Science & Technology Awards (PSTA) 2019 was awarded to our faculty members Prof Saw Seang Mei, Prof Roger Beuerman, Adjunct Prof Donald Tan and Associate Prof Audrey Chia, for their exceptional translational research and strategies that have contributed to decreasing the severity of myopia in children. Our SERI researchers were recognized for their pioneering work in the field of myopia research that has contributed to a decrease in the prevalence and severity of myopia in children over the last three decades. The team established the role of low-dose atropine in controlling myopia in young children, as well as conducted epidemiological studies that have led to practical recommendation for better eye health.

As a part of the SERI-SNEC Ophthalmic technologies incubator's Incubator Advisory Board (IAB) meeting, the incubator's first VC advisory panel meeting was held in October 2019 where they assessed the promising startup-oriented R&D projects within the SERI pipeline, with broad agreement on the high potential these have. EyRIS, one of SERI's previously spun off start-ups and a joint venture between SERI, NUS and the local digital health company NovaHealth has obtained Singapore HSA regulatory approval along with approval for CE mark and Malaysia Medical Device Authority. It is commendable that the EyRIS team has expanded its business in the region and beyond, despite the COVID situation.

In recognition of SERI's deep expertise and reputation in the eye health space, Johnson and Johnson (Vision Care) committed to a \$36.4M research collaboration with SERI to tackle the global Myopia epidemic. Launched in April 2019, this first-of-its-kind partnership in Asia is employing a multidisciplinary approach to understand underlying mechanisms of Myopia, develop prediction tools as well as identify potential preventive interventions. Of note, this collaboration represents JJVC's single largest commitment to an external R&D programme and serves to anchor JJVC's focus for Myopia research, product testing, and pipeline development as well as downstream investments in Singapore.

SNEC and SERI hosted a panel of eminent global experts in myopia for a WHO-supported roundtable discussion on "Controversies in Myopia" in August 2019. The aim of the workgroup was to collate evidence, identify unmet needs and provide consensus on future directions for clinical research in myopia.

As I sit to write this message, we are in the midst of an ongoing global pandemic, one that will define us for the generations to come. I would like to extend my thoughts and prayers to my colleagues, employees and the affected families. I would like to sincerely thank all of you for quickly adapting to the new norm of working from home with umpteen virtual meetings, constant review of operating procedures and decreased face-to-face communication, all while striving to maintain work productivity.

I want to take this opportunity to request your whole-hearted support as we re-examine, redefine and rebuild our existing models with respect to work, patients and healthcare delivery models while working towards the realization of our goal of being a global centre of excellence in eye and vision research in Asia.

A handwritten signature in black ink, appearing to read 'Wong Tien Yin', written in a cursive style.

Professor Wong Tien Yin
Chairman

EXECUTIVE DIRECTOR'S MESSAGE



At the outset, I would like to congratulate my colleagues Prof Saw Seang Mei, Prof Roger Beuerman, Adjunct Prof Donald Tan and Associate Prof Audrey Chia on receiving the prestigious President's Science and Technology Award 2019. With their collective expertise on Myopia, they've carried out translational and clinical research that has established the role of low-dose atropine in controlling myopia in young children, which has led to better strategies in decreasing the severity of myopia in children. Their work truly exemplifies the vision with which SERI was established - to be at the forefront of clinical and translational eye and vision research.

The theme of international and local collaborations continues this year with the signing of MoU between SNEC/SERI with the UCL Institute of Ophthalmology and its strategic partner, Moorfields Eye Hospital, London. The joint collaboration will utilize some of the biggest advances in Science & Technology, including artificial intelligence (AI) and big data analysis to meet the growing demand for ophthalmic services across the world. They will jointly focus on health-services related research aimed at addressing clinical questions on the diagnoses, detection of progression of eye diseases and the impact of new models of care. A joint PhD programme with UCL is also on the anvil.

On the homefront, the joint lab established by SERI and NTU, the SERI-NTU ADVANCED OCULAR ENGINEERING (STANCE), was formally launched on 7th January 2020 by Prof Ivy Ng, Group CEO of Singapore Health Services Pte Ltd. The new STANCE lab will focus on innovative healthcare solutions that leverage advanced technologies such as artificial intelligence, machine learning, robotics, and new optical imaging techniques.

SERI's partnership with Santen, our long standing partner and a global ophthalmic leader has been further augmented by Santen's Series B investment in the SERI spin-off startup, PLANO. PLANO, which focuses on raising awareness and educating the public on the prevention, detection and risk factors of myopia, will use this funding to grow its user engagement, strengthen its big data analytics and AI capabilities, while helping drive its international expansion plan. I hope and wish that this strategic alliance will take PLANO to even greater heights.

As the world is emerging from the overwhelming influence of the novel coronavirus disease (COVID-19), our systems, priorities and needs in the world have changed dramatically. Amidst turbulent times and discontinuous changes, it is important that we stop and reflect, use this crisis as an opportunity to substantially change the way we think and act for ourselves, our workplace and for the whole society. These changes have indeed begun, including the increased use of telemedicine for online medical consultations, technological innovations, virtual meetings and conferences, using AI to detect medical conditions and perform medical procedures, to name a few changes happening right now. We will focus on being resilient as a team and work together to overcome this difficult situation by innovating and staying ahead of the curve.

My heartfelt thanks to all the clinical and research staff, healthcare and front-line workers who have been working hard to protect the lives and livelihoods of our people.

A blue ink handwritten signature of Prof Aung Tin, consisting of a stylized, flowing line that starts with a small loop and ends with a long, sweeping tail.

Prof Aung Tin
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 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 235, encompassing clinician scientists, scientists, fellows, students, and support staff.
- SERI has successfully secured external peer-reviewed competitive grant funding worth approximately S\$ 19.38 million this year, and a cumulative quantum of approximately S\$328 million.
- SERI continues its leading performance in publication, with 367 scientific papers this year, and with a cumulative publication quantum of 4,003 scientific papers.
- As of March 2020, the SERI faculty has received 619 national and international awards with 135 patent applications being filed during the same period.
- Since 1997, SERI has conducted 1954 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 411 ongoing research projects at SERI, of which approximately 70% cover clinical/translational research, 12 % basic research and 18% epidemiology, imaging and health service research.
- SERI has further contributed to the training of research manpower, including over 204 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 & INNOVATIONS

- **SNEC/SERI – Moorfields Eye Hospital Partnership**

SNEC and SERI have signed a Memorandum of Understanding (MoU) with the UCL Institute of Ophthalmology and its strategic partner, Moorfields Eye Hospital, London.

Joint work will utilize some of the biggest advances in science and technology including artificial intelligence (AI) and big data analysis to meet the growing demand for ophthalmic services across the world.

In addition, the MoU will target health-services related research aimed at addressing clinical questions on the diagnoses, detection of progression of eye diseases and the impact of new models of care. In addition, the partnership includes a joint PhD programme with UCL, focused on fostering collaborative work between staff in both institutes with a particular emphasis on Ophthalmology.

- **SNEC Myopia Centre**

SNEC Myopia Centre at Bedok was officially opened on 16 August 2019. Dr Lam Pin Min, Senior Minister of State for Health and Transport was the Guest-of-Honour.

Strategically located in the heartlands of Bedok, the Myopia Centre addresses the growing need to provide an easily accessible and comprehensive clinical service for children and adults with myopia in the heartlands. It will also act as a base to develop better, evidence based options in the management of myopia.

Operated by a team of trained eye care professionals, the Myopia Centre leverages on the eye-health expertise from SNEC in providing well-rounded measures at the Centre.

The Centre will also embark on research on myopia prevention and treatment in collaboration with Johnson & Johnson Vision (JJV), the first-of-its-kind public-private partnership in Asia focused on myopia.

- **International Myopia Summit 2019 – Controversies in Myopia**

SNEC and SERI hosted a panel of eminent global experts in myopia for a round table discussion on “Controversies in Myopia”. This meeting was held on 19-20 August 2019 in Singapore, and was supported by the World Health Organization.

The roundtable covered a myriad of clinical topics in myopia, with the aim of:

- Developing consensus in areas where evidence is lacking;
- Discussing avenues for further research and collaboration where consensus cannot be reached, and
- Increasing global awareness in myopia prevention and treatment.

- **SERI-SNEC Incubator Advisory Board Meeting & VC Advisory Panel Meeting**

The SERI-SNEC ophthalmic technologies incubator had been set up since 2014 to nurture promising research projects and to accelerate their momentum towards commercialization and medical deployment via spinning off start-up companies.

The 3rd Advisory board meeting and 1st VC advisory panel meeting was held on 23 – 24 October 2019 to review all incubator projects as well as assess overall incubator progress, future development plan and potential collaborations.

The overall comments from all board members had been very positive and they had given high comments to the team in terms of (1) advancing translational research and establishing the process of technology transfer; (2) fostering an environment of innovation with the goal of transferring clinical expertise and solutions to marketable products and spinning of companies; (3) attracting entrepreneurs, institutional investors and strategic partners.

Two of the companies who've been supported by the SNEC incubator showed good progress on their investment and development paths:

- **PLANO**, SERI's third spin off focusing on raising awareness and educating the public on the prevention, detection and risk factors of myopia has recently made a major announcement on forming a strategic alliance with Santen, SERI's long standing partner and a global ophthalmic leader. This comes with Santen's series B round investment into plano, to grow its user engagement, strengthen its big data analytics and AI capabilities, and drive its international expansion plans. Further details: <https://www.plano.co/santen-and-singapores-health-tech-start-up-plano-form-a-strategic-alliance-to-tackle-the-global-burden-of-myopia/>
- **EyRIS**: SERI's fourth spin off company, a joint venture between SERI, NUS and local veteran healthcare IT company NovaHealth, to commercialize the world's first fundus imaging analysis AI system that can detect 3 major eye conditions, DR, GS and AMD. This will lead the way for global commercial expansion. In addition to Singapore HSA regulatory approval obtained in Oct 2019, EyRIS has now also obtained approval for CE mark (March) and Malaysia Medical Device Authority (MDA; April). Despite the COVID situation, the team has made substantial progress in business expansion and SELENA+ deployment in Singapore and additional markets, such as countries in south-east Asia, China, Europe, etc.

- **President's Science and Technology Award 2019**

The team from SERI, Assoc Prof Audrey Chia, Prof Saw Seang Mei, Adjunct Prof Donald Tan and Prof Roger Beuerman received the prestigious President's Science Award 2019.

The President's Science and Technology Awards (PSTA) is the highest honour bestowed on exceptional research scientists and engineers in Singapore whose work have resulted in significant scientific, technological or economic benefits for the country. The winners were picked by a distinguished panel of representatives from industry, academia and research.

The team from SERI was recognized for their pioneering work in the field of myopia research that has contributed to a decrease in the prevalence and severity of myopia in children over the last three decades.

The team carried out translational research and clinical trials that established the role of low-dose atropine in controlling myopia in young children, as well as epidemiological studies that have led to practical recommendations for better eye health. Both strategies have contributed to decreasing the severity of myopia in children.

- **Official Opening of SERI-NTU Advanced Ocular Engineering (STANCE) Laboratory**

SERI and NTU launched a joint laboratory that will develop advanced eye imaging technologies on 7 January 2020.

The new STANCE Laboratory would focus on development of innovative healthcare solutions that leverage advanced technologies such as artificial intelligence, machine learning, robotics, and new optical imaging techniques.

The joint Lab was launched by Prof Ivy Ng, Group CEO of Singapore Health Services Pte Ltd, and it would be located on the NTU Smart Campus where other advanced technologies are being developed in partnership with industry.

The STANCE Lab is led by Prof Leopold Schmetterer, who is also a Professor at NTU and the Scientific Director and Head of Ocular Imaging Research Group at SERI.

PERFORMANCE OVER THE PAST TWENTY-THREE YEARS (as of March 2020)

- SERI has amassed an impressive array of publications over the years.

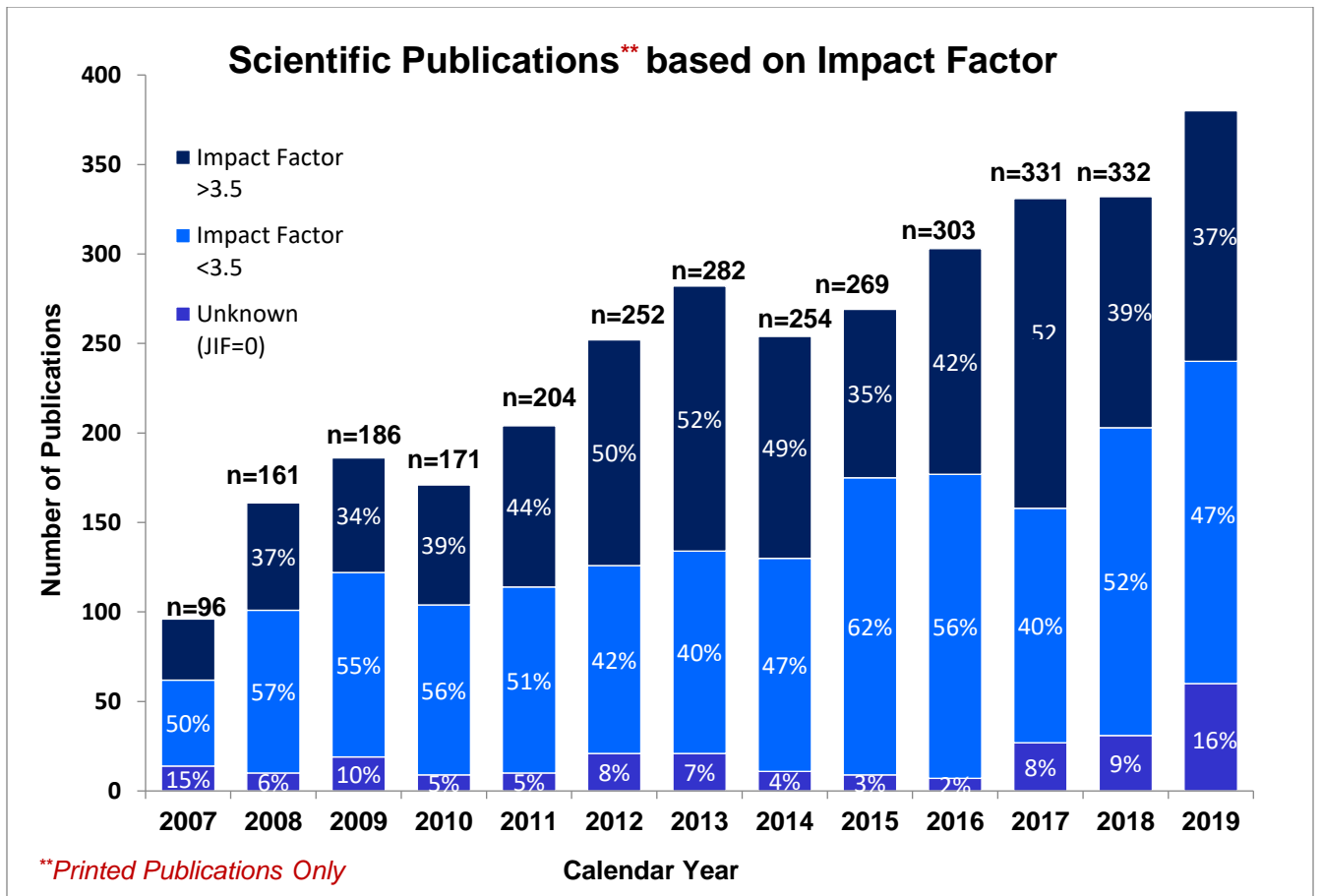


Figure 1: Number of yearly publications published at SERI

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

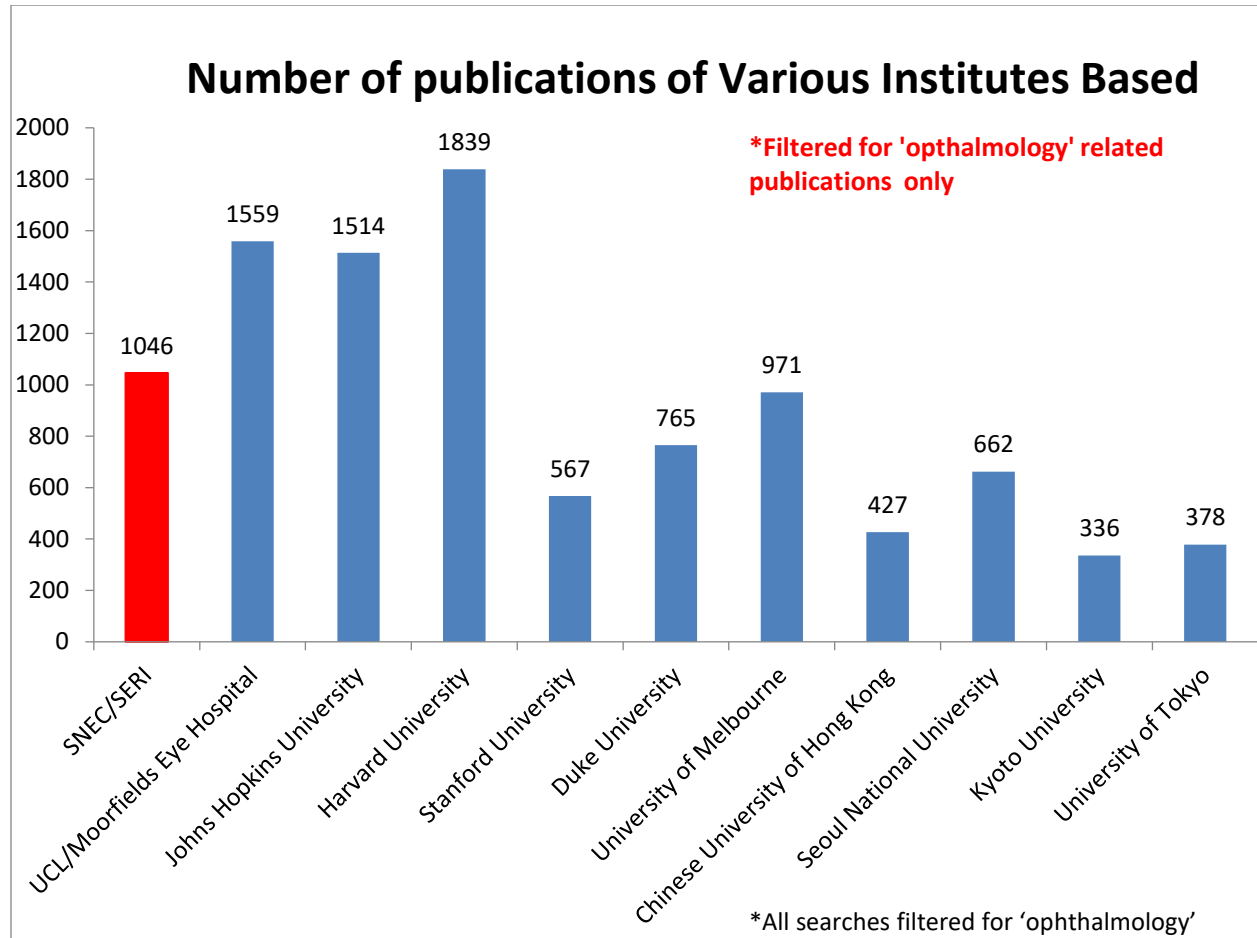


Figure 2: Number of publications by SERI and other institutions around the world, during the period of 2012 – 2019

- SERI's staff strength over the years.

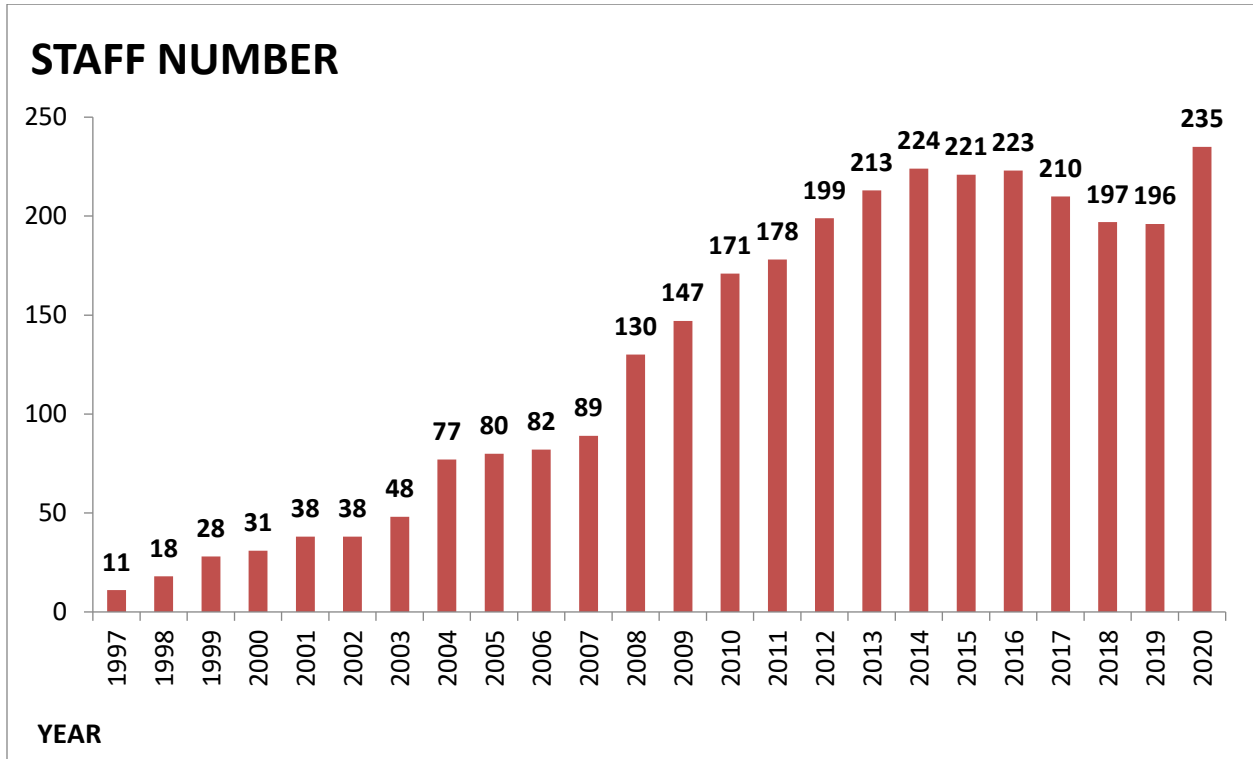


Figure 3: Number of staff members at SERI

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



Figure 4: Nationalities of staff members at SERI

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

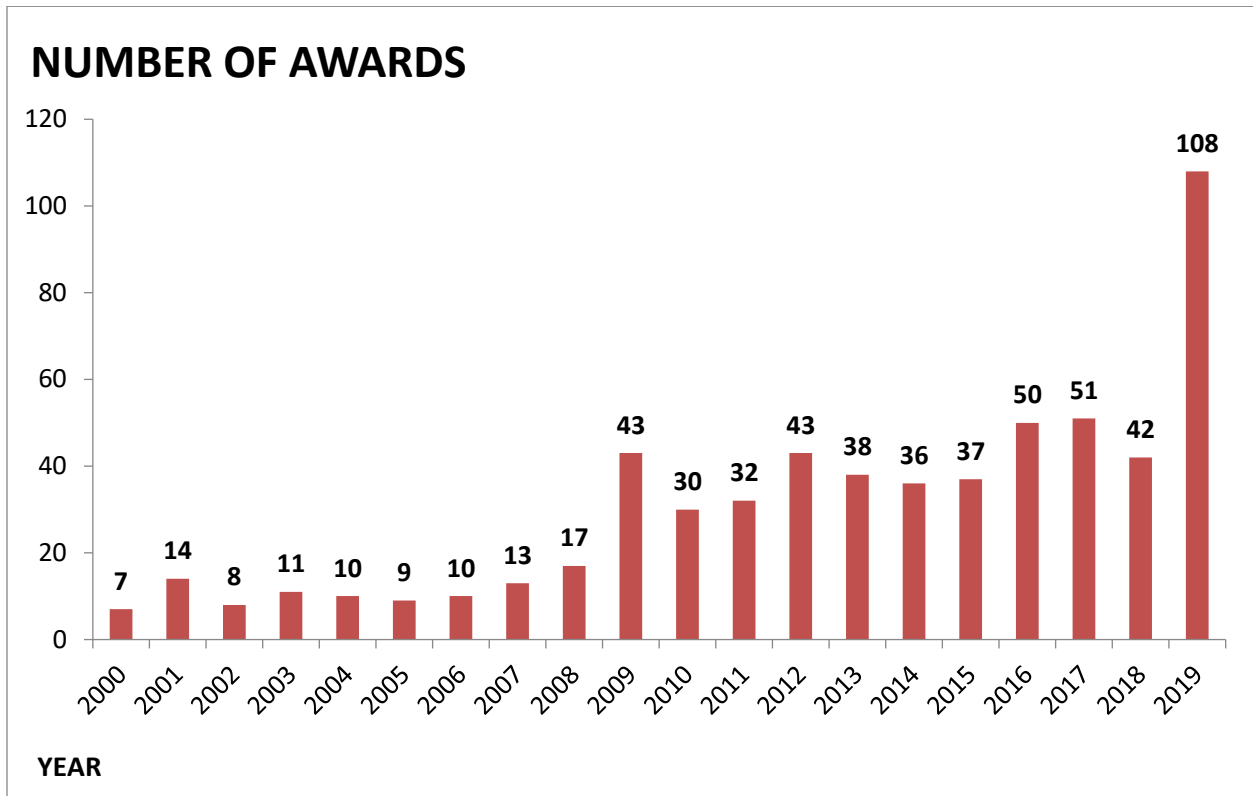


Figure 5: Number of awards received by SERI and its staff (Data from 1997-1999 are not available)

APPRECIATION & 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

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 Medical School, Lee Kong Chian School of Medicine, SingHealth, National Healthcare Group 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



Prof Ang Chong Lye
Senior Advisor,
SingHealth

Senior Consultant,
Singapore National Eye Centre



Prof Tan Sze Wee
Executive Director,
Agency For Science, Technology and Research



Prof Lim Tock Han
Deputy Group CEO (Education & Research),
National Healthcare Group

Senior Consultant,
NHG Institute, Tan Tock Seng Hospital



Prof Chong Yap Seng
Dean, Yong Loo Lin School of Medicine
National University of Singapore



Prof James Best
Dean,
Lee Kong Chian School of Medicine



Prof Thomas Coffman
Dean,
Duke-NUS Medical School



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



Assoc Prof Vernon Lee
Director (Communicable Diseases),
Ministry of Health



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



Ms Ooi Chee Kar
Chartered Accountant (Singapore)

SERI's DIRECTORS / STRATEGIC PLANNING COMMITTEE

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



Prof Jodhbir Mehta
Deputy Executive Director



Prof Leopold Schmetterer
Scientific Director



Prof Ecosse Lamoureux
Director, Population Health and Epidemiology



Assoc Prof Eranga Vithana
Director, Laboratory Translational Research



Prof Tina Wong
Director, Clinical Translational Research



Dr Vandana Ramachandran
Director, Research & Academic Affairs



Dr Danny Belkin
*Director, Technology Development
& Commercialisation*

SERI's RESEARCH HEADS

The SERI Research Heads 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
Head, Glaucoma Research Group



Prof Wong Tien Yin
Chairman



Prof Jodhbir Mehta
Deputy Executive Director
Head, Tissue Engineering & Cell Therapy Research Group
Head, Cornea & Refractive Research Group



Prof Leopold Schmetterer
Scientific Director
Head, Ocular Imaging Research Group



Prof Eccosse Lamoureux
Director, Population Health and Epidemiology
Head, Population Research Group & Co-head, Data Management Research Platform



Adj Prof Donald Tan
Senior Scientific Advisor



Prof Tina Wong
Director, Clinical Translational Research
Head, Ocular Therapeutics & Drug Delivery Research Group



Assoc Prof Eranga Vithana
Director, Laboratory Translational Research
Head, Ocular Genetics Research Group & Experimental & Basic Sciences & Genomics Research Platforms



Dr Danny Belkin
Director, Technology Development & Commercialisation



Dr Vandana Ramachandran
Director, Research & Academic Affairs



Dr Seet Li Fong
Assistant Director, Laboratory Translational Research
Head, Experimental Microscopy, Molecular & Cell Biology Research Platform



Dr Kelvin Teo
Director, Research Clinic
Head, Clinical Research / Trials Research Platform



Prof Dan Milea
Head, Visual Neuroscience Research Group



Prof Cheng Ching-Yu
Head, Ocular Epidemiology Research Group & Data Science Research Platform

SERI's RESEARCH HEADS *(continued)*



Assoc Prof Audrey Chia
Co-Head, Myopia Research Group



Prof Saw Seang Mei
Co-Head, Myopia Research Group



Prof Louis Tong
Head, Ocular Surface Research Group



Prof Gemmy Cheung
Head, Retina Research Group



Prof Chee Soon Phaik
Head, Cataract & Uveitis Research Group



Assoc Prof Lakshminarayanan Rajamani
Head, Anti-Infectives Research Group



Dr Michael Girard
Co-Head, Bioengineering & Devices Research Group



Assoc Prof Shamira Perera
Co-Head, Bioengineering & Devices Research Group



Dr Anita Chan
Head, Translational Ophthalmic Pathology Research Platform



Dr Amutha Barathi
Head, Translational Pre-Clinical Model Research Platform



Dr Daniel Ting
Head, AI & Digital Innovations Research Group



Dr Zhou Lei
Head, Proteomics Research Platform

SNEC's RESEARCH & INNOVATIVE COMMITTEE

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 Tina Wong
Head & Senior Consultant, Glaucoma Dept, SNEC

Director, Clinical Translational Research, SERI



Prof Jodhbir Mehta
Head & Senior Consultant, Corneal & External Eye Disease Dept, SNEC

Deputy Executive Director, SERI



Prof Louis Tong
Senior Consultant, Corneal & External Eye Disease Dept, SNEC

Head, Ocular Surface Research Group, SERI
Co-Head, Ocular Inflammation & Immunology Research Group, SERI



Prof Dan Milea
Senior Clinician, Neuro-Ophthalmology Dept, SNEC

Head, Visual Neuroscience Research Group, SERI



Prof Gemmy Cheung
Head & Senior Consultant, Medical Retina Dept, SNEC

Head, Retina Research Group, SERI



Prof Jonathan Crowston
Senior Consultant, Glaucoma Dept, SNEC

Clinician Scientist, SERI



Assoc Prof Shamira Perera
Senior Consultant, Glaucoma Dept, SNEC

Co-Head, Bioengineering & Devices Research Group, SERI



Adj Assoc Prof Lee Shu Yen
Deputy Head & Senior Consultant, Surgical Retina Dept, SNEC



Adj Assoc Prof Sharon Tow
Senior Consultant, Neuro-Ophthalmology Dept, SNEC



Dr Gavin Tan
Senior Consultant, Surgical Retina Dept, SNEC
Co-Head, Ocular Imaging Dept, SNEC

Clinician Scientist, SERI

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 networking conduit between the 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-related talent development within SERI that is high value-added and knowledge-based.

The talks presented via these channels at SERI offer discourse 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 therapeutics, etc.; blending clinical, epidemiological, translational and basic approaches within specific disciplines. These seminars have certainly led to the launch of many new projects and successful collaborative partnership 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 |
|-------------|--|--|
| 31 May 2019 | Life, Death... and Life? Of The Optic Nerve | Prof Guy Lenaer <i>Director of the Mitochondrial Medicine Research Centre in Angers</i> |
| 25 Jul 2019 | Protecting and Regenerating the Optic Nerve | Prof Keith Martin <i>Managing Director of the Centre for Eye Research Australia and Ringland Anderson Professor and Head of Ophthalmology at the University of Melbourne</i> |
| 21 Aug 2019 | Stemming and Navigating The Rising Tide of AK (Acanthamoeba Keratitis) | Dr Nicole Carnt <i>Scientia Research Fellow and Senior Lecturer at The School of Optometry and Vision Science, UNSW, Sydney</i> |
| 22 Aug 2019 | Retinal Microvasculature Manifestations of Central Nerve System Neurodegenerative Disorders | Dr Hong Jiang <i>Associate Professor of Neurology and Ophthalmology at the University of Miami, Miller School of Medicine</i> |
| 22 Aug 2019 | Topographical Thickness Mapping of Intraretinal Layers in Aging and Neurologic Disorders | Dr Jay Wang <i>Associate Professor of Ophthalmology and Electric and Computer Engineering, Scientific Co-Director of Experimental Imaging Laboratory for the Bascom Palmer Eye Institute, University of Miami</i> |
| 18 Sep 2019 | A Story of Gene Expression and Its Regulation in Rod Development, Maintenance, and Regeneration | Dr Sun Chi <i>Postdoc research associate Washington University in St. Louis</i> |

| | | |
|-------------|---|--|
| 23 Sep 2019 | Regenerative Medicine - Novel Therapeutic Pathways to Overcome the Challenges of Ocular Surface Reconstruction | <p>Prof Tsutomu Inatomi</p> <p><i>Director of the Center for Sensory Organs at the National Center for Geriatrics and Gerontology (NCGG), Obu City, Japan</i></p> |
| 30 Oct 2019 | Stem Cells and Retinal Regeneration | <p>Dr. Timothy A Blenkinsop</p> <p><i>Assistant Professor at the Icahn School of Medicine at Mount Sinai in New York City, in the department of Cell, Development and Regenerative Biology</i></p> |

OUR COLLABORATIONS

Local Institutions

- Bioinformatics Institute (BII)
- Bioprocessing Technology Institute (BTI)
- Changi General Hospital Pte Ltd
- Duke-NUS Medical School
- Genome Institute of Singapore (GIS)
- Health Science Authority (HSA)
- Institute for Infocomm Research (I2R)
- Institute of High Performance Computing (IHPC)
- Khoo Teck Huat Hospital
- KK Women's and Children's Hospital
- Nanyang Polytechnic
- Nanyang Technological University (NTU)
- National Cancer Centre (NCC) Singapore
- National Dental Centre of Singapore Pte Ltd
- National Heart Centre of Singapore Pte Ltd
- National Healthcare Group Pte Ltd
- National Neuroscience Institute of Singapore (NNI)
- National University Hospital (Singapore) Pte Ltd
- National University of Singapore (NUS)
- Sengkang General Hospital (SKH)
- Singapore Clinical Research Institute
- Singapore General Hospital Pte Ltd
- Singapore Health Services Pte Ltd
- Singapore Management University
- Singapore-MIT Alliance for Research and Technology
- Singapore National Eye Centre
- Singapore Translational Immunology and Inflammation Centre (STIIC)
- Tan Tock Seng Hospital (TTSH)

Overseas Institutions (Academic)

- Asian Eye Institute, Inc
- Asahikawa Medical University
- Cardiff University
- Duke University
- Hyderabad Eye Research Foundation
- Imperial College London Diabetes Centre
- Johns Hopkins University
- King Khaled Eye Specialist Hospital (KKESH)
- LV Prasad Eye Institute
- Maastricht University
- Monash University
- Moorfields Eye Hospital
- Ningbo Institute of Materials Technology and Engineering
- Shinchon Severance Hospital
- The Chinese University of Hong Kong
- The First Affiliated Hospital of Kunming Medical University
- The Queen's University of Belfast
- The University Court of the University of Edinburgh
- The University of Newcastle
- The University of Tokyo
- Tianjin Medical University Eye Hospital
- University of Sheffield
- University of Southern Denmark
- Vietnam National Institute of Ophthalmology (VNIO)
- Wenzhou Medical University
- Yonsei Medical Centre

Industry Collaborations

- Advanced Eye Centre
- Aier Eye Hospital Group Cop. Ltd
- Alcon Pte Ltd
- Allergan Singapore Pte Ltd
- ASAN Medical Center
- Astatine Ventures Pty Ltd
- Bayer (South East Asia) Pte Ltd
- Belle Healthcare Medical Technology Co. Ltd
- Biolight Life Sciences Ltd
- Boehringer Ingelheim International GmbH (BI)
- Boehringer Ingelheim Singapore Pte Ltd
- BSI Group Singapore
- CapaBio Pte Ltd
- Carl Zeiss Pte Ltd
- Chiltern International Pte. Ltd
- CLINREG Consulting Services
- Cylite Pte Ltd
- D.O.R.C. Dutch Ophthalmic Research Center (International) B.V.
- Experimental Biotherapeutics Centre
- Exonate Limited
- Financiere De L'ombree (EOLANE)
- Gemini Therapeutics, Inc
- Geuder AG
- Gilead Sciences, Inc
- Gobiqity Inc
- Graybug Vision Inc
- Grey Innovation Pty Ltd
- Heidelberg Engineering GmbH
- HistoIndex Pte Ltd
- Hogan Lovells US LLP
- HOYA Medical Singapore Pte Ltd
- INC Research LLC
- InnoVealth Pte Ltd
- Integrated Decision Systems Consultancy Pte Ltd
- Inteq Communications Pte Ltd
- Interactive Micro-organisms Laboratories Pte Ltd
- Johnson and Johnson Vision Care, Inc.
- International Agency for the Prevention of Blindness (IAPB)
- Kowa Company Ltd
- Lars Nelleman Consulting
- L'occitane Singapore Pte Ltd
- Leave a Nest Singapore Private Ltd
- Life Bridge Partners Pte Ltd
- Matrix Medical Consulting, Inc
- Medi Whale Inc.
- Menarini Biomarkers Singapore Pte Ltd
- MuPharma Pty Ltd
- Nidek Co., Ltd
- Novartis (Singapore) Pte Ltd
- NOXXON Pharma AG
- O.D. Ocular Discovery Ltd
- OliX Pharmaceuticals, Inc
- ONL Therapeutics, Inc.
- Optomed Oy
- Parexel International (Singapore) Pte Ltd
- Pharmaceutical Research Associates Singapore Pte Ltd
- Physio-Logic Ltd
- Pixium Vision
- Quark Pharmaceuticals, Inc.
- Roche Singapore Pte Ltd
- Samie Intellab Pte Ltd
- Sanofi- Aventis Singapore Pte Ltd
- Santen Pharmaceutical Asia Pte Ltd
- Santen Pharmaceutical Co. Ltd
- Seoul Semiconductor Co. Ltd
- SinSA Labs Inc
- Thesis Pte Ltd
- Topcon Corporation
- Ushio Asia Pacific Pte Ltd
- Verily Life Sciences LLC
- Yukti Bioscience Pte Ltd
- Zicom Medtacc Pte Ltd
- Zig Ventures Limited

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 |
| Jakarta eye Centre Seminar: GLAUCOMA & DRY EYE: DOUBLE TROUBLE | 13 Apr 2019 | Jakarta, Indonesia |
| BEYOND EU | 10 – 15 Apr 2019 | Lisbon, Portugal |
| Bayer Symposium at Japan Ophthalmology Society 2019 | 18 – 21 Apr 2019 | Tokyo, Japan |
| The 123rd Annual Meeting of the Japanese Ophthalmological Society | 18 – 21 Apr 2019 | Tokyo, Japan |
| Allergan See Beyond Vision Forum | 22 Apr 2019 | Johor Bahru, Malaysia |
| International Ocular Surface Society 2019 | 27 Apr 2019 | Richmond, Canada |
| Association for Research in Vision and Ophthalmology (ARVO) 2019 | 28 Apr - 2 May 2019 | Vancouver, Canada |
| ASCRS 2019 Annual Meeting | 3 – 7 May 2019 | San Diego, USA |
| Basel Seminar Series on Vision Research | 8 – 9 May 2019 | Basel, Switzerland |
| 66th Annual Meeting of the Japanese Association for Laboratory Animal Science (JALAS) | 15 – 17 May 2019 | Fukuoka, Japan |
| European Vision Institute (EVI) Special Interest Focus Group Meeting | 16 – 17 May 2019 | Cologne, Germany |
| 2nd Annual Academic Conference of Blindness Prevention Committee of Shaanxi Province and the 6th International Glaucoma Forum | 18 May 2019 | Xi'an, China |
| 2019 Taiwan Santen Ophthalmology Forum | 19 May 2019 | Taipei, Taiwan |
| International Glaucoma Course at Medical University of Lublin | 31 May – 1 Jun 2019 | Poland |
| Santen Dry Eye and Ocular Surface Inflammation Task Force Meeting | 8 Jun 2019 | Manila, Philippines |
| International Association for Computerized Adaptive Testing (IACAT) Conference 2019 | 10 – 13 Jun 2019 | Minneapolis, USA |
| 2019 Advances in Pediatric Retina Course | 13 – 15 Jun 2019 | Utah, USA |
| European Society of Ophthalmology (SOE) 2019 | 13 – 16 Jun 2019 | Nice, France |
| 14th Meeting of European Neuro-Ophthalmology Society | 16 – 19 Jun 2019 | Porto, Portugal |
| Congresso Sul-brasileiro de Oftalmologia | 20 – 22 Jun 2019 | Porto Alegre, Brazil |
| Inaugural Mark W. Lunde MD Memorial Lecture, 2019 Illinois Eye and Ear Infirmary Ophthalmology Alumni Day | 21 Jun 2019 | Chicago, USA |
| Alcon Taiwan Standalone Scientific Symposium | 22 – 23 Jun 2019 | Taipei, Taiwan |
| Optimizing Artificial Tears and Managing Dry Eye - Alcon Advisory Board Meeting | 23 Jun 2019 | Taipei, Taiwan |
| International MaculArt Meeting | 23 – 25 Jun 2019 | Paris, France |
| 2019 European Vitreo Retinal Society (EVRS) Meeting | 27 - 30 Jun 2019 | Portugal, Lisbon |
| Fifth International Conference of Ophthalmic Endoscopic Surgery (5 th ICOES) | 27 – 30 Jun 2019 | Changchun, China |

| INTERNATIONAL ACTIVITIES | | |
|---|------------------|-------------------------|
| TOPIC | DATE | VENUE |
| Global Ocular Inflammation Workshops (GOWI) 2019 | 28 – 30 Jun 2019 | Sapporo, Japan |
| 2nd International Scientific Meeting of The Eye and Vision Institute of The Medical City | 29 – 30 Jun 2019 | Manila, Philippines |
| EMBO Symposium - New Approaches and Concepts in Microbiology | 10 – 13 Jul 2019 | Heidelberg, Germany |
| 2019 American Society of Retina Specialists Annual meeting | 26 – 30 Jul 2019 | Chicago, USA |
| Sun Pharma Glaucoma Summit | 27 Jul 2019 | India |
| Queensland Branch RANZCO Meeting | 2 Aug 2019 | Australia |
| Annual Conference of the Indian Society of Cornea & Keratorefractive Surgeons (ISCKRS) | 3 – 4 Aug 2019 | New Delhi, India |
| Refractive Surgery 360° - 2019 | 9 – 11 Aug 2019 | Hyderabad, India |
| 1st International Conference in Clinical Research in Ophthalmology (ICCRO) | 9 – 11 Aug 2019 | Guangzhou, China |
| CERA Scientific Seminar | 12 Aug 2019 | Melbourne, Australia |
| 21st International Society for Genetic Eye Diseases + Retinoblastoma | 29 – 31 Aug 2019 | Giessen, Germany |
| EURETINA 2019 | 5 – 8 Sep 2019 | Paris, France |
| Annual Conference of the Intraocular Implant & Refractive Society | 8 – 9 Sep 2019 | Delhi, India |
| 17th International Myopia Conference | 12 – 15 Sep 2019 | Tokyo, Japan |
| 38th Annual ESOPRS Meeting | 12 – 14 Sep 2019 | Hamburg, Germany |
| 37th Congress of the ESCRS 2019 | 14 – 18 Sep 2019 | Paris, France |
| 4th Asia Pacific Tele-Ophthalmology Society (APTOS) Symposium | 21 – 22 Sep 2019 | Chennai, India |
| 14th International Congress of Physiological Anthropology | 24 – 27 Sep 2019 | Singapore |
| 28th Annual Congress of the College of Ophthalmologists of Sri Lanka | 26 – 29 Sep 2019 | Colombo, Sri Lanka |
| Asia Pacific Glaucoma Society Symposium | 27 Sep 2019 | Sri Lanka |
| 11th International Meeting of Tianjin Medical University Eye Hospital | 27 – 29 Sep 2019 | Tianjin, China |
| 1st Asia Glaucoma Academy (AGA) Conference | 28 Sep 2019 | Tokyo, Japan |
| 32nd APACRS Annual Meeting | 3 – 5 Oct 2019 | Kyoto, Tokyo |
| IEEE International Ultrasonics Symposium | 6 – 9 Oct 2019 | Glasgow, United Kingdom |
| Cornea and Eye Banking Forum 2019 | 11 Oct 2019 | San Francisco, USA |
| American Academy of Ophthalmology (AAO) 2019 | 12 – 15 Oct 2019 | San Francisco, USA |
| 2nd International Conference on Wound Care, Tissue Repair and Regenerative Medicine | 16 – 17 Oct 2019 | London, United Kingdom |
| XXII Ever Congress 2019 | 17 – 19 Oct 2019 | Nice, France |
| 15th Asian Angle Closure Glaucoma Club Seoul Meeting | 1 – 2 Nov 2019 | Seoul, South Korea |
| American Society of Nephrology (ASN) Kidney Week 2019 | 5 – 10 Nov 2019 | Washington, USA |
| AAPOS/RANZCO/APSPPOS joint meeting | 7 – 8 Nov 2019 | Sydney, Australia |
| ASEAN Ophthalmology Society Congress | 7 – 8 Nov 2019 | Siem Reap, Cambodia |
| 15th The International Symposium on Ocular Pharmacology and Therapeutics (ISOPT) Clinical Meeting | 7 – 9 Nov 2019 | Valencia, Spain |
| Turkish Ophthalmology Association 53th National Congress | 8 Nov 2019 | Antalya, Turkey |
| Asian Dry Eye Summit 2019 | 8 – 9 Nov 2019 | Kamakura, Japan |
| 4th Annual Doheny-UCLA International Glaucoma Symposium | 8 – 10 Nov 2019 | Los Angeles, USA |

| INTERNATIONAL ACTIVITIES | | |
|--|------------------|--------------------------------|
| TOPIC | DATE | VENUE |
| Course on Functional and Structural Investigations in Gla | 12 – 15 Nov 2019 | Bucharest, Romania |
| 15th International Ocular Inflammation Society Congress | 13 – 16 Nov 2019 | Kaohsiung, Taiwan |
| 13th Asia Pacific Vitreo-retina Society (APVRS) 2019 | 22 – 24 Nov 2019 | Shanghai, China |
| The Shanghai Singapore Summit of Myopia-Epidemiology | 27 – 29 Nov 2019 | Shanghai, China |
| Glaucoma Society of Nepal | 5 – 6 Dec 2019 | Kathmandu, India |
| Philippine Academy of Ophthalmology Annual Convention | 5 – 8 Dec 2019 | Manila, Philippines |
| 12th International Conference on Cachexia, Sarcopenia and Muscle Wasting | 6 – 8 Dec 2019 | Berlin, Germany |
| The 60th Annual Meeting of the Taiwan Ophthalmological Society (TOS) | 13 – 15 Dec 2019 | Taipei, Taiwan |
| Chang Gung Memorial Hospital Symposium Taiwan | 16 Dec 2019 | Taipei, Taiwan |
| 7th International OCT Angiography and Advances in OCT Congress | 13 – 14 Dec 2019 | Rome, Italy |
| World Congress on Ocular Trauma New Delhi | 14 – 15 Dec 2019 | New Delhi, India |
| Glaucoma Imaging in Praxis Workshop | 16 – 19 Dec 2019 | Vienna, Austria |
| 44th Annual Atlantic Coast Retina Club Meeting | 9 – 11 Jan 2020 | New York, USA |
| Fuchs VII Symposium 2020 | 11 Jan 2020 | Miami, USA |
| 8th Zermatt Glaucoma Winter Meeting | 23 – 26 Jan 2020 | Zermatt, Switzerland |
| SPIE Photonics West, BIOS | 1 – 6 Feb 2020 | San Francisco, California, USA |
| Angiogenesis, Exudation and Degeneration 2020 | 8 Feb 2020 | Miami, USA |
| 5th International Stevens-Johnson Syndrome Symposium | 8 – 9 Feb 2020 | Kyoto, Japan |
| Annual Conference of all India Ophthalmological Society | 13 – 16 Feb 2020 | Gurugram, India |
| 43rd Annual Macula Society Meeting | 19 – 22 Feb 2020 | San Diego, California, USA |
| International Conference on Frailty and Sarcopenia Research (ICFSR) | 9 – 15 Mar 2020 | Toulouse, France |
| Romanian Society of Glaucoma National Congress | 11 – 14 Mar 2020 | Poiana Brasov, Romania |
| International Retinal Imaging Symposium (IntRIS 2020) | 13 – 14 Mar 2020 | Los Angeles, USA |
| Ocular Drug Discovery Convention | 18 – 20 Mar 2020 | Vienna, Austria |
| Council of the British Society of Refractive Surgery (BSRS) annual meeting | 28 – 29 Mar 2020 | Birmingham, United Kingdom |
| LOCAL ACTIVITIES | | |
| TOPIC | DATE | VENUE |
| Singapore Society of Rheumatology-Malaysian society of rheumatology 2019 conference | 15 – 18 Aug 2019 | Singapore |
| Bayer/Novartis Preceptorship: Singapore | 1 – 2 Nov 2019 | Singapore |
| 5th Peptides and Proteins Symposium Singapore | 12 – 13 Dec 2019 | Singapore |
| 35th Singapore - Malaysia Joint Meeting in Ophthalmology & 1st Asia-Pacific Ocular Imaging Society Meeting | 17 – 19 Jan 2020 | Singapore |

Gala Fund-Raising Dinner, The EYE Ball 2019

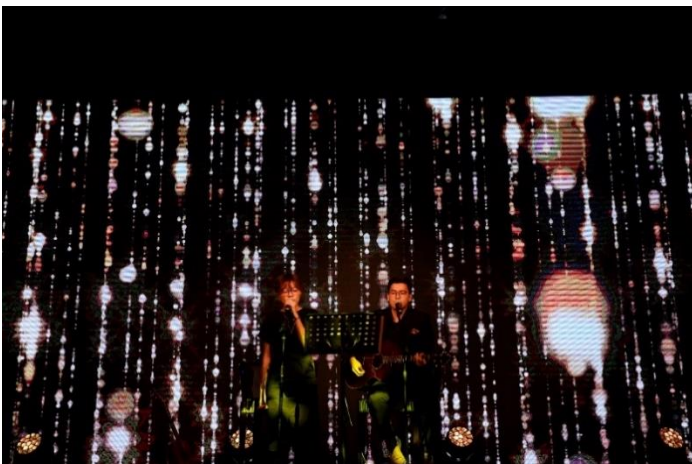
The SNEC/SERI's Gala Fund-Raising dinner i.e. "The EYE Ball" intends to spread awareness of eye diseases and the fragility of vision, while concurrently raising funds for the VisionSave campaign, so that SNEC/ SERI can continue in our strive to initiate positive life-changing outcomes for our patients.

The annual Eye Ball event – The Golden EYE Ball 2019 was held on Friday, 27 September 2019, at The Ritz-Carlton, Millenia Singapore.

As in the previous year, SNEC/ SERI presented *The Visionary Award* at the EYE Ball. The intent of this award is to raise the profile and add prestige to the VisionSave campaign, the EYE Ball, and indirectly, SNEC/SERI; and to hopefully expand our network of guests, supporters and donors. This year's awardee was Dr Chua Thian Poh, who was conferred *The Visionary Award*. The Chairman and CEO of property investment and development company Ho Bee Land is known for his generous contributions towards the area of business, education, public service, culture and community.

This year, SNEC/SERI managed to raise approximately \$1.46 million, a record amount for this annual fund raising event with silent auction, live auction and power pledge as part of the programme for the evening.

The event ended with guests dancing the night away!





ACHIEVEMENTS

OUR AWARDS

Local Awards

- **National Medical Research Council: Transition Award** [Feb 2020]
Dr Ryan Man
- **2019 President's Science & Technology Awards (PSTA): President's Science Award** [Oct 2019]
A/Prof Audrey Chia
- **2019 President's Science & Technology Awards (PSTA): President's Science Award** [Oct 2019]
Prof Roger Beuerman
- **SingHealth Duke-NUS AMC Research Forum 2019: SingHealth Publish! Award** [Oct 2019]
Dr Anna Tan
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Ms Aw Ai Tee
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Dr Wong Chee Wai
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Dr Thiyagarajan Jayabaskar
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Ms Belinda Toh
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Ms Heidi Tai
- **National Medical Excellence Award: National Clinical Excellence Team Award** [Sep 2019]
- **14th Singapore Public Health & Occupational Medicine (PHOM) Conference: Certificate of Recognition for 3rd Place in Best Poster (Open) Presentation** [Oct 2019]
"Myopia and Outdoor Light Patterns in 7-year-old Singaporean Children in GUSTO"
Dr Carla Lanca
- **2019 President's Science & Technology Awards (PSTA): President's Science Award** [Oct 2019]
Prof Saw Seang Mei
- **2019 President's Science & Technology Awards (PSTA): President's Science Award** [Oct 2019]
Adj Prof Donald Tan
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
A/Prof Vicky Drury
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
A/Prof Ian Yeo
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Dr Andrew Tsai
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Ms Chitra Vallei
- **AM•EI Golden Apple Awards 2019: Programme Excellence Award** [Sep 2019]
"Nurse Led Intraveal Injection Clinic"
Ms Claire Ong
- **National Medical Excellence Award: National Clinical Excellence Team Award** [Sep 2019]
Dr Gavin Tan

Ms Haslina Hamzah

- **National Medical Research Council: Clinician Scientist Award - Investigator** [Sep 2019]
“Investigating the Genetic and Phenotypic Architecture of Advanced Primary Angle Closure Glaucoma for Stratified Disease management”
Dr Monisha Nongpiur
- **National Day Awards 2019: Efficiency Medal** [Aug 2019]
Ms Chua Li Hong
- **National Day Awards 2019: Long Service Medal** [Aug 2019]
Ms Fang Lai Mei
- **National Medical Research Council: Transition Award** [Aug 2019]
“Improved Detection of Glaucomatous Structural Damage Using Wide-Field Optical Coherence Tomography”
Dr Jacqueline Chua
- **Nurses' Merit Award 2019** [Jul 2019]
Ms Yeo Liew Soo
- **GCEO Excellence Award 2019: Outstanding Admin Staff Award** [May 2019]
Dr Danny Belkin
- **SingHealth Excellence Awards 2019: Distinguished Young Researcher Award** [May 2019]
Dr Liu Yu-Chi
- **SingHealth Excellence Awards 2019: Distinguished Team Award** [May 2019]
Dr Ranjana Mathur
- **SingHealth Excellence Awards 2019: Distinguished Team Award** [May 2019]
Ms Carin Tan
- **National Medical Research Council: Transition Award** [May 2019]
“A study to identify markers of early retinal cell fate commitment in pluripotent stem cells in vitro”
Dr Shweta Singhal
- **National Medical Research Council: Transition Award** [Sep 2019]
“Community-based Screening for Pathological Visual Impairment among Elderly Residents using Artificial-Intelligence Integrated Retinal Imaging”
Dr Tham Yih Chung
- **National Day Awards 2019: Public Administration Medal (Silver)** [Aug 2019]
Prof Wong Tien Yin
- **National Day Awards 2019: Long Service Medal** [Aug 2019]
Prof Aung Tin
- **National Day Awards 2019: Long Service Medal** [Aug 2019]
Prof Wong Tien Yin
- **National Medical Research Council: Clinician Scientist Award - Investigator** [Aug 2019]
“Investigating the role of the primary angle closure glaucoma (PACG) susceptibility gene, PLEKHA7 in Plekha7^{-/-} mutant rats”
Dr Anita Chan
- **National Medical Research Council: Clinician Scientist Award - Senior Investigator** [Jul 2019]
“Targeted Cell-Based Therapeutic Program for Corneal Blindness”
Prof Jodhbir Mehta
- **GCEO Excellence Award 2019: Outstanding Ancillary Staff Award** [May 2019]
Ms Haslina Hamzah
- **SingHealth Excellence Awards 2019: Distinguished People Leader Award** [May 2019]
Adj A/Prof Doric Wong
- **SingHealth Excellence Awards 2019: Distinguished Team Award** [May 2019]
Ms Amanda Ng
- **SingHealth Excellence Awards 2019: Distinguished Team Award** [May 2019]
Dr Yang Xu

- **SGH 23rd Annual Scientific Meeting 2019: Young Investigator Award (Health Services Research)** [Apr 2019]
“Cost-Effectiveness Analysis Of An Artificial Intelligence-Assisted Deep Learning System Implemented In The National Tele-Medicine Diabetic Retinopathy Screening”
Ms Xie Yuchen
- **SGH 23rd Annual Scientific Meeting 2019: Outstanding Researcher Award (Allied Health)** [Apr 2019]
“Six-Year Incidence And Progression Of Visual Impairment In A Multi-Ethnic Asian Population: The Singapore Epidemiology Of Eye Diseases (SEED) Study”
Dr Tham Yih Chung
- **National Medical Research Council: Clinician Scientist Award - Investigator** [Apr 2019]
“Scleral Biomechanical Properties in Pathologic Myopia and Myopic Glaucoma”
Dr Donny Hoang
- **National Medical Research Council: National Outstanding Clinician Scientist Resident Award 2018** [Apr 2019]
Dr Soh Yu Qiang
- **SGH 23rd Annual Scientific Meeting 2019: Young Investigator Award (Clinical Research)** [Apr 2019]
“Visual Impairment And Risk Of Cognitive Impairment: The Singapore Epidemiology Of Eye Diseases (Seed) Study”
Dr Tham Yih Chung
- **National Medical Research Council: NMRC Research Training Fellowship** [Apr 2019]
Dr Liu Yu-Chi

International Awards

- **Fuschs VII Symposium: Tillett Lecturer** [Jan 2020]
Prof Jodhbir Mehta
- **American Academy of Ophthalmology (AAO) 2019: 2019 Artemis Award** [Oct 2019]
A/Prof Marcus Ang
- **American Academy of Ophthalmology (AAO) 2019: Best Poster Award** [Oct 2019]
“25-Year Surgical Trends and Risk Factors Related to the Functional and Structural Outcomes for Giant Retinal Tear–Rhegmatogenous RDs”
Dr Valencia Foo
- **28th Annual Scientific Congress of The College of Ophthalmologists of Sri Lanka 2019: College Lecture** [Sep 2019]
Prof Aung Tin
- **Degree of Doctor of Philosophy in Optometry** [Jul 2019]
Prof Jodhbir Mehta
- **ASCRS Annual Meeting 2019: Best Paper of Session** [May 2019]
“Refractive Target for a Diffractive Extended Depth of Field Intraocular Lens in Order to Achieve Good Unaided Distant, Intermediate, and Near-Vision”
Prof Chee Soon Phaik
- **College of Optometrists’ Research Excellence Awards: Bernard Gilmartin OPO Award** [Nov 2019]
“Current and predicted demographics of high myopia and an update of its associated pathological changes”
Prof Saw Seang Mei
- **American Academy of Ophthalmology (AAO) 2019: AAO Achievement Award** [Oct 2019]
A/Prof Marcus Ang
- **American Academy of Ophthalmology (AAO) 2019: AAO Achievement Award** [Oct 2019]
Prof Ecosse Lamoureux
- **XOVA (eXcellence in Ophthalmology Vision Award): XOVA 2019 Award** [Sep 2019]
“The Vision Mission projects - Project Netra”
Dr Jayant V Iyer
- **University of Illinois at Chicago/ Illinois Eye and Ear Infirmary Ophthalmology Alumni Day 2019: Inaugural Mark W. Lunde M.D. Memorial Lectureship** [Jun 2019]
Dr Donny Hoang
- **The Ophthalmologist’s Power List 2019: Emerging Leader** [Apr 2019]
Prof Jodhbir Mehta

OUR GRANTS

NMRC

- **“Scleral Biomechanical Properties in Pathologic Myopia and Myopic Glaucoma”**.
Dr Donny Hoang; S\$675,000.00
- **“A study to identify markers of early retinal cell fate commitment in pluripotent stem cells in vitro”**.
Dr Donny Hoang; S\$675,000.00
- **“Computerized Adaptive Testing (CAT) Technologies to Improve Patient-Provider Experience and Healthcare Outcomes for Patients”**.
Prof Ecosse Lamoureux; S\$208,333.00
- **“Targeted Cell-Based Therapeutic Program for Corneal Blindness”**.
Prof Jodhbir Mehta; S\$1,749,347.00
- **“Singapore LYMPHoma translational study (SYMPHONY) - Theme 4: Harnessing computational genomics and integrative machine learning algorithms to advance diagnosis, prognostication and patient stratification for therapy”**.
Dr Anita Chan; S\$250,000.00
- **“Bayesian Machine Learning Approach to Identify Markers of Progression in Primary Angle Closure Glaucoma”**.
Dr Monisha Nongpiur; S\$770,257.00
- **“Evaluation of safety and efficacy of subconjunctival injection of liposomal tacrolimus for allergic conjunctivitis”**.
Prof Jodhbir Mehta; S\$208,333.33
- **“Improved Detection of Glaucomatous Structural Damage Using Wide-Field Optical Coherence Tomography”**.
Dr Jacqueline Chua; S\$374,992.37
- **“Investigating the role of the primary angle closure glaucoma (PACG) susceptibility gene, PLEKHA7 in Plekha7-/- mutant rats”**.
Dr Anita Chan; S\$674,999.70
- **“Community-based Screening for Pathological Visual Impairment among Elderly Residents using Artificial-Intelligence Integrated Retinal Imaging”**.
Dr Tham Yih Chung; S\$375,000.00
- **“Investigating the Genetic and Phenotypic Architecture of Advanced Primary Angle Closure Glaucoma for Stratified Disease management”**.
Dr Monisha Nongpiur; \$675,000.00
- **“NCID SHORT TERM FELLOWSHIP FY2019 – INCOMING VISIT for A/Prof Ishwar Singh from the School of Pharmacy at University of Lincoln, UK”**.
A/Prof Rajamani Lakshminarayanan; S\$7,697.15
- **“Development and Validation of a Myopia-Specific Item Bank Administered using Computerized Adaptive Testing: The MyoCAT Study”**.
Dr Ryan Man; S\$374,904.00
- **“Wireless Miniaturised GonioPEN for irido-corneal imaging”**.
A/Prof Shamira Perera; S\$208,333.33

A*Star/ Duke-NUS/ MOH/ Others

- **“Promoting Neurorecovery in Mouse Retinal Ganglion Cells”**.
Prof Jonathan Crowston; S\$750,000.00
- **“Whole exome sequencing of Indian subjects with primary angle closure glaucoma”**.
Prof Aung Tin; S\$165,000.00
- **“New Drug Susceptibility Testing and Treatment Strategies for Non-Tuberculosis Mycobacterial Infections”**.
Prof Roger Beuerman; S\$50,000.00
- **“Innovations in Ocular Imaging”**.
Dr Anthony Kuo; S\$75,000.00
- **“Automatic Evaluation and Prediction of Polyp Closure and Visual Outcome in Polypoidal Choroidal Vasculopathy using Artificial Intelligence”**.
Prof Gemmy Cheung; S\$100,000.00
- **“Translating MSC exosomes into pharmaceuticals (TEx2Pharm)”**.
Prof Jodhbir Mehta & Dr Ong Hon Shing; S\$1,032,585.00
- **“Implementation of Community-based Elderly Health Care for Eye and Systemic Diseases Using Automated screening”**.
Dr Tyler Rim Hyungtaek; S\$375,000.00
- **“Transforming vision evaluation and dilation in the care of ophthalmic patients”**.
Dr Gavin Tan; S\$49,999.20
- **“Using Epdr1tm1b Knockout (KO) mice to determine the ocular phenotype of primary angle closure glaucoma (PACG) susceptibility gene, EPDR1 and its effects on cellular adhesion related pathways”**.
Dr Anita Chan; S\$200,000.00
- **“SERI - Johnson & Johnson Vision Care Joint Research Programme for Myopia”**.
A/Prof Audrey Chia; S\$9,385,200.00
- **“Functional Features of Outer Retinal Dysfunction Detected using Handheld Chromatic Pupillometry”**.
Dr Raymond Najjar; S\$149,206.00
- **“Functional Role of human embryonic stem cell derived photoreceptor progenitors in non-human primates”**.
Dr Gavin Tan; S\$30,000.00
- **“Randomised placebo controlled study of herbal medication to treat dry eye in peri/ post-menopausal women”**.
A/Prof Louis Tong; S\$415,224.75
- **“The role of Caveolin-1 in Ocular Neurovascular Coupling”**.
Dr Rachel Chong; S\$20,000.00

SingHealth

- **“Artificial Intelligence for Functional Vision Screening Using Retinal Imaging (AVIRI)”**.
Dr Tham Yih Chung; S\$100,000.00
- **“From Machine to Machine - Developing a Deep Learning Algorithm for Quantification of Ocular Traits based on Retinal Photographs”**.
Dr Tyler Rim Hyungtaek; S\$100,000.00
- **“COVID-19 Pandemic: Triaging of ‘Only Urgent Eye Referrals’ from Polyclinics (TOP) using Retinal Photograph-based Deep Learning”**.
Dr Tham Yih Chung; S\$28,500.00
- **“The Role of the Aging Visual Function System on Functional Health in Elderly Singaporeans”**.
Dr Preeti Gupta; S\$149,889.00
- **“Task Shifting intravitreal Injection from Ophthalmologists to Nurses: A Prospective Randomized Non-Inferiority Trial”**.
A/Prof Ian Yeo; S\$65,000.00
- **“Choroidal All-trans Retinoic Acid Involvement in the Local Control of Eye Growth in Myopia Development”**.
Dr Jiang Liqin; S\$49,500.00

Commercial

- **“Correlating pathological optical coherence tomography changes in age related macular degeneration with functional visual losses measured on microperimetry.”**.
Dr Anna Tan; S\$95,136.66
- **“SinSa Labs Combination Antibiotic Study”**.
A/Prof Rajamani Lakshminarayanan; S\$103,530.74
- **“A Randomized, Double-masked, Sham-controlled Phase 4 Study of the Efficacy, Safety and Tolerability of Intravitreal Aflibercept Monotherapy Compared to Aflibercept with Adjunctive Photodynamic Therapy in patients with Polypoidal Choroidal Vasculopathy (ATLANTIC)”**.
A/Prof Cheng Ching Yu; S\$21,000.00
- **“Efficacy of Retrobulbar Latanoprost on Orbital Fat in Rat Model”**.
Dr Amutha Barathi; S\$61,765.96
- **“A Multicenter, Double-Masked, Randomized, Dose-Ranging Trial to Evaluate the Efficacy and Safety of Conbercept Intravitreal Injection in Subjects with Neovascular Age-related Macular Degeneration”**.
Dr Kelvin Teo; S\$205,871.75
- **“Assessment of Various Dyes on Cultured Primary Human Corneal Endothelial Cells (2020)”**.
Prof Jodhbir Mehta; S\$24,551.15
- **“A Phase III, Multicenter, Randomized, Double-masked, Active Comparator-Controlled Study to Evaluate the Efficacy and Safety of Faricimab in Patients with Neovascular Age-Related Macular Degeneration (Lucerne)”**.
Prof Gemmy Cheung; S\$281,164.60
- **“Testing efficacy and toxicity of DcB in spontaneous ocular hypertensive monkeys”**.
Dr Amutha Barathi; S\$139,010.28
- **“A Comparative Clinical Evaluation of a New Tecnis® Presbyopia-Correcting Intraocular Lens Against a Trifocal Intraocular Lens”**.
A/Prof Chee Soon Phaik; S\$129,391.43
- **“Testing small molecule compound in Mice CNV model”**.
Dr Amutha Barathi; S\$71,362.47
- **“Determination of the Ocular Tissue Distribution of EXN407 After a Repeated Topical Ocular Dose Regimen in Cynomolgus Monkeys”**.
Dr Amutha Barathi; S\$666,083.13
- **“Ophthalmology-Related Biomarkers Validation Using Persistent Retinal Neovascularization Rabbit Models Induced by Intravitreal Injection of DL- α -aminoadipic acid (AAA)”**.
Dr Amutha Barathi; S\$10,289.00

OUR PUBLICATIONS

- Bandeira F, Yusoff NZ, Yam GH, Mehta JS. **Corneal re-innervation following refractive surgery treatments.** *Neural Regen Res.* 2019 Apr;14(4):557-565. doi: 10.4103/1673-5374.247421.
- Tan TE, Tan DTH. **Cytomegalovirus Corneal Endotheliitis After Descemet Membrane Endothelial Keratoplasty.** *Cornea.* 2019 Apr;38(4):413-418. doi: 10.1097/ICO.0000000000001847.
- Chee SP, Chan NS, Yang Y, Ti SE. **Femtosecond laser-assisted cataract surgery for the white cataract.** *Br J Ophthalmol.* 2019 Apr;103(4):544-550. doi: 10.1136/bjophthalmol-2018-312289.
- Tan RKY, Wang X, Chan ASY, Nongpiur ME, Boote C, Perera SA, Girard MJA. **Permeability of the porcine iris stroma.** *Exp Eye Res.* 2019 Apr;181:190-196. doi: 10.1016/j.exer.2019.02.005.
- Jung JJ, Cheng J, Pan JY, Brinton DA, Hoang QV. **Anatomic, Visual and Financial Outcomes for Traditional and Nontraditional Primary Pneumatic Retinopexy for Retinal Detachment.** *Am J Ophthalmol.* 2019 Apr;200:187-200. doi: 10.1016/j.ajo.2019.01.008.
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FINANCIAL REPORT

Directors' statement

The directors are pleased to present their statement to the member together with the audited financial statements of Singapore Eye Research Institute (the "Company") for the financial year ended 31 March 2020.

Opinion of the directors

In the opinion of the directors,

- (i) the financial statements of the Company are drawn up so as to give a true and fair view of the financial position of the Company as at 31 March 2020 and the financial performance, changes in funds and cash flows of the Company for the year ended on that date in accordance with the provisions of the Companies Act, Chapter 50, the Charities Act, Chapter 37 and other relevant regulations and Financial Reporting Standards in Singapore; and
- (ii) at the date of this statement, having regards to the financial support from the immediate holding company, there are reasonable grounds to believe that the Company will be able to pay its debts as and when they fall due.

Directors

The directors of the Company in office at the date of this statement are:

Professor Wong Tien Yin

Ms Ooi Chee Kar

Professor Ang Chong Lye

Professor Wang Linfa

Doctor Geh Min

Doctor Seet Hun Yew Benjamin

(Appointed on 5 August 2020)

Professor James D Best

Professor Thomas M Coffman

A/Prof Vernon Lee Jian Ming

Professor Chong Yap Seng

Professor Tan Sze Wee

Directors' Interests

The Company has no share capital and debentures 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.

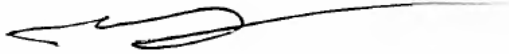
Options

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

Auditor

Ernst & Young LLP have expressed their willingness to accept re-appointment as auditor.

On behalf of the board of directors,



Professor Wong Tien Yin
Director



Ms Ooi Chee Kar
Director

Singapore

31 Aug 2020

INDEPENDENT AUDITORS' REPORT
For the financial year ended 31 March 2020

Independent auditor's report to the member of Singapore Eye Research Institute

Report on the audit of the financial statements

Opinion

We have audited the financial statements of Singapore Eye Research Institute (the "Company"), which comprise the balance sheet as at 31 March 2020, statement of comprehensive income and statement of cash flows of the Company for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements are properly drawn up in accordance with the provisions of the Companies Act, Chapter 50 (the "Act"), the Charities Act, Chapter 37 and other relevant regulations (the "Charities Act and "Regulations") and Financial Reporting Standards in Singapore (FRS) so as to give a true and fair view of the financial position of the Company as at 31 March 2020 and of the financial performance and cash flows of the Company for the year ended on that date.

Basis for opinion

We conducted our audit in accordance with Singapore Standards on Auditing (SSAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with the Accounting and Corporate Regulatory Authority (ACRA) Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities (ACRA Code) together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Management is responsible for the other information. Other information comprises directors' statement set out on pages 1 and 2, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

INDEPENDENT AUDITORS' REPORT

For the financial year ended 31 March 2020

Independent auditor's report to the member of Singapore Eye Research Institute

Responsibilities of management and those charged with governance 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 Act, the Charities Act and Regulations and FRSs, 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 financial statements and to maintain accountability of assets.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The directors' responsibilities include overseeing the Company's financial reporting process.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

INDEPENDENT AUDITORS' REPORT
For the financial year ended 31 March 2020

Independent auditor's report to the member of Singapore Eye Research Institute

Auditors' responsibilities for the audit of the financial statements (cont'd)

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Other matters

The financial statements of Singapore Eye Research Institute for the year ended 31 March 2019 were audited by another auditor who expressed an unmodified opinion on those statements on 2 September 2019.

Report on other legal and regulatory requirements

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

During the course of our audit, nothing has come to our attention that causes us to believe that during the year:

- (a) the Company has not used the donation moneys in accordance with its objectives as required under Regulation 11 of the Charities (Institutions of a Public Character) Regulations; and
- (b) the Company has not complied with the requirements of Regulation 15 of the Charities (Institutions of a Public Character) Regulations.

Ernst & Young LLP

Public Accountants and
Chartered Accountants
Singapore

FINANCIAL STATEMENTS

Balance sheet

As at 31 March 2020

| | Note | 2020 \$ | 2019 \$ |
|---|------|------------|------------|
| Assets | | | |
| Property, plant and equipment | 4 | 9,529,016 | 5,805,066 |
| Intangible assets | 5 | 121,534 | 67,273 |
| | | <hr/> | <hr/> |
| Non-current assets | | 9,650,550 | 5,872,339 |
| | | <hr/> | <hr/> |
| Trade and other receivables | 6 | 25,569,722 | 20,080,126 |
| Prepayments | | 218,218 | 301,687 |
| Cash and cash equivalents | 8 | 11,210,093 | 9,644,088 |
| | | <hr/> | <hr/> |
| Current assets | | 36,998,033 | 30,025,901 |
| | | <hr/> | <hr/> |
| Total assets | | 46,648,583 | 35,898,240 |
| | | <hr/> | <hr/> |
| Accumulated fund | 9 | (946,278) | (650,359) |
| | | <hr/> | <hr/> |
| Liabilities | | | |
| Deferred income | 10 | 3,790,986 | 3,693,492 |
| Other payables | 12 | 788,193 | – |
| | | <hr/> | <hr/> |
| Non-current liabilities | | 4,579,179 | 3,693,492 |
| | | <hr/> | <hr/> |
| Trade payables | 11 | 9,606,766 | 8,517,186 |
| Other payables | 12 | 30,051,329 | 21,998,924 |
| Deferred income | 10 | 2,406,430 | 1,616,943 |
| Employee benefits | 13 | 951,157 | 722,054 |
| | | <hr/> | <hr/> |
| Current liabilities | | 43,015,682 | 32,855,107 |
| | | <hr/> | <hr/> |
| Total liabilities | | 47,594,861 | 36,548,599 |
| | | <hr/> | <hr/> |
| Total accumulated fund and liabilities | | 46,648,583 | 35,898,240 |
| | | <hr/> | <hr/> |

The accompanying accounting policies and explanatory notes form an integral part of the financial statements.

Statement of comprehensive income
For the financial year ended 31 March 2020

| | Note | 2020 | 2019 |
|---|-------------|--------------|--------------|
| | | \$ | \$ |
| Operating expenditure grants | 15 | 31,943,448 | 28,519,272 |
| Amortisation of deferred income | 10 | 1,588,528 | 1,535,058 |
| Government subvention | 18 | 543,456 | 543,463 |
| Other income | 16 | 4,864,386 | 3,090,285 |
| | | <hr/> | |
| | | 38,939,818 | 33,688,078 |
| Staff costs | | (18,099,506) | (16,594,416) |
| Supplies and consumables | | (3,420,682) | (3,492,867) |
| Depreciation of property, plant and equipment | 4 | (2,469,974) | (1,481,665) |
| Amortisation of intangible assets | 5 | (63,118) | (125,034) |
| Rental and utilities | | (2,089,759) | (2,915,745) |
| Purchased and contracted services | | (9,656,140) | (6,802,770) |
| Repairs and maintenance | | (708,970) | (527,127) |
| Reversal of impairment loss on trade and other receivables | | 25,036 | 26,894 |
| Other operating expenses | | (2,642,878) | (1,780,265) |
| | | <hr/> | |
| Results from operating activities | | (186,173) | (4,917) |
| Net finance (costs)/income | 17 | (109,746) | 8,098 |
| | | <hr/> | |
| (Deficit)/surplus before tax | | (295,919) | 3,181 |
| Tax expense | 19 | – | – |
| | | <hr/> | |
| (Deficit)/surplus for the year, representing total comprehensive income for the year | 20 | (295,919) | 3,181 |
| | | <hr/> | |

The accompanying accounting policies and explanatory notes form an integral part of the financial statements.

Statement of changes in funds
For the financial year ended 31 March 2020

| | Accumulated funds \$ |
|--|-------------------------------------|
| Balance at 1 April 2018 | (546,878) |
| Adjustments on initial application of FRS 109 (net of tax) | (106,662) |
| | <hr/> |
| Adjusted balance at 1 April 2018 | (653,540) |
| Net surplus, representing total comprehensive income for the year | 3,181 |
| | <hr/> |
| Balance at 31 March 2019 | (650,359) |
| | <hr/> |
| Balance at 1 April 2019 | (650,359) |
| Net deficit, representing total comprehensive income for the year | (295,919) |
| | <hr/> |
| Balance at 31 March 2020 | (946,278) |
| | <hr/> <hr/> |

Statement of changes in funds
For the financial year ended 31 March 2020

| | Note | 2020 | 2019 |
|---|-------------|-------------|-------------|
| | | \$ | \$ |
| Cash flows from operating activities | | | |
| (Deficit)/surplus before tax | | (295,919) | 3,181 |
| Adjustments for: | | | |
| Depreciation of property, plant and equipment | 4 | 2,469,974 | 1,481,665 |
| Loss on disposal of property, plant and equipment | 20 | 78,237 | – |
| Interest expense | | 110,709 | – |
| Amortisation of intangible assets | 5 | 63,118 | 125,034 |
| Reversal of impairment loss on trade and other receivables | | (25,036) | (26,894) |
| Amortisation of deferred income | 10 | (1,588,528) | (1,535,058) |
| | | <hr/> | <hr/> |
| Operating cash flows before changes in working capital | | 812,555 | 47,928 |
| Changes in working capital: | | | |
| Trade and other receivables | | (4,628,192) | (4,182,351) |
| Prepayments | | 83,469 | (245,312) |
| Trade and other payables | | 8,239,462 | 4,417,273 |
| Employee benefits | | 229,103 | (13,366) |
| | | <hr/> | <hr/> |
| Net cash from operating activities | | 4,736,397 | 24,172 |
| | | <hr/> | <hr/> |
| Cash flows from investing activities | | | |
| Purchase of property, plant and equipment | | (3,723,940) | (1,252,788) |
| Purchase of intangible assets | | (117,379) | (29,889) |
| Grants for capital expenditure | | 1,639,141 | 785,483 |
| | | <hr/> | <hr/> |
| Net cash used in investing activities | | (2,202,178) | (497,194) |
| | | <hr/> | <hr/> |
| Cash flows from financing activities | | | |
| Interest paid | | (110,709) | – |
| Payment of principal portion of lease liabilities | | (857,505) | – |
| | | <hr/> | <hr/> |
| Net cash used in financing activities | | (968,214) | – |
| | | <hr/> | <hr/> |
| Net increase/(decrease) in cash and cash equivalents | | 1,566,005 | (473,022) |
| Cash and cash equivalents at beginning of the year | | 9,644,088 | 10,117,110 |
| | | <hr/> | <hr/> |
| Cash and cash equivalents at end of the year | 8 | 11,210,093 | 9,644,088 |
| | | <hr/> <hr/> | <hr/> <hr/> |

During the year, the Company acquired property, plant and equipment and intangible assets with an aggregate cost of \$3,841,319 (2019: \$1,282,677), of which \$1,639,141 (2019: \$785,483) was acquired using grants received.

The accompanying accounting policies and explanatory notes form an integral part of the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2020

1. Corporate information

Singapore Eye Research Institute ('the Company') is incorporated in the Republic of Singapore. The address of the Company's registered office is at 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 controlling 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 Going Concern

As at 31 March 2020, the Company had deficiencies in accumulated fund and net working capital of \$946,278 (2019: \$650,359) and \$6,017,649 (2019: \$2,829,206) respectively. Notwithstanding this, the directors of the Company consider that it is appropriate for the Company to prepare its financial statements on a going concern basis as the immediate holding company has agreed to provide financial support as is necessary for the next twelve months to enable the Company to continue its operations and to meet its liabilities as and when they fall due.

2.2 Statement of compliance

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

This is the first set of the Company's annual financial statements in which FRS 116 Leases has been applied. Changes to significant accounting policies are described in Note 2.6.

2.3 Basis of measurement

The financial statements have been prepared on the historical cost basis except as otherwise described in the notes below.

2.4 Functional and presentation currency

These financial statements are presented in Singapore dollars (\$), which is the Company's functional currency.

2. Basis of preparation (cont'd)

2.5 Use of estimates and judgements

The preparation of the financial statements in conformity with FRSs 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 amount recognised in the financial statements and assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial year are included below:

Useful lives of property, plant and equipment and intangible assets

Property, plant and equipment and intangible assets, are stated at cost and depreciated/amortised on a straight-line basis over their estimated useful lives. The estimated useful lives represent the 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, management considers the likelihood of technical obsolescence arising from changes in technology and intended use.

Valuation of trade receivables – measurement of expected credit losses (“ECL”) allowance

The Company applies the simplified approach to provide for ECLs for all trade receivables. Loss rates are based on actual credit loss experience over the past one to five years. These rates are adjusted by scalar factors to reflect differences between economic conditions during the period over which the historic data has been collected, current conditions and the Company’s view of economic conditions over the expected lives of the receivables. These scalar factors are calculated using statistical models that determine numeric co-relation of loss rates with relevant economic variables.

Measurement of fair values

Information about the measurement of fair values and the assumptions made in measuring fair values is described in Note 21.

2.6 Adoption of new standards

The Company applied FRS 116 Leases for the first time. The adoption of FRS 116 did not have any effect on the financial performance or position of the Company as at 1 April 2019.

Several other amendments and interpretations apply for the first time in the year ended 31 March 2020, but do not have an impact on the financial statements of the Company. The Company has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

3. Significant accounting policies

3.1 Foreign currency

Foreign currency transactions

Transactions in foreign currencies are measured in the functional currency of the Company and recorded on initial recognition in the functional currency at exchange rates approximating those ruling at the transaction dates. Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange ruling at the end of the reporting period. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was measured.

Exchange differences arising on the settlement of monetary items or on translating monetary items at the end of the reporting period are recognised in surplus or deficit.

3.2 Financial instruments

(i) Recognition and initial measurement

Non-derivative financial assets and financial liabilities

Trade receivables are initially recognised when they are originated. All other financial assets and financial liabilities are initially recognised when the Company becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at fair value through profit or loss (“FVTPL”), transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

Financial liabilities are initially recognised when the Company becomes a party to the contractual provisions of the instrument. The Company determines the classification of its financial liabilities at initial recognition. All financial liabilities are recognised initially at fair value plus in the case of financial liabilities not at fair value through profit or loss, directly attributable transaction costs.

(ii) Classification and subsequent measurement

Non-derivative financial assets

On initial recognition, a financial asset is classified as measured at amortised cost.

Financial assets are not reclassified subsequent to their initial recognition unless the Company changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

3. Significant accounting policies (cont'd)

3.2 Financial instruments (cont'd)

(ii) Classification and subsequent measurement (cont'd)

Subsequent measurement and gains and losses

A financial asset is measured at amortised cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

These assets are subsequently measured at amortised cost using the effective interest method. The amortised cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognised in surplus or deficit. Any gain or loss on derecognition is recognised in surplus or deficit.

Non-derivative financial liabilities

Such financial liabilities are subsequently measured at amortised cost using the effective interest method.

(iii) Derecognition

Financial assets

The Company derecognises a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Company neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

Financial liabilities

The Company derecognises a financial liability when its contractual obligations are discharged or cancelled, or expire. The Company also derecognises a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognised at fair value.

On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognised in surplus or deficit.

3. Significant accounting policies (cont'd)

3.2 Financial instruments (cont'd)

(iv) Offsetting

Financial assets and financial liabilities are offset and the net amount presented in the balance sheet when, and only when, the Company currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

The Company do not have any financial assets and financial liabilities that:

- are offset in the balance sheet; or
- are subject to an enforceable master netting arrangement, irrespective of whether they are offset in the balance sheet.

(v) Cash and cash equivalents

Cash and cash equivalents comprise cash and bank balances and deposits with financial institutions that are subject to an insignificant risk of changes in their fair value, and are used by the Company in the management of its short-term commitments.

3.3 Property, plant and equipment

Recognition and measurement

Items of property, plant and equipment are stated 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 assets to a working condition for their intended uses;
- 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, if any.

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

Construction-in-progress comprises the capitalised costs of on-going capital projects.

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 recognised in surplus or deficit.

3. Significant accounting policies (cont'd)

3.3 Property, plant and equipment (cont'd)

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 as an expense 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, unless it is included in the carrying amount of another asset.

Construction-in-progress is not depreciated.

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 years are as follows:

| | |
|----------------------------------|----------|
| Building improvements | 10 years |
| Medical and laboratory equipment | 8 years |
| Computers | 3 years |
| Office equipment | 5 years |
| Furniture and fittings | 8 years |
| Motor vehicles | 5 years |

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting period and adjusted if appropriate.

3.4 Leases

Policy applicable beginning 1 April 2019

The Company assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Company as a lessee

The Company applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Company recognises lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

3. Significant accounting policies (cont'd)

3.4 Leases (cont'd)

Policy applicable beginning 1 April 2019 (cont'd)

Company as a lessee (cont'd)

a. Right-of-use assets

The Company recognises right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets, as follows:

| | |
|---------------------------|---------|
| Building and office space | 3 years |
|---------------------------|---------|

If ownership of the leased asset transfers to the Company at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

The right-of-use assets are also subject to impairment. Refer to accounting policies in Note 3.6 (ii). The Company's right-of-use assets are included in property, plant and equipment (Note 4).

b. Lease liabilities

At the commencement date of the lease, the Company recognises lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Company and payments of penalties for terminating the lease, if the lease term reflects the Company exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognised as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Company uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

The Company's lease liabilities are included in other payables (Note 12).

3. Significant accounting policies (cont'd)

3.4 Leases (cont'd)

Policy applicable beginning 1 April 2019 (cont'd)

Company as a lessee (cont'd)

c. Short-term leases and leases of low-value assets

The Company applies the short-term lease recognition exemption to its short-term leases of machinery and equipment (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered to be low value. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

Leases in which the Company does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in income in surplus or deficit due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as income in the period in which they are earned.

Policy applicable before 1 April 2019

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.

3.5 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 accumulated impairment losses.

No amortisation is provided on software development-in-progress.

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.

3. Significant accounting policies (cont'd)

3.5 Intangible assets (cont'd)

Amortisation

Amortisation is calculated based on the cost of asset, less its residual value.

Amortisation of computer software is recognised in surplus or deficit on a straight-line basis over its estimated useful life of 3-5 years, from the date that they are available for use.

Amortisation methods, useful lives and residual values are reviewed at the end of each reporting period and adjusted if appropriate.

3.6 Impairment

(i) Non-derivative financial assets

The Company recognises loss allowances for ECLs on financial assets measured at amortised cost.

Loss allowances of the Company are measured on either of the following bases:

- 12-month ECLs: these are ECLs that result from default events that are possible within the 12 months after the reporting date (or for a shorter period if the expected life of the instrument is less than 12 months); or
- Lifetime ECLs: these are ECLs that result from all possible default events over the expected life of a financial instrument.

Measurement of ECLs

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the Group in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of the financial asset.

Credit-impaired financial assets

At each reporting date, the Company assesses whether financial assets carried at amortised cost are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

- significant financial difficulty of the borrower or issuer;
- a breach of contract such as a default or being more than 1 to 3 years, taking into consideration historical payment track records, current macroeconomics situation as well as the general industry trend;
- the restructuring of a loan or advance by the Company on terms that the Company would not consider otherwise;
- it is probable that the borrower will enter bankruptcy or other financial reorganisation; or
- the disappearance of an active market for a security because of financial difficulties.

3. Significant accounting policies (cont'd)

3.6 Impairment (cont'd)

(i) Non-derivative financial assets (cont'd)

However, financial assets that are considered as 'credit-impaired' would still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due.

Presentation of allowance for ECLs in the balance sheet

Loss allowances for financial assets measured at amortised cost are deducted from the gross carrying amount of these assets.

Write-off

The gross carrying amount of a financial asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Company determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Company's procedures for recovery of amounts due.

Simplified approach

The Company applies the simplified approach to provide for ECLs for all trade receivables. The simplified approach requires the loss allowance to be measured at an amount equal to lifetime ECLs.

General approach

The Company applies the general approach to provide for ECLs on all other financial instruments. Under the general approach, the loss allowance is measured at an amount equal to 12-month ECLs at initial recognition.

At each reporting date, the Company assesses whether the credit risk of a financial instrument has increased significantly since initial recognition. When credit risk has increased significantly since initial recognition, loss allowance is measured at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Company's historical experience and informed credit assessment and including forward-looking information.

If credit risk has not increased significantly since initial recognition or if the credit quality of the financial instruments improve such that there is no longer a significant increase in credit risk since initial recognition, loss allowance is measured at an amount equal to 12-month ECLs.

3. Significant accounting policies (cont'd)

3.6 Impairment (cont'd)

(i) Non-derivative financial assets (cont'd)

The Company considers a financial asset to be in default when:

- the borrower is unlikely to pay its credit obligations to the Company in full, without recourse by the Group to actions such as realising security (if any is held); or
- the financial asset is more than 1 to 3 years past due, taking into consideration historical payment track records, current macroeconomics situation as well as the general industry trend.

The maximum period considered when estimating ECLs is the maximum contractual period over which the Company is exposed to credit risk.

(ii) Non-financial assets

The carrying amounts of the Company's non-financial assets, other than inventories, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is 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 CGU 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.

The Company's corporate assets do not generate separate cash inflows and are utilised by more than one CGU. Corporate assets are allocated to CGUs on a reasonable and consistent basis and tested for impairment as part of the testing of the CGU to which the corporate asset is allocated.

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.

Impairment loss 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. Significant accounting policies (cont'd)

3.7 Employee benefits

Defined contribution plans

A defined contribution plan is a 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 plans are recognised as an expense in income and expenditure 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.

3.8 Provisions

A provision is recognised if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as finance cost.

3.9 Income recognition

Grant income

Grant income designated for research purposes is recognised in surplus or deficit when the relevant qualifying costs are incurred. The deferral of certain grant income is described in note 3.10.

Grants which are designated for property, plant and equipment, and intangible assets purchases whose individual value of more than \$1,000 and \$10,000 respectively are taken to deferred income in the period of receipt. The deferred income is amortised over the useful life of the property, plant and equipment and intangible assets by crediting to the surplus or deficit an amount so as to match the related depreciation and amortisation expense.

Programme fees

Programme fees relate to fees or income which the Company receives when it carries out activities through direct service provision to undertake the work that contributes to its objectives. Programme fees are recognised in surplus or deficit when the relevant milestone is achieved.

3. Significant accounting policies (cont'd)

3.10 Government grants

Government grants related to property, plant and equipment and intangible assets are taken to deferred income or to the surplus or deficit for assets which are written off in the year of purchase. Such government grant recognised in deferred income is recognised in the surplus or deficit over the periods necessary to match the depreciation/amortisation and write off of the property, plant and equipment and intangible assets purchased with the related grants. Upon the disposal of the property, plant and equipment and intangible assets, the balance of the related deferred income is recognised in the surplus or deficit to reflect the net book value of the assets disposed.

Government subvention

Government subvention is accounted for on an accrual basis in the surplus or deficit when there is reasonable assurance that the Company has complied with all the terms and conditions attached to the subvention and that there is reasonable certainty that the subvention will be received. Government subvention is a subsidy from the Ministry of Health for expenses incurred in relation to the Temporary occupation licence.

3.11 Finance income and finance costs

The Company's finance income and finance costs include foreign currency gain or loss on financial assets and financial liabilities.

Foreign currency gains and losses on financial assets and financial liabilities 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.

3.12 Tax

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.

3.13 New standards and interpretations issued but not yet effective

The Company has not adopted the following standards that have been issued but not yet effective:

| <i>Description</i> | <i>Effective for annual periods beginning on or after</i> |
|---|---|
| Amendments to FRS 1 and FRS 8: <i>Definition of Material</i> | 1 January 2020 |
| Amendments to References to the Conceptual Framework in FRS Standards | 1 January 2020 |

The directors expect that the adoption of the standards above will have no material impact on the financial statements in the year of initial application.

4. Property, plant and equipment

| | Building improvements \$ | Medical and laboratory equipment \$ | Computers \$ | Office equipment \$ | Furniture and fittings \$ | Motor vehicle \$ | Right-of-use assets (Note 14) \$ | Construction- in-progress \$ | Total \$ |
|-------------------------------------|--------------------------------|--|-----------------|---------------------------|---------------------------------|------------------------|---|------------------------------------|-------------|
| Cost | | | | | | | | | |
| At 1 April 2018 | 1,047,102 | 17,011,708 | 1,486,056 | 120,521 | 387,037 | 401,661 | – | 16,373 | 20,470,458 |
| Additions | – | 630,835 | 172,111 | 1,711 | 26,003 | – | – | 422,128 | 1,252,788 |
| Disposals | – | (720,414) | (6,732) | – | – | (196,880) | – | – | (924,026) |
| At 31 March 2019 | 1,047,102 | 16,922,129 | 1,651,435 | 122,232 | 413,040 | 204,781 | – | 438,501 | 20,799,220 |
| Additions | – | 1,226,419 | 652,547 | 33,667 | – | – | 2,548,221 | 1,811,307 | 6,272,161 |
| Disposals | (1,047,102) | (2,318,375) | (346,004) | – | – | – | – | – | (3,711,481) |
| At 31 March 2020 | – | 15,830,173 | 1,957,978 | 155,899 | 413,040 | 204,781 | 2,548,221 | 2,249,808 | 23,359,900 |
| Accumulated depreciation | | | | | | | | | |
| At 1 April 2018 | 1,040,566 | 11,326,454 | 1,326,731 | 118,270 | 239,972 | 40,166 | – | – | 14,092,159 |
| Depreciation charge for the year | 3,479 | 1,289,691 | 109,066 | 1,088 | 37,385 | 40,956 | – | – | 1,481,665 |
| Disposals | – | (553,250) | (6,732) | – | – | (19,688) | – | – | (579,670) |
| At 31 March 2019 | 1,044,045 | 12,062,895 | 1,429,065 | 119,358 | 277,357 | 61,434 | – | – | 14,994,154 |
| Depreciation charge for the year | 2,223 | 1,298,223 | 192,723 | 7,351 | 29,126 | 40,956 | 899,372 | – | 2,469,974 |
| Disposals | (1,046,268) | (2,240,972) | (346,004) | – | – | – | – | – | (3,633,244) |
| At 31 March 2020 | – | 11,120,146 | 1,275,784 | 126,709 | 306,483 | 102,390 | 899,372 | – | 13,830,884 |
| Carrying amounts | | | | | | | | | |
| At 31 March 2019 | 3,057 | 4,859,234 | 222,370 | 2,874 | 135,683 | 143,347 | – | 438,501 | 5,805,066 |
| At 31 March 2020 | – | 4,710,027 | 682,194 | 29,190 | 106,557 | 102,391 | 1,648,849 | 2,249,808 | 9,529,016 |

5. Intangible assets

| | Computer software |
|----------------------------------|--------------------------|
| | \$ |
| Cost | |
| At 1 April 2018 | 1,733,535 |
| Additions | 29,889 |
| | <hr/> |
| At 31 March 2019 | 1,763,424 |
| Additions | 117,379 |
| | <hr/> |
| At 31 March 2020 | <u>1,880,803</u> |
| | |
| Accumulated amortisation | |
| At 1 April 2018 | 1,571,117 |
| Amortisation charge for the year | 125,034 |
| | <hr/> |
| At 31 March 2019 | 1,696,151 |
| Amortisation charge for the year | 63,118 |
| | <hr/> |
| At 31 March 2020 | <u>1,759,269</u> |
| | |
| Carrying amounts | |
| At 31 March 2019 | <u>67,273</u> |
| At 31 March 2020 | <u>121,534</u> |

6. Trade and other receivables

| | Note | 2020 | 2019 |
|--------------------------------|-------------|-------------|-------------|
| | | \$ | \$ |
| Deposits and other receivables | 7 | 21,289,478 | 15,884,243 |
| Trade amounts due from: | | | |
| - Immediate holding company | | 3,445,417 | 3,622,153 |
| - Intermediate holding company | | 730,249 | 527,873 |
| - Related corporations | | 104,578 | 45,857 |
| | | <hr/> | <hr/> |
| | | 25,569,722 | 20,080,126 |
| | | <hr/> | <hr/> |

Outstanding balances with related parties are unsecured. There is no allowance for doubtful debts arising from these outstanding balances.

Information about the Company's exposures to credit risks and impairment losses for trade and other receivables are included in note 21.

7. Deposits and other receivables

| | Note | 2020 \$ | 2019 \$ |
|--------------------------------------|------|------------|------------|
| Deposits | | 74,904 | 1,193 |
| Receivables from funding bodies | | 20,001,002 | 15,024,917 |
| Grant receivables from third parties | | 846,614 | 911,674 |
| Sundry receivables | | 421,690 | 26,227 |
| | | <hr/> | <hr/> |
| | | 21,344,210 | 15,964,011 |
| Less: Impairment loss | | (54,732) | (79,768) |
| | | <hr/> | <hr/> |
| | 6 | 21,289,478 | 15,884,243 |
| | | <hr/> | <hr/> |

Receivables from funding bodies are non-interest bearing and have no credit terms.

8. Cash and cash equivalents

| | 2020 \$ | 2019 \$ |
|--------------------------|------------|------------|
| Cash at bank and in hand | 11,210,093 | 9,644,088 |
| | <hr/> | <hr/> |

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 or deficit 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. In the event of an operating deficit or a shortfall of current assets over current liabilities, the Company will obtain appropriate financial support from its immediate holding company to pay liabilities, as and when they fall due.

Capital management

Capital comprises the accumulated fund of the Company. The Company's operation is funded primarily from grants from various funding bodies and loans 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.

10. Deferred income

| | 2020 \$ | 2019 \$ |
|----------------------------|-----------------|-----------------|
| Capital expenditure grants | 5,361,048 | 5,310,435 |
| Other grants | 836,368 | – |
| | <hr/> 6,197,416 | <hr/> 5,310,435 |
| Non-current | 3,790,986 | 3,693,492 |
| Current | 2,406,430 | 1,616,943 |
| | <hr/> 6,197,416 | <hr/> 5,310,435 |

Capital expenditure grants

Capital expenditure grants comprised grants received for the purchase of property, plant and equipment (“PPE”) and intangible assets (“IA”). Income received is deferred and amortised over the periods necessary to match the depreciation of the PPE and amortisation of the IA purchased with the related grants.

Movement in deferred income relating to capital expenditure grants is as follows:

| | 2020 \$ | 2019 \$ |
|-------------------------------------|------------------|------------------|
| At cost | 19,046,536 | 21,085,439 |
| Less: Accumulated amortisation: | | |
| At 1 April | 15,775,004 | 14,815,637 |
| Amortisation charge for the year | 1,588,528 | 1,535,058 |
| Disposal of assets funded by grants | (3,678,044) | (575,691) |
| At 31 March | <hr/> 13,685,488 | <hr/> 15,775,004 |
| | <hr/> 5,361,048 | <hr/> 5,310,435 |
| Non-current | 3,790,986 | 3,693,492 |
| Current | 1,570,062 | 1,616,943 |
| | <hr/> 5,361,048 | <hr/> 5,310,435 |

11. Trade payables

| | 2020 | 2019 |
|--------------------------------|------------------|------------------|
| | \$ | \$ |
| Trade payables | 508,336 | 2,060,549 |
| Trade amounts due to: | | |
| - Immediate holding company | 3,176,094 | 1,353,748 |
| - Intermediate holding company | 5,702,667 | 4,720,733 |
| - Related corporations | 219,669 | 382,156 |
| | <u>9,606,766</u> | <u>8,517,186</u> |

The Company's exposure to liquidity risks related to trade payables is disclosed in Note 21.

12. Other payables

| | 2020 | 2019 |
|--|-------------------|-------------------|
| | \$ | \$ |
| Accrued operating expenses | 4,162,209 | 3,058,449 |
| Loans from immediate holding company | 6,000,000 | 6,000,000 |
| Research grants received in advance from government | 7,119,227 | 2,897,777 |
| Research grants received in advance from third parties | 7,052,261 | 5,472,040 |
| Research grants received in advance from related corporation | 4,814,169 | 4,569,718 |
| Lease liabilities | 14 1,690,716 | - |
| Refundable deposits | 940 | 940 |
| | <u>30,839,522</u> | <u>21,998,924</u> |
| Non-current | 788,193 | - |
| Current | 30,051,329 | 21,998,924 |
| | <u>30,839,522</u> | <u>21,998,924</u> |

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

The Company's exposure to liquidity risks related to other payables is disclosed in Note 21.

13. Employee benefits

| | 2020 | 2019 |
|---|---------|---------|
| | \$ | \$ |
| Liability for short-term accumulated compensated absences | 951,157 | 722,054 |

14. Leases

Company as a lessee

The Company's obligations under its leases are secured by the lessor's title to the leased assets.

Set out below are the carrying amounts of right-of-use assets (included under property, plant and equipment) recognised and the movements during the period:

| | Building and office space \$ |
|---|--|
| At 31 March 2019 | – |
| Adjustments on initial application of FRS 116 | – |
| | <hr/> |
| At 1 April 2019 | – |
| Additions | 2,548,221 |
| Depreciation expense | (899,372) |
| | <hr/> |
| At 31 March 2020 | <u>1,648,849</u> |

Set out below are the carrying amounts of lease liabilities (included under trade and other payables) and the movements during the period:

| | \$ |
|---|------------------|
| At 31 March 2019 | – |
| Adjustments on initial application of FRS 116 | – |
| | <hr/> |
| At 1 April 2019 | – |
| Additions | 2,548,221 |
| Accretion of interest | 110,709 |
| Payments | (968,214) |
| | <hr/> |
| At 31 March 2020 | <u>1,690,716</u> |
| | <hr/> |
| Non-current | 788,193 |
| Current | 902,523 |
| | <hr/> |
| | <u>1,690,716</u> |

The maturity analysis of lease liabilities are disclosed in Note 21.

14. Leases (cont'd)

Company as a lessee (cont'd)

The following are the amounts recognised in surplus or deficit:

| | \$ |
|--|------------------|
| Depreciation expense of right-of-use assets | 899,372 |
| Interest expenses on lease liabilities | 110,709 |
| Expenses relating to short-term leases (included in Rental & utilities) | 1,523,582 |
| Expenses relating to leases of low-value assets (included in Rental & utilities) | 14,624 |
| Total amount recognised in surplus or deficit | <u>2,548,287</u> |

The Company had total cash outflows for leases of \$2,506,420 in 2020. The Company also had non-cash additions to right-of-use assets and lease liabilities of \$2,548,221 in the year ended 31 March 2020. There are no lease contracts committed but not yet commenced as at 31 March 2020.

15. Operating 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.

16. Other income

| | 2020 | 2019 |
|------------------------------------|------------------|------------------|
| | \$ | \$ |
| Clinical trial and research income | 4,226,717 | 2,730,826 |
| Other miscellaneous income | 637,669 | 359,459 |
| | <u>4,864,386</u> | <u>3,090,285</u> |

17. Net finance (costs)/income

| | 2020 | 2019 |
|---|------------------|--------------|
| | \$ | \$ |
| Interest expense on lease liabilities (Note 14) | (110,709) | – |
| Net foreign exchange gain | 963 | 8,098 |
| Net finance (costs)/income | <u>(109,746)</u> | <u>8,098</u> |

18. Government Subvention

Government subvention is recognised in the surplus or deficit when conditions attached to its recognition are met by the Company. The Government is currently reviewing and finalising the subvention paid and payable to the Company in respect of the current year, no adjustment has been made in the financial statements for this component in the current financial year.

19. Tax expense

The Company is a non-profit organisation registered with the Commissioner of Charities under the Singapore 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 was made in the financial statements.

20. (Deficit)/surplus for the year

The following items have been included in arriving at (deficit)/surplus for the year:

| | 2020 | 2019 |
|---|------------------|------------------|
| | \$ | \$ |
| Short-term and low-value/operating lease expense | 1,538,206 | 2,375,745 |
| Contributions to defined contribution plan included in staff costs | 1,672,002 | 1,633,709 |
| Loss on disposal of property, plant and equipment | 78,237 | – |
| | <u>3,288,445</u> | <u>4,009,454</u> |

21. Financial Instruments

Overview

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

- credit risk
- liquidity 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.

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 occurring 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.

21. Financial Instruments (cont'd)

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 as and when they fall due.

The carrying amount of financial assets in the balance sheet represents the Company's 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.

Financial assets measured at amortised cost

The Company has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis.

The allowance account in respect of trade and other receivables is used to record impairment losses unless the Company is satisfied that no recovery of the amount owing is possible. At that point, the financial asset is considered irrecoverable and the amount charged to the allowance account is written off against the carrying amount of the impaired financial asset.

Cash is placed with financial institutions which are regulated.

The Company's primary exposure to credit risk arises through its receivables from funding bodies and corporations. These parties are established and reputable institutions which management regarded the associated credit risk to be minimum. The Company's historical experience in the collection of accounts receivable falls within the recorded allowances for impairment losses. Due to these factors, management believes that no additional credit risk beyond the amounts provided for collection losses is inherent in the Company's trade and other receivables.

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

| | 2020 | 2019 |
|----------------|-------------|-------------|
| | \$ | \$ |
| Funding bodies | 20,001,002 | 15,024,917 |
| Corporations | 5,568,720 | 5,055,209 |
| | <hr/> | <hr/> |
| | 25,569,722 | 20,080,126 |
| | <hr/> <hr/> | <hr/> <hr/> |

21. Financial Instruments (cont'd)

Credit risk (cont'd)

Impairment losses

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

| | 2020 | 2020 |
|-----------------------------|--------------------|-----------------|
| | Not credit- | Credit- |
| | impaired | impaired |
| | \$ | \$ |
| Not past due | 22,992,028 | – |
| Past due 1 – 30 days | 278,441 | – |
| Past due 31 – 150 days | 905,577 | – |
| Past due over 150 days | 1,418,720 | 29,688 |
| | <hr/> | <hr/> |
| Total gross carrying amount | 25,594,766 | 29,688 |
| Impairment loss allowance | (25,044) | (29,688) |
| | <hr/> | <hr/> |
| | 25,569,722 | – |
| | <hr/> | <hr/> |
| | 2019 | 2019 |
| | Not credit- | Credit- |
| | impaired | impaired |
| | \$ | \$ |
| Not past due | 19,845,978 | – |
| Past due 1 – 30 days | 88,301 | – |
| Past due 31 – 150 days | 144,286 | – |
| Past due over 150 days | 80,689 | 640 |
| | <hr/> | <hr/> |
| Total gross carrying amount | 20,159,254 | 640 |
| Impairment loss allowance | (79,128) | (640) |
| | <hr/> | <hr/> |
| | 20,080,126 | – |
| | <hr/> | <hr/> |

21. Financial Instruments (cont'd)

Credit risk (cont'd)

Impairment losses (cont'd)

The Company uses an allowance matrix to measure the ECLs of trade and other receivables from funding bodies and corporations (excluding related parties).

Other receivables from funding bodies of \$20,001,002 and \$15,024,917 as at 31 March 2020 and 31 March 2019 respectively are neither past due nor impaired.

The following table provides information about the exposure to credit risk and ECLs for other receivables from corporations (excluding related parties) as at 31 March:

| | Weighted average loss rate | Gross | Impairment losses |
|------------------------|----------------------------------|-----------|----------------------|
| 2020 | % | \$ | \$ |
| Not past due | 0.3 | 1,022,306 | 2,685 |
| Past due 1 – 30 days | 13.2 | 149,465 | 19,718 |
| Past due 31 – 150 days | – | – | – |
| Past due over 150 days | 16.5 | 195,988 | 32,329 |
| | | <hr/> | <hr/> |
| | | 1,367,759 | 54,732 |
| | | <hr/> | <hr/> |

| | Weighted average loss rate | Gross | Impairment losses |
|------------------------|----------------------------------|---------|----------------------|
| 2019 | % | \$ | \$ |
| Not past due | 6.5 | 625,178 | 40,775 |
| Past due 1 – 30 days | 9.9 | 88,301 | 8,748 |
| Past due 31 – 150 days | 6.7 | 144,286 | 9,638 |
| Past due over 150 days | 25.3 | 81,329 | 20,607 |
| | | <hr/> | <hr/> |
| | | 939,094 | 79,768 |
| | | <hr/> | <hr/> |

Loss rates are based on actual credit loss experience over the past three years. These rates are adjusted by scalar factors to reflect differences between economic conditions during the period over which the historic data has been collected, current conditions and the Company's view of economic conditions over the expected lives of the receivables. These scalar factors are calculated using statistical models that determine numeric co-relation of loss rates with relevant economic variables.

Amounts due from related parties

Impairment on these balances has been measured on the 12-month expected loss basis which reflects the low credit risk of the exposures. The amount of the allowance on these balances is insignificant.

21. Financial Instruments (cont'd)

Credit risk (cont'd)

Movements in allowance for impairment in respect of trade and other receivables

The movement in the allowance for impairment in respect of trade and other receivables during the year was as follows:

| | 2020 | 2019 |
|-----------------------------|---------------|---------------|
| | \$ | \$ |
| At 1 April | 79,768 | 106,662 |
| Reversal of impairment loss | (25,036) | (26,894) |
| At 31 March | <u>54,732</u> | <u>79,768</u> |

Cash and cash equivalents

The Company held cash and cash equivalents of \$11,210,093 at 31 March 2020 (2019: \$9,644,088). The cash and cash equivalents are held with regulated financial institutions.

Allowance for impairment losses on cash and cash equivalents has been measured on the 12-month expected loss basis and reflects the short maturities of the exposures. The Company considers that its cash and cash equivalents have low credit risk based on the external credit ratings of the counterparties. The amount of the allowance on cash and cash equivalents was negligible.

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 loans 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 immediate holding company has agreed to provide financial support as is necessary for the next twelve months to enable the Company to meet its liabilities as and when they fall due (see Note 2.1).

21. Financial Instruments (cont'd)

Liquidity risk (cont'd)

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

| | Note | Carrying amount \$ | Total contractual cash flows \$ | Within 1 year \$ | Within 5 years |
|---|------|--------------------------|--|------------------------|-------------------|
| 2020 | | | | | |
| Non-derivative financial liabilities | | | | | |
| Trade payables | 11 | 9,606,766 | (9,606,766) | (9,606,766) | – |
| Other payables* | 12 | 10,163,149 | (10,163,149) | (10,163,149) | – |
| Lease liabilities | 14 | 1,690,716 | (1,775,039) | (968,203) | (806,836) |
| | | 21,460,631 | (21,544,954) | (20,738,118) | (806,836) |
| 2019 | | | | | |
| Non-derivative financial liabilities | | | | | |
| Trade payables | 11 | 8,517,186 | (8,517,186) | (8,517,186) | – |
| Other payables* | 12 | 9,059,389 | (9,059,389) | (9,059,389) | – |
| | | 17,576,575 | (17,576,575) | (17,576,575) | – |

* Excludes research grants received in advance from government, third parties and related corporation and lease liabilities

The maturity analysis shows the undiscounted cash flows of the Company's financial liabilities on the basis of their earliest possible contractual maturity.

21. Financial Instruments (cont'd)

Measurement of fair values

The Company has an established control framework with respect to the measurement of fair values.

If third party information, such as broker quotes, property valuations or pricing services, is used to measure fair values, then the Company assesses and documents the evidence obtained from the third parties to support the conclusion that such valuations meet the requirements of FRS, including the level in the fair value hierarchy in which such valuations should be classified.

When measuring the fair value of an asset or a liability, the Company uses market observable data as far as possible. Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability fall into different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement (with Level 3 being the lowest).

The Company recognises transfers between levels of the fair value hierarchy as of the end of the reporting period during which the change has occurred.

21. Financial Instruments (cont'd)

Accounting classifications and fair values

The carrying amounts of recognised financial assets and liabilities, as shown below, with a maturity of less than one year (including trade and other receivables, cash and cash equivalents, trade payables and other payables) approximate their fair values because of the short period to maturity. Accordingly, no fair value is separately presented.

| | Note | Financial assets at amortised cost \$ | Financial liabilities at amortised cost \$ | Total carrying amount \$ |
|---|------|---|--|-----------------------------------|
| 31 March 2020 | | | | |
| Financial assets not measured at fair value | | | | |
| Cash and cash equivalents | 8 | 11,210,093 | – | 11,210,093 |
| Trade and other receivables | 6 | 25,569,722 | – | 25,569,722 |
| | | <u>36,779,815</u> | <u>–</u> | <u>36,779,815</u> |
| Financial liabilities not measured at fair value | | | | |
| Trade payables | 11 | – | (9,606,766) | (9,606,766) |
| Other payables* | 12 | – | (10,163,149) | (10,163,149) |
| | | | <u>– (19,769,915)</u> | <u>(19,769,915)</u> |

| | Note | Financial assets at amortised cost \$ | Financial liabilities at amortised cost \$ | Total carrying amount \$ |
|---|------|---|--|-----------------------------------|
| 31 March 2019 | | | | |
| Financial assets not measured at fair value | | | | |
| Cash and cash equivalents | 8 | 9,644,088 | – | 9,644,088 |
| Trade and other receivables | 6 | 20,080,126 | – | 20,080,126 |
| | | <u>29,724,214</u> | <u>–</u> | <u>29,724,214</u> |
| Financial liabilities not measured at fair value | | | | |
| Trade payables | 11 | – | (8,517,186) | (8,517,186) |
| Other payables* | 12 | – | (9,059,389) | (9,059,389) |
| | | | <u>– (17,576,575)</u> | <u>(17,576,575)</u> |

* Excludes research grants received in advance from government, third parties and related corporation and lease liabilities

22. Commitments

| | 2020 | 2019 |
|-----------------------------------|-------------|-------------|
| | \$ | \$ |
| Capital commitments: | | |
| - contracted but not provided for | 1,416,320 | 147,239 |

At 31 March 2019, the Company has commitments for future minimum lease payments under non-cancellable operating leases (including those under Temporary Occupation License) as follows:

| | 2019 |
|---------------------------------|---------------|
| | \$ |
| Within 1 year | 54,066 |
| After 1 year but within 5 years | – |
| | <u>54,066</u> |

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

23. 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:

| | 2020 | 2019 |
|---|-------------|-------------|
| | \$ | \$ |
| Other income received/receivable | | |
| Intermediate holding company | (603,776) | (518,369) |
| Immediate holding company | (2,408,666) | (2,345,838) |
| Related corporation | (4,777) | (1,913,561) |
| Sale of other services | | |
| Intermediate holding company | – | (46,729) |
| Immediate holding company | (2,500) | (109,083) |
| Related corporation | – | – |
| Purchase of manpower services | | |
| Intermediate holding company | 2,521,395 | 838,932 |
| Immediate holding company | 615,139 | 653,535 |
| Related corporation | 474,125 | 210,521 |
| Purchase of other services | | |
| Intermediate holding company | 1,199,959 | 978,020 |
| Immediate holding company | 1,120,675 | 507,917 |
| Related corporations | 501,178 | 371,056 |
| Purchase of supplies and consumables | | |
| Intermediate holding company | 486,120 | 560,239 |
| Immediate holding company | 19,066 | 5,886 |
| Related corporations | – | 1,103 |
| Other expenses paid/payable | | |
| Intermediate holding company | 2,944,057 | 2,731,256 |
| Immediate holding company | 220,197 | 244,104 |
| Related corporations | 98,609 | 96,721 |

The Company occupies space at the premises of its intermediate and immediate holding companies. The current year rental of \$72,366 (2019: \$144,113) is waived by the immediate holding company.

23. Related parties (cont'd)

Key management personnel remuneration

Key management personnel of the Company are those persons having the authority and responsibility for planning, directing and controlling the activities of the Company. The senior management are considered as key management personnel of the Company.

Key management personnel remuneration recognised in the statement of comprehensive income is as follows:

| | 2020 | 2019 |
|---|------------------|------------------|
| | \$ | \$ |
| Key management personnel | | |
| - short-term employee benefits | 1,233,174 | 1,379,001 |
| - contribution to defined contribution plan | 47,843 | 59,965 |
| | <u>1,281,017</u> | <u>1,438,966</u> |

In compliance with the Code of Corporate Governance for Charities and Institutions of a Public Character - Guideline 8.3, the annual remuneration of the Company's three highest paid staff who each received remuneration exceeding \$100,000, in the following bands in the year are as follows:

| | 2020 | 2019 |
|-------------------------------|-------------|-------------|
| Number of personnel in bands: | | |
| - \$200,001 to \$300,000 | 1 | - |
| - \$300,001 to \$400,000 | 1 | 3 |
| - \$400,001 to \$500,000 | <u>1</u> | <u>-</u> |

24. Events occurring after the reporting period

The Multi-Ministry Taskforce implemented an elevated set of safe distancing measures as a circuit breaker from 7 April 2020 to 1 June 2020, to pre-empt the trend of increasing local transmission of COVID-19. This has impacted the Company's operations in respect of resource allocation across the Company to support the emergency/ad-hoc facilities set-up for COVID-19. As the COVID-19 situation is still evolving, the Company shall continuously monitor its resource allocation. The Company will also assess the impact of COVID-19 in conjunction with Government reliefs and through discussions with MOH on its government grants. Consequently, the full impact of COVID-19 cannot be ascertained at the date of this report.

25. Comparative figures

The financial statements for the financial year ended 31 March 2019 were audited by another firm of Chartered Public Accountants.

26. Events occurring after the reporting period

The financial statements for the financial year ended 31 March 2020 were authorised for issue in accordance with a resolution of the directors on 31 Aug 2020.

APPENDIX

In compliance with the Code of Corporate Governance for Charities and Institutions of a Public Character, the annual remuneration of the Company's three highest paid staff who each received remuneration exceeding \$100,000, in the following bands in the year are as follows:

None of these three highest paid staff serves as a governing board member of the charity.

There is no paid staff, being a close member of the family belonging to the Executive Head or a governing board member of the charity, who has received remuneration exceeding \$50,000 during the financial year.

| | 2020 | 2019 |
|-------------------------------|-------|------|
| Number of personnel in bands: | | |
| - \$200,001 to \$300,000 | 1 | – |
| - \$300,001 to \$400,000 | 1 | 3 |
| - \$400,001 to \$500,000 | 1 | – |
| | <hr/> | |

SERI Board Meeting

The SERI Board Meeting were held twice every financial year.

Details of the meetings:

| <i>1st SERI Board Meeting on 4 March 2020, 6pm at AC 6-3 Meeting Room at Academia</i> | |
|---|------------------------------|
| Present | Absent with Apologies |
| Prof Wong Tien Yin | |
| Prof Ang Chong Lye | |
| Prof Chong Yap Seng | |
| Prof Wang Linfa | |
| Dr Geh Min | |
| A/Prof Vernon Lee | |
| Ms Ooi Chee Kar | |
| Prof Lim Tock Han | |
| Prof James Best | |
| Prof Thomas Coffman | |
| Prof Tan Sze Wee | |

| <i>2nd SERI Board Meeting on 31 August 2020, 6pm via Zoom</i> | |
|---|------------------------------|
| Present | Absent with Apologies |
| Prof Wong Tien Yin | |
| Prof Ang Chong Lye | |
| Prof Chong Yap Seng | |
| Prof Wang Linfa | |
| Dr Geh Min | |
| A/Prof Vernon Lee | |
| Ms Ooi Chee Kar | |
| Prof James Best | |
| Prof Thomas Coffman | |
| Prof Tan Sze Wee | |
| Dr Benjamin Seet | |