

THE GIVING TIMES

AN ANNUAL ROUNDUP OF DEVELOPMENT NEWS IN SINGHEALTH

MCI (P) 059/07/2015

Rising to the challenge

Over the last year, two outstanding clinicians and researchers, Professor Yann Barrandon and Associate Professor Lim Soon Thye, at the SingHealth Duke-NUS Academic Medical Centre, were conferred Professorships – the most prestigious faculty appointments reserved for distinguished individuals who have demonstrated excellent academic leadership with their pioneering research. *The Giving Times* speaks to both recipients to understand the impact and potential of their groundbreaking work.

Advancing the fight against lymphomas

Lymphoma research received a \$2.5 million boost with a generous gift from the Tanoto Foundation to establish the Tanoto Foundation Professorship in Medical Oncology. Associate Professor Lim Soon Thye champions pioneering research in Non-Hodgkin's Lymphoma, a cancer prevalent in Asia.



Tell us more about your research in lymphoma.

Lymphoma is a form of cancer that affects the immune system. In Singapore, it is ranked as one of the top 10 cancers. There are two types – Hodgkin's Lymphoma (HL) and Non-Hodgkin's Lymphoma (NHL). The latter includes the B, T and NK/T cell lymphomas, which are more common than the HL.

My research focuses particularly on the T and NK/T cell lymphomas because even

with conventional chemotherapy, less than 50 per cent of these patients can be cured.

How will your work benefit Singaporeans and the region?

The bad news is that T and NK/T cell lymphomas occur more frequently in Asians, particularly in men, as ageing occurs. They are very aggressive tumours that can affect patients very rapidly with poor prognosis.

and how will it further the impact on patients?

Our ultimate goal is to be able to develop novel diagnostic strategies and drugs to treat these lymphomas. We hope to be able to recruit more patients into clinical trials. As we uncover the molecular profile of different cancers, we hope to customise anti-cancer therapy to enable targeted and personalised molecular therapy.

“ My vision is for Singapore to be the leader in therapeutic trials for lymphoma research in Asia, as we consolidate Singapore's cancer network and expand our partnerships to improve survival rates for these lymphomas.

– Assoc Prof Lim Soon Thye, Head & Senior Consultant, National Cancer Centre Singapore

We hope to examine the molecular development of these lymphomas from clinical and pathological specimens. Knowing how these diseases develop and affect us will enable better diagnosis and treatments for these lymphomas to improve survival rates.

My vision is for Singapore to be the leader in therapeutic trials for lymphoma research in Asia, as we consolidate Singapore's cancer network and expand our partnerships.

Our collaborations have fostered a vibrant international consortium among the world's leading cancer and genomic researchers. This will undoubtedly accelerate our research progress.

What do you hope to achieve as the recipient of the Tanoto Professorship in Medical Oncology

Harvesting the potential of skin research

Professor Yann Barrandon is the recipient of the Lee Seng Teik and Lee Hoo Leng Professorship in Plastic Surgery and Regenerative Medicine. He leads clinicians and scientists in groundbreaking efforts to advance the frontiers of translational skin research.

What are your research focus areas?

Our work focuses on basic and translational research in epithelial stem cells to better treat extensive burns and genetic diseases of the skin and related tissues. Our epidermis renews on a very regular basis. My laboratory has been interested in finding where the stem cells are, what controls them and what we can do with them.

Why is this important?

If we know the biology of transplanted cells, we can improve the process which has not changed for the last 30 years. Potentially, this means that we can cultivate the patient's own cells to treat extensive burns and prevent organ rejection. This will transform

the treatment for burn victims and patients with extensive skin diseases. We also seek to improve the quality of the skin we reconstruct, so that regenerative tissue can be made available and transferrable on a larger scale.

What do you hope to achieve through your work here?

Our work will directly impact the excellent care for treatment of burns in Singapore. Singapore is a busy and densely-packed cosmopolitan city; any burns disasters will affect us drastically. It is also the perfect global platform for the treatment of burns. Burns can happen to anyone of us – it is a threat regardless of age. In Europe and USA, many

burns incidences are caused by domestic accidents, car crashes and boating accidents. Treatment for epidermolysis bullosa (a genetic skin disorder) is also very close to burns treatment, so we hope to leverage different learning models to improve the current management of related skin diseases.

What motivates you to do research?

Seeing patients recover reminds me of the real reason why I pursue science. Publishing a research paper is part of the job, but the ultimate goal is to see life in the eyes of the patient; to see the patient recover. That is the real purpose of doing research. It's very important that young researchers understand this. We will continue to seek answers

on how we can replicate human skin akin to that built during embryogenesis. The technologies that we establish may even be replicated for other forms of organ transplantation. Now, this should be the future!



“ Seeing patients recover reminds me of the real reason why I pursue science. Publishing a research paper is part of the job, but the ultimate goal is to see life in the eyes of the patient; to see the patient recover. That is the real purpose of doing research.

– Prof Yann Barrandon, Joint Professor, Stem Cell Dynamics, Ecole Polytechnique Fédérale Lausanne and Lausanne University and Head of the Department, Experimental Surgery, Lausanne University Hospital

Nurturing tomorrow's medical minds in internal medicine

Lee Foundation's lead gift of \$270,000 establishes the Master Physicians of Internal Medicine Programme to groom the next generation of physicians and advance holistic patient care.

" It doesn't matter if you are at the pinnacle of your career or how much you've achieved. At the end of the day, you believe in the practice of Medicine, inculcate the values of dedication and compassion to the next generation and serve as the role model we hope to see more of in our hospital. "

— Prof Chow Wan Cheng, Chairman, Division of Medicine, SGH



Master Physician of Internal Medicine Award winners Prof Ng Han Seong (2nd from left) and Prof Ng Yong Yau (2nd from right) with (from left) Prof Fong Kok Yong, Deputy Group CEO (Regional Health and Medical), SingHealth, Prof Chow Wan Cheng, and Prof Ang Chong Lye, Deputy Group CEO (Clinical Services and Informatics), SingHealth

TODAY, it is not uncommon for a patient to suffer from asthma, diabetes mellitus, hypertension, heart disease and stroke at the same time. If not properly managed, patients with a multitude of serious, chronic conditions can quickly deteriorate when severe complications set in. They end up seeing different specialists, who treat only the specific health issue, resulting in fragmented care with high medical costs.

Against this backdrop, Internal Medicine physicians play an increasingly critical role in managing patients who have multi-system disease processes. They aggregate clinical input from different sub-specialists, which can be conflicting. As more patients are being treated by teams of highly trained sub-specialists, there is an urgent need to groom more Internal Medicine physicians to coordinate and orchestrate care. The Master Physicians of Internal Medicine Programme focuses on the continuing education and training of junior Internal Medicine physicians. Master Physicians are distinguished by their breadth of knowledge, outstanding skills in clinical medicine and are exceptional teachers. As master diagnosticians, they are able to diagnose diversified, complex and undifferentiated conditions.

In April 2016, the first two Master Physician of Internal Medicine Awards were conferred on Professor Ong Yong Yau and Professor Ng Han Seong, both Emeritus Consultants with the Singapore General Hospital. With a combined number of years of experience that span nearly a century, Prof Ong and Prof Ng are distinguished role models, outstanding mentors and pillars of inspiration for generations of clinicians who have trained under them.

Making the quantum leap in breast diseases research

MORE than 9,000 women in Singapore were diagnosed with breast diseases over the last five years. Conditions range from the common benign (non-cancerous) conditions such as fibroadenomas, papillomas and fibrocystic change to the more sinister and malignant (cancerous) form known commonly as breast cancer. Studies have shown that due to differences in genetic make-up, some of these breast conditions affect Asians differently from other ethnic groups such as the Caucasians.

Over the last few years, with research grants from different partners and institutions, a landmark discovery was made in 2014. A multi-disciplinary team of scientists and clinicians from the SingHealth Duke-NUS Academic Medical Centre partnered with investigators from the Cancer Science Institute of Singapore, Genome Institute of Singapore at A+STAR and National University Hospital, and identified the culprit gene (MED12) driving the development of a group of breast tumours in Asian women. This distinct breast tumour group called the fibroepithelial tumour, includes two tumour types – fibroadenoma, the most common benign breast tumour in women of reproductive age, and phyllodes tumour, a rarer breast tumour that currently has no effective therapy other than surgery. They also identified the genes behind these tumours which cause them to become cancerous.

The Next Phase of Groundbreaking Research

This discovery paves the way for improved diagnostic accuracy in these breast tumours, and enhanced clinical intervention for patients diagnosed with them. Encouraged by this important breakthrough, clinician researchers Professors Tan Puay Hoon, Teh Bin Tean and Dr Ong Kong Wee are leading the next phase in Breast Diseases Research to accelerate impactful discoveries in several key areas (see box). The

goal is to enable more targeted and effective treatments, more accurate diagnosis of breast lumps to reduce patients' anxiety and avoid unnecessary surgery.

RESEARCH FOCUS

- Understand the correlation between ethnicity and breast cancer in Asians
- Research into triple negative breast cancer – an aggressive and difficult to manage form of breast cancer
- Extend the impact of the MED12 gene discovery to other breast tumours
- Understand other benign breast conditions that affect thousands of women each year

" There is tremendous potential in understanding how and why tumours become cancerous and recur. With relatively less information on how breast disease affects Asians, research becomes even more imperative and urgent. Philanthropic funding will enable us to make that quantum leap into understanding breast cancer and hopefully, bring us closer to a cure. "

— Prof Tan Puay Hoon, Academic Chair, Pathology Academic Clinical Programme

Palliative care gets \$1 million boost



(From left) Senior Nurse Clinician Stella Goh, and Nurse Clinician Xu Zhi Zhen

THE Alice Lee Palliative Nursing Care Programme at the National Cancer Centre Singapore (NCCS) was set up in 2011 with a generous \$1 million gift from the Lee Foundation to equip nurses with the necessary skills for palliative care. Nurses have the opportunity to pursue a three-year Masters of Nursing programme at the National University of Singapore, which includes a one-year internship. To date, two nurses have graduated and are now Advance Practice Nurses (APNs), while two others are pursuing the Masters. This year, Lee Foundation pledged a further \$1 million to enable more nurses to enhance their skills. *The Giving Times* speaks to two nurses who have benefited from the Foundation's generosity.

How has this Programme enhanced your skills?

Stella: I'm very thankful for the opportunity to advance my clinical knowledge and critical thinking skills, and reinforce my understanding of research methodology and principles behind medical intervention. Now, I can better help patients who have general chronic and acute conditions, and provide more holistic care for patients with life-limiting illnesses.

Zhi Zhen: This programme has supported my pursuit to become an APN. The internship complemented the classroom learning and the experience enabled me to take on more patient care responsibilities, many of which were formerly assumed by physicians. I'm gratified that I can do more to ensure that our patients get the best care possible.

How do you think patients have benefited from this programme?

Stella: With the latest research findings, I am able to help my patients manage both the chronic and

palliative aspects of cancer to achieve a better quality of life. This means that patients need not go for so many sub-specialised consultations, and may be able to reduce the many types of medication they need to take. This saves cost, time and hassle for the patient.

Zhi Zhen: This programme has helped me become more confident in the work that I do – be it caring for my patients or teaching junior staff, both nurses and physicians.

Were there any difficulties you faced?

Stella: My greatest challenge was juggling my time between my studies and the demands of my family. Thankfully, I was able to complete the programme with the support of my family and colleagues. It wasn't easy, but they helped to hold the fort both at home and at work. I was tremendously grateful for this support.

Zhi Zhen: I had quite a heavy clinical, teaching and administrative workload. I had to find a balance and make sure that I had time for my studies too.

What is one learning point that stood out for you so far?

Stella: Learning is a lifelong process! I've been a nurse close to 20 years and there is still so much more I have yet to learn and discover. Most importantly, of course, we must always ensure that we care for our patients safely!

Zhi Zhen: In order to help others, you must have a heart that is ready to serve. Then, you have to equip yourself with the right skills and knowledge.

How do you hope to contribute in your area of work after finishing your programme?

Stella: I want to share my knowledge and experience on palliative care with other nurses and practitioners, the community and, hopefully, contribute to the Masters of Nursing programme curriculum. Through this, I want to strengthen the foundation of palliative care nursing in Singapore.

Zhi Zhen: I, too, hope to share what I've learned with other nurses, especially those who work in the general wards and who provide community care. This will increase the level of awareness of how palliative care can help patients and their families. I also want to participate in more research and quality innovation projects to improve the efficiency and quality of our work.



Dr Toh (right) presenting the cheque to Professor Terrance Chua, Medical Director, NHCS, at the inaugural SingYouth Heart Challenge, a youth outreach event to increase the awareness, prevention and challenges of cardiovascular disease, where he was the Guest of Honour

A heartfelt gift for cardiovascular research

WHEN Dr Charles Toh started his career as a young clinician, he had the opportunity to do stints in 12 different departments in Royal Newcastle Hospital, and trained under eminent cardiologists in Australia. The extensive knowledge and skills which he gained from the experience over the years shaped his career. Today, he is one of Singapore's most eminent and respected cardiologists.

Dr Toh was instrumental in the establishment of the National Heart Centre Singapore (NHCS) in 1996. During his illustrious career, he also served as Vice Dean and Acting Dean of the Faculty of Medicine at the University

of Singapore between 1969 and 1972, and is a Fellow of the American College of Cardiology and the American Heart Association. Dr Toh is a firm advocate of younger clinicians being involved in clinical research. He strongly believes that pursuing research is a critical part of a clinician's training as it broadens perspectives and develops critical thinking skills. To encourage and enable more discoveries in cardiovascular sciences, Dr Toh made a gift of \$1 million to set up the Charles Toh Cardiovascular Fellowship in September 2015. This endowed gift will go towards training and educating the next generation of cardiovascular clinicians.

"In Singapore, heart disease and stroke account for 30 per cent of deaths each year. This staggering statistic offers a glimpse into the tremendous

burden of heart disease, which is also a leading cause of disability and death in the world. I hope that my gift will enable eminent foreign cardiologists or cardiovascular scientists to lead research programmes in Singapore. This will elevate our standard of cardiovascular care here. I also hope to support local scientists or clinician scientists who wish to take time off from routine work to engage in specific research projects, or even to pursue an M.D or Ph.D.", Dr Toh said. "Hopefully this will boost the research in the country and translate into better care for our community."

This is not the first time Dr Toh has made a gift to boost medical research. In 2015, he gave \$1 million to establish the Vicky Toh Cancer Research Fund, in memory of his late wife, Mrs Vicky Toh.

Grateful patient's gift fuels research collaboration in HPB cancers



Su Pin, Senior Consultant, Medical Oncology at NCCS, collaborated with Dr Apoovra Gogna, Consultant, Department of Diagnostic Radiology,

WHEN Mr Lee Kok Wah was diagnosed with advanced stage liver cancer in January 2015, he decided to seek a second opinion at the National Cancer Centre Singapore (NCCS) after he was dissatisfied with the initial treatment and recommendation at another healthcare institution. Dr Choo

Singapore General Hospital (SGH) to work out a combined oncology and radiological intervention for Mr Lee. What resulted was a marked improvement in his condition and an extremely grateful Mr Lee for the care he received.

In gratitude, Mr Lee pledged a gift of \$200,000 to further clinical and translational research relating to Hepatobiliary (HPB) cancers. He hoped that his gift would kick-start the deepening of knowledge in HPB cancers so that treatments can be enhanced. Named the Lee Kok Wah Hepatobiliary Cancers Research Fund, this is the first collaborative fund set up between the Oncology and Radiological Sciences Academic Clinical Programmes. As HPB cancer treatments often require collaboration between clinicians from different disciplines, this Fund provides the opportunity for

radiologists, surgeons and medical oncologists to come together to uncover key insights into this condition.

Mr Lee is now also an advocate for cancer research and actively encourages his friends to support this cause. This is not the first time Mr Lee has given to a cause that he is passionate about. In 2014, he made a gift to the National University of Singapore to establish the Mr and Mrs Lee Wai Kin Bursary to help needy students. He firmly believes that those who have the resources should do more to benefit society instead of focusing on accumulating wealth.

"We are very appreciative of Mr Lee's lead gift and support for this cause. NCCS sees about 200

HPB cancers cases every year. These are lethal cancers and are often diagnosed when the cancer is at a very advanced stage. We know that Hepatocellular Carcinoma (HCC) – a type of HPB cancer – tends to predominantly affect Asians. Only with a deeper understanding of why these cancers occur and recur, even with surgery, can we hope to treat them more effectively," says Dr Choo Soo Pin, who is Mr Lee's primary physician.

Added Dr Gogna, "I feel fortunate to be part of the multi-disciplinary treatment team for Mr Lee and am greatly heartened by his recovery. On behalf of SGH, I thank Mr Lee for his generosity and I hope this will encourage others to choose to support research as a way to magnify their contributions to society."

Fostering collaborations to save more young lives



17 world experts and close to 250 delegates from 22 countries attended the SJVF this year

IN 2015, the VIVA-KKH Paediatric Brain and Solid Tumour Programme was launched with a generous \$8.2 million pledge from the VIVA Foundation for Children with Cancer (VIVA), in collaboration with KK Women's and Children's Hospital (KKH). As part of the Programme, the 10th St. Jude-VIVA Forum (SJVF) was organised to bring together international experts, clinicians and caregivers to discuss the latest care advances.

For the first time, one whole day was dedicated to focus on the study of brain and solid tumours.

The VIVA-Asia Brain and Solid Tumour Working Group, which comprises regional clinicians, came together to discuss common issues and challenges and future collaboration opportunities. The SJVF also featured the Children's Cancer Foundation (CCF)-VIVA Family Learning Exchange, where invited speakers Dr Francis Chin (National Cancer Centre Singapore) and Ms Jaslyn Koo (KKH) facilitated this session to enhance patient supportive care. Patients, families and survivors met with international and local experts to better understand their conditions and overall care.

Each year, about 140 children are diagnosed with cancer in Singapore – half of these cases are blood cancers like leukaemia and the other half, solid cancers such as brain tumours. While the survival rate of children with blood cancers has improved, more still needs to be done for children with brain and solid tumours to find new and better ways to save young lives and improve their chances of survival.

The Eye Ball 2015

On 23 October 2015, more than 350 guests attended the Singapore Eye Research Institute's (SERI) annual signature fundraising event, The Eye Ball. Held at The Fullerton Hotel, the Ball included performances from Guest of Honour Dick Lee and a live auction which featured paintings from the late Professor Arthur Lim. The charity ball raised more than \$590,000 for eye research.



This year's The Eye Ball was titled "Do you see what I see?"



Guests enjoying the evening



Professor Wong Tien Yin, Medical Director of Singapore National Eye Centre, presenting a token of appreciation to Guest of Honour Dick Lee



Guests taking part in the live auction

Heart to Heart Gala 2016

Close to 300 guests attended the National Heart Centre Singapore (NHCS) Heart To Heart Gala on 15 April 2016 at the Conrad Centennial Singapore, with Minister for Foreign Affairs, Dr Vivian Balakrishnan as the Guest of Honour. The charity gala raised more than \$650,000 for the NHCS Heart To Heart Fund for patient care and research.



The programme opened with "Danse des Oiseaux et les Papillons" (Dance of the Birds and the Butterflies) by a troupe of young ballerinas aged 6 to 11 from The Ballet School. Dressed like little forest fairies, the young ballerinas handed out little tokens of nature to the guests.



NHCS Heart To Heart Fund beneficiary Mr Andy Peh sharing on his life after getting a second chance with a heart assist device implantation



Renowned bonsai artist, Mr Boh Twang Keng (right), sharing some tips on bonsai appreciation with Dr Balakrishnan



Successful bidders and sponsors with Dr Balakrishnan (centre) and Prof Terrance Chua (left most) at the Heart To Heart Gala 2016

First paediatric neurology Fellowship launched to advance neurological care

In April 2016, the first Paediatrics Fellowship – the Lee Kong Chian Paediatric Neurology Fellowship – was established with a generous gift of \$150,000 from the Lee Foundation. It aims to impact and improve the health of children with neurological conditions in Singapore and in Asia.

Children with epilepsy, cerebral palsy and other conditions of the brain and nervous system are common in developing countries. The ability to accurately diagnose these conditions and initiate fundamental care plans are critical for these children. An estimated 80% of individuals suffering from epilepsy in developing countries do not have access to advanced epilepsy care. This Fellowship provides opportunities for trainee doctors from Southeast Asia to hone their skills in paediatric neurology through training in KK Women's and Children's Hospital (KKH), before returning to their home countries to establish and develop related clinical services. By fostering closer cooperation in the region, the overall standard of care can be raised to enhance the quality of lives of children with neurological diseases.

On the significance of this Fellowship, Head and Senior Consultant of KKH's Paediatric Neurology Service, Dr Derrick Chan said, "We are heartened by the support for this inaugural Fellowship as it will enable us to share our knowledge with colleagues from the region who are less equipped in terms of resources and access to expertise. This opportunity to "pay it forward" will positively impact the lives of children in less fortunate circumstances."

Upcoming development events



On 14 October 2016, the SingHealth Duke-NUS Charity Golf Tournament will take place at Sentosa Golf Club in support of medical research and education in Cardiovascular Sciences, Musculoskeletal Sciences, Cancer, Eye and Pathology. The funds will empower our researchers to pursue better treatments and impart new knowledge to the next generation of healthcare professionals. To find out more, please contact Sabrina at sabrina.chin@singhealth.com.sg or 6377-8718.

20 August 2016

Kidz Horizon Appeal Charity Gala

GOH: Mr Tan Chuan Jin, Minister for Social and Family Development

1 October 2016

SingHealth supports President's Challenge 2016

14 October 2016

SingHealth Duke-NUS Charity Golf Tournament

GOH: Mr Wong Kan Seng, Chairman, Ascendas-Singbridge

12 November 2016

NCCS Charity Gala

GOH: Mr Teo Chee Hean, Deputy Prime Minister and Coordinating Minister for National Security

19 November 2016

The Eye Ball 2016 – An Op-art Party

19 February 2017

Run for Hope 2017, in support of cancer patients and research