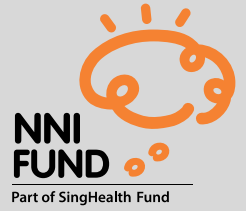




National  
Neuroscience Institute  
SingHealth



B E C A U S E O F



G I V I N G R E P O R T 2 0 1 9 / 2 0 2 0



...we can shape  
neuroscience care for  
a better tomorrow.

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## Beginning a New Chapter



**T**his past year has been truly memorable for NNI. The highlight was our 20<sup>th</sup> Anniversary celebrations, culminating in a gala dinner in November 2019, which allowed us to reaffirm friendships, raise funds for our patients through a silent auction, outright donations and sales of a commemorative recipe book and to take stock of the progress we have made over the past two decades.

Your support has made this progress possible and changed patients' lives.

One such patient who benefited from your kind generosity is Mdm Sumarni, who suffers from severe migraines. Her migraines are triggered by stress and loud noises, which can be hard to avoid when living with her four children aged 6 to 16 years. However, she is determined to stay strong for them. With assistance from the NNI Fund, she is now able to afford medication to control her migraines, and recently started working as a kitchen helper to support her family. Thank you for making a difference to Mdm Sumarni's health and her family's future.

As NNI embarks on its next chapter, it does so under new leadership. Associate Professor Au Wing Lok took over as Medical Director on 1 July 2020, when I moved to Changi General Hospital to become the Chief Executive Officer. I have full confidence that A/Prof Au will continue to build on the progress NNI has made over the last 20 years and lead the institution to greater heights.

Thank you for journeying with us and helping to shape neuroscience care for a better tomorrow. Please keep well and stay safe.

**A/Prof Ng Wai Hoe**  
Medical Director, NNI  
Up to 30 June 2020

## Meet Our New Medical Director

**I** became a neurologist because I enjoy the complexity of the structure and diseases of the brain and all the nerves in the body. Every patient is unique with their own physical, psychological and social challenges. There are no 'one size fits all' answers when helping patients with neurological conditions.

Patients are indeed at the heart of all we do. Whether it is making the diagnosis and relieving their suffering, working in the research laboratory, or cultivating the future healthcare workforce, we have only one goal in mind and that is to shape neuroscience care for a better tomorrow.

As I take over as Medical Director, I'm deeply aware of the heavy responsibility I now have. The decisions made will not only affect NNI, but also the whole neuroscience landscape in Singapore. I would like to thank A/Prof Ng Wai Hoe for his excellent leadership in transforming NNI, and passing it on to me with a very capable and dedicated team.

There is still much we can and must do to help people living with neurological conditions. Many of our patients face challenges every day, from walking and eating to remembering the names of their loved ones. Yet I am constantly inspired by their determination and the commitment of family members to help them succeed.

I look forward to meeting you, sharing our plans for NNI and how your support can change our patients' lives now and neuroscience care for future generations.

**A/Prof Au Wing Lok**  
Medical Director, NNI  
As of 1 July 2020



## The Three Pillars of Support

At NNI, funds raised to support neuroscience patient care, research and education are channelled through the NNI Fund or NNI Health Research Endowment Fund (HREF). From 1 April 2020, all funds raised have been directed to the NNI Fund and used according to the donors' intents to support the impending transition and transfer of the NNI HREF's funds to the NNI Fund.

The NNI Fund supports NNI's three pillars:



### Patient Care

Improve treatments using innovative equipment, care models and treatment methods; support financially challenged patients with their medical bills, assistive equipment, and daily living needs



### Research

Accelerate research discoveries in neuroscience for the development of new and improved treatment methods for patients with neurological conditions



### Education

Nurture and develop the next generation of neuroscience leaders in care delivery to continually bring patients the care they need

The NNI Fund Board Committee will assess the eligibility of projects for Patient Care, Research, and Education for the disbursement of funds.



The NNI Fund is part of the SingHealth Fund (SHF), incorporated on 2 September 2016, as a Company Limited by Guarantee to manage charity funds for the SingHealth cluster.

All donations made to the NNI Fund are ring-fenced accordingly under SHF for NNI Fund's purposes. These funds will be used in accordance with the donors' intents for neuroscience causes. As an Institution of a Public Character (IPC), SHF is committed to maintain the highest standards of governance and abide by the Code of Governance for Charities and IPCs.

## Because of You

### Holding on to Hope

I was diagnosed with myasthenia gravis last November, a neuromuscular condition that causes weakness in my muscles. This causes me to feel lethargic constantly. I am also unable to control the muscles of my throat, so there are days when I cannot even swallow food and water. As a self-employed hairdresser, this has impacted me greatly because my arms are too weak to even perform basic tasks, such as washing my customers' hair. In addition to the loss of income, I also have to care for my aged mother who has health issues. The stress from all these worsen my condition.

However, I am thankful for my family, who have always been there for me and encouraged me not to give up. I would also like to extend my gratitude towards the donors of NNI Fund. Without you and my medical social worker's help, I would not be able to afford treatment. You have helped to reduce my stress so that I can better manage my condition.

*Shirley Tan*



*Mr and Mrs Suresh and their two children on a family outing*

### A Pillar of Strength

Five years ago I went through one of the toughest moments of my life. My wife suddenly collapsed at home while I was at work. Doctors diagnosed her with an autoimmune disease. She was unable to control her speech and movements and was hospitalised for over three months. I became the sole breadwinner and was worried as I had to make sure my family had food to eat. Thankfully, our parents helped to care for my wife and children while I was at work.

My wife had to take a lot of medicine in the following months, and it was expensive. She is now well because we could pay for the medication with help from the NNI Fund. I can say this with confidence, that my wife could only have survived because of the NNI Fund. Thank you so much from the bottom of my heart.

*Poonusamy Suresh*

## Because You Care

### "A Candle loses Nothing by lighting Another Candle..."

James Keller

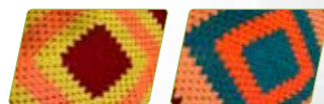
Many look forward to their retirement years of leisure and enjoyment and Lily was no exception. Having brought up her two children single-handedly, Lily eagerly anticipated the rest and respite that would come with her retirement in 2015.

But something was not quite right. Lily's limbs felt weak and a bowl slipped out of her hands. Just one month into retirement, Lily was diagnosed with Motor Neuron Disease (MND). Her muscles weakened over time and Lily had to rely on a wheelchair in her later years. It was tough, especially for someone as active and strong-willed as Lily.

Not one to bow in the face of adversity, Lily looked at the bright side – she chose to live her life with joy and positivity. She counted her blessings daily and encouraged many fellow MND patients from her support group at NNI in their journey. As her condition deteriorated over the years, talking and breathing became difficult as the muscles around her throat weakened. Yet, one thing remained constant – her love for people. Lily enjoyed crocheting and often donated her finished work to charities and orphanages. NNI Fund was a grateful beneficiary of her beautiful crochet art for fundraising.

Lily left us in April this year but she leaves behind a legacy of love, joy and hope in the face of adversity that will live on for a long time to come.

Lily Koh



Lily's beautiful crochet art that she donated to the NNI Fund in 2019.



### "We Make a life by What We Give..."

Winston Churchill

When I experienced frequent fainting spells in 2018, I never thought it would be because of a brain tumour. Thankfully, A/Prof Ng Wai Hoe managed to remove the tumour and I feel much better these days.

The following year, my friends from the Echo of Love Society (EoLS) shared that they were raising funds for NNI through a charity concert to purchase a new surgical system that can help patients like me who have a brain tumour.

After my ordeal, I realised how complex the human brain is and the specialised care it needs. Knowing what it's like to suffer with the same condition and wanting to pay it forward, I decided to support patients like myself and NNI by performing in the Echo of Love concert.

I am so happy that our contribution is now helping patients today and I'm actively spreading the word about the NNI Fund so doctors at NNI can continue to find new and better treatment options for patients.

Maggie Shen



## Because You Give

### A Heart for Those in Need

I have been working in the healthcare industry since 1988 but had never seen patients with chronic conditions like stroke, Parkinson's disease, dementia and epilepsy until I joined NNI in 2017. These patients live with their condition for the rest of their lives. It made me very sad to see some of them not being able to earn a living because of their condition.

About 2 years ago, I started giving to NNI's needy patients because I sympathised with their situation and wanted to lend a helping hand. Reflecting on this now makes me want to increase my monthly donation! It makes me feel happy and blessed knowing that I can brighten someone's life through my giving.

#### Normala Binte Mohamed Ghaus

Senior Patient Service Associate  
Neuroscience Clinic

### A little Goes a long Way

Last year, I started giving to needy patients as I find fulfilment in helping to ease the suffering of others. There's a poem that says *little drops of water make the mighty ocean*. Similarly, my monthly contribution may be small but in the long run, it would add up to a good amount for a good cause.

I believe that God has given us what we have so we can share them with others – no one has become poor from donating. I feel happy being able to support NNI in creating a better tomorrow for patients and look forward to increasing my donation in the coming years.

#### Dr Shahul Hameed

Senior Consultant  
Department of Neurology

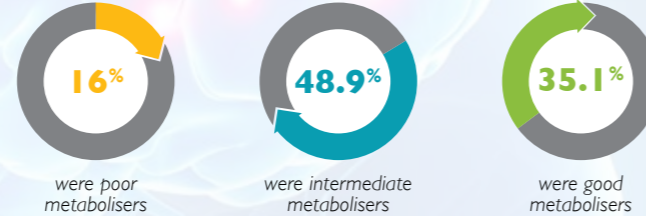


## Because You Give

# Redefining Treatment for Stroke Patients

Stroke is a leading cause of disability and death worldwide. Most strokes are caused by an abrupt blockage of arteries leading to the brain, known as ischaemic strokes. Clopidogrel is an anti-blood clotting medication that is commonly prescribed to treat and prevent another stroke. To take effect, clopidogrel has to be metabolised in the body by a certain enzyme.

Dr Carol Tham, Consultant Neurologist at NNI, heads a research study to determine the prevalence of this enzyme in local stroke patients and the outcomes of stroke patients treated with clopidogrel. Close to 300 patients were studied using genetic testing, and the results found that almost 20% of the patients were poor metabolisers, while close to half of the patients were intermediate metabolisers.



Preliminary analysis showed that patients who were poor clopidogrel metabolisers tend to have higher rates of recurrent stroke compared to those who were intermediate or good clopidogrel metabolisers. If these results are confirmed in larger studies, it would make a big difference to the way we prescribe medications and our stroke patients' outcomes.

To improve clinical outcomes for all stroke patients, Dr Tham hopes to gain more funding support to conduct larger studies to assess:

- the effect of clopidogrel on intermediate metabolisers
- which alternative medications would be more effective for poor metabolisers

**We are very thankful for this donation, which has been very valuable in contributing to our knowledge on clopidogrel metaboliser status in our Asian population. It will help us to adjust our clinical practice to ensure the best outcomes for our stroke patients.**

**Dr Carol Tham**  
Consultant  
Department of Neurology

## Improving Health Outcomes Through Team-Based Care

**The IPECP programme is promising and has potential for wider impact. Ultimately, we hope that the lessons learnt can help our fellow healthcare institutions locally and internationally as they embark on their own IPECP journeys.**

**A/Prof Kevin Tan**  
Education Director



The team steering the Inter-Professional Education programme is led by A/Prof Kevin Tan and A/Prof Nigel Tan (second row, second and third from the left respectively).

Led by A/Prof Nigel Tan, Deputy Group Director, Education, SingHealth and A/Prof Kevin Tan, Education Director, NNI, this programme aims to optimise the effectiveness of team-based healthcare by enhancing collaboration among healthcare professionals.

People living with complex neurological conditions often need care from multiple healthcare professionals with various expertise. Hence, well-coordinated team-based care with doctors, nurses and other healthcare professionals is ideal for providing high quality healthcare. According to the World Health Organisation, interprofessional education can promote interprofessional collaborative practice, where different healthcare professionals work together to deliver patient care and improve health outcomes.

**Thanks to a generous donation of \$450,000 from the Lee Foundation, the Interprofessional Education and Collaborative Practice (IPECP) programme was launched at NNI in 2019 to develop better team-based care.**

The donation will fund the programme's key activities:

- Collaboration with international experts in interprofessional education
- Understanding the current attitudes and practice of NNI healthcare teams
- Training and development of NNI healthcare teams
- Evaluation of the effectiveness of new or revamped team-based clinical programmes

The IPECP programme will improve existing and build new clinical teams and services, further raising the bar for patient care at NNI.



### Because You Trust

## NNI Fund

The NNI Fund raises funds to address and bridge the gap between existing government grants and support schemes to benefit NNI patients. The fund provides financial assistance to needy NNI patients and supports patient care, research and education in neuroscience.

For more information on the NNI Fund, please refer to page 4.

Eligibility: A grant-making committee evaluates projects for funding eligibility. For disbursement of financial assistance through the NNI Fund, outpatients of NNI will be assessed on their eligibility for funding by medical social workers for bills incurred at NNI. Only Singapore Citizens and Permanent Residents will be considered. Patients who have exhausted all other funding schemes will then be supported by the NNI Fund.



**\$1,176,543** Total gifts received in FY2019



**29** Needy patients benefited



**1** Assistive device supported



Set-up of One-stop Integrated Care Model to Optimise Care Delivery for Patients with Parkinson's Disease



Established a fund in support of neurosurgical needy patients



**229** Donors



**154** Staff donors

Our donors have kind hearts – many have expressed their desire to help needy patients in particular. My team works closely with the fundraising team and medical social workers, to reach out to our donors and review patients' requests for financial help on a case-by-case basis ensuring we do not miss out anyone in need. We always strive to do our best for our patients and knowing that I am helping them brings new meaning to my work.

All funds are strictly managed based on our donors' intents and in compliance with national guidelines\*. With the help of our donors' generous contributions, even more can be achieved in the areas of patient care, medical research or education to improve our patients' lives for the better.

\*For more information on the guidelines, refer to page 5.



Lee Sock Gek  
Deputy Director  
Finance Department

## NNI Health Research Endowment Fund (HREF)

The NNI Health Research Endowment Fund (HREF) supports neuroscience research to transform patient care. NNI scientists pursue neurological disease research, changing how we understand, prevent, diagnose and ultimately treat these diseases to advance medicine. From 1 April 2020, funds raised for neurological disease research at NNI are channelled towards the NNI Fund in support of the impending transition and transfer of the NNI HREF's funds to the NNI Fund.



**\$1,212,381** Total gifts received in FY2019



**>200** Ongoing research projects



**64** Staff donors



**190** Donors

## Because You Hope

# Aiming for Different and Better in the Post-COVID-19 Period

Post-stroke recovery is a long journey for patients and their caregivers - from rehabilitation and managing complications to preventing recurrent stroke. With post-stroke care, we hope to reintegrate patients into society with the best quality of life possible.

COVID-19 has disrupted this journey for many stroke patients. The safe-distancing and infection control measures mean the full spectrum of services needed for recovery are less accessible to many. This problem poses potentially permanent and adverse consequences affecting patients, their caregivers and families. COVID-19 may present a challenge, but it also provides an opportunity for us to provide innovative, improved and patient-empowered care.

Our stroke team of doctors, nurses, pharmacists, psychologists and therapists are working alongside community partners on the **Advancing Recovery and Care after Stroke Programme (ARCS)**.

The **ARCS** enables patients and their caregivers to:

- remotely participate in recovery programmes
- better understand post-stroke issues
- be empowered to take charge of their recovery journey
- easily access educational and relevant resources

This includes provision of videos and online reading material on post-stroke rehabilitation exercises, psychological support, medical adherence reminders and more. Part of these services will be delivered through a mobile application, which is in development.

With funding support, we will be able to:

- broaden its scope such as record and monitor patients' measurements (e.g. blood pressure) and activities to self-screen for consequences and complications of stroke
- introduce more content
- translate it into other languages



For more information on the Advancing Recovery and Care after Stroke Programme (ARCS) or how you can stand together with our patients to help them receive the support they need to improve their recovery, get in touch with Clarisse from the NNI Corporate Development office at [Clarisse\\_Lim@nni.com.sg](mailto:Clarisse_Lim@nni.com.sg).

**AI/Prof Deidre Anne De Silva**  
Head and Senior Consultant  
Department of Neurology  
(Singapore General Hospital Campus)

# Technology: Shaping the Future of Parkinson's Disease Research

The brain is the most complex organ in our bodies. It is like a super computer! If we can unravel the brain, I believe we can unlock the secrets of the universe.

My specialty in Parkinson's disease (PD) as both a clinician and scientist places me in a unique position - I am at the forefront of the latest research development of the disease and I also see and treat patients, enabling me to explain to patients and their families better, even when we cannot provide a cure at this moment.

PD is a progressive nervous system disorder that affects movement. It is a challenging and frustrating disease. Patients with PD are mentally self-aware, yet are stuck in a 'frozen' body.

As a result, they often suffer a lot of mental pain and anguish. I dream of the day that a cure can modify the progression of PD and reduce the disease burden on patients and caregivers. Recent breakthroughs in PD research such as the development of the human mini midbrain organoid derived from stem cells are improving our understanding of PD, and neuro-transplantation has the potential to treat PD.

With recent advancements and funding support, I envisage NNI pioneering technology that would result in new treatments for PD. My hope is to develop a bio-engineering platform, where engineering principles of design and analysis are integrated with medical technology, enabling us to study how the brain ages and why neurodegenerative diseases such as PD develop. At the end of the day, our passion for research is always driven by the desire to improve treatment outcomes for our patients.



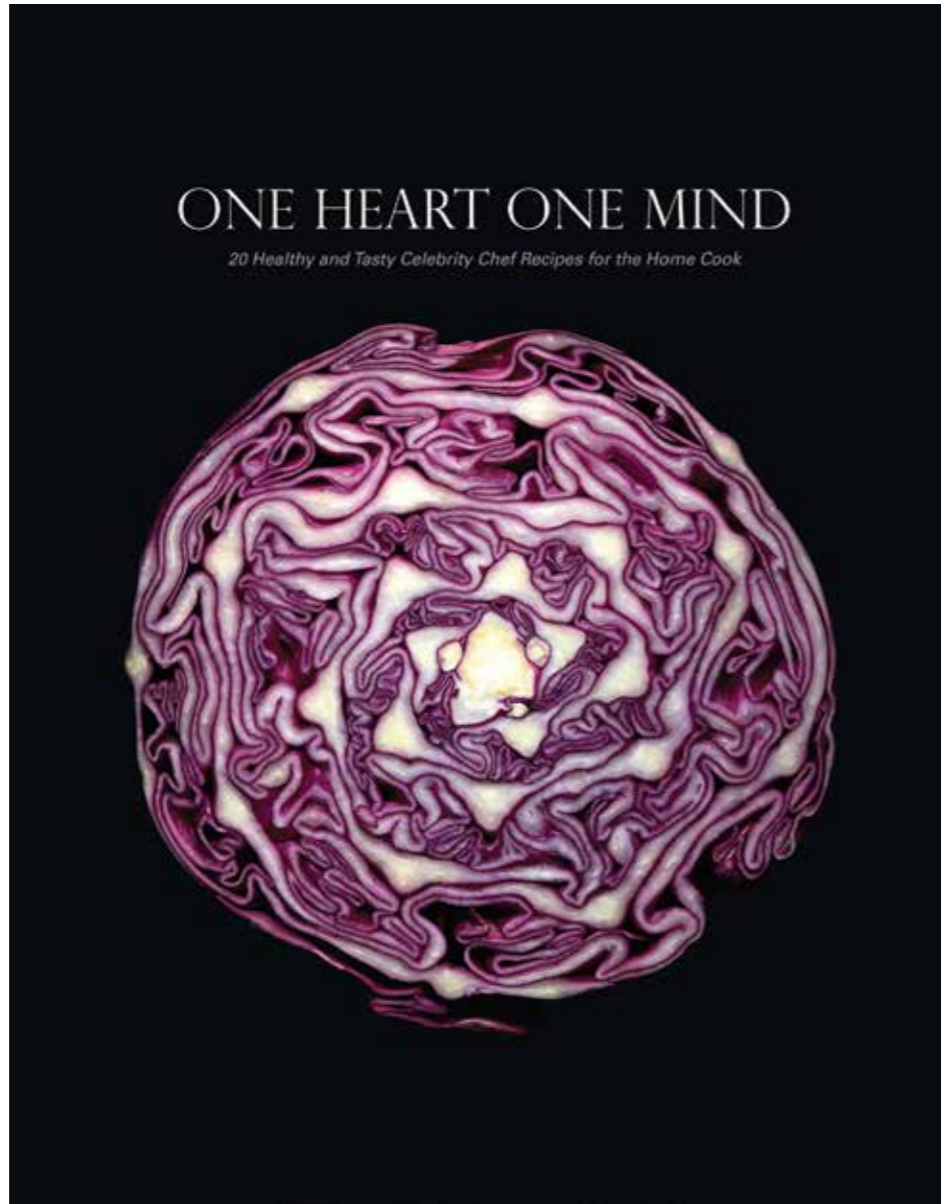
For more information on research in Parkinson's disease and other neurodegenerative diseases, do not hesitate to get in touch with Angela from the NNI Corporate Development office at [Angela\\_ML\\_Chen@nni.com.sg](mailto:Angela_ML_Chen@nni.com.sg).

**Prof Tan Eng King**  
Deputy Medical Director (Academic Affairs)  
and Director of Research

## Because You Support

# One Heart One Mind Recipe Book

In celebration of NNI's 20<sup>th</sup> Anniversary, a specially curated recipe book with 20 healthy recipes was produced in collaboration with 10 celebrity chefs. The book was launched at the NNI 20<sup>th</sup> Anniversary Gala Dinner where Deputy Prime Minister Mr Heng Swee Keat, graced the event as the Guest-of-Honour.



For more information on the recipe book, get in touch with the NNI Corporate Development Office at [CorpDev@nni.com.sg](mailto:CorpDev@nni.com.sg).



**01 Mok Kit Keung**  
Executive Chef, Shang Palace  
Shangri-La Hotel, Singapore

**02 Julien Royer**  
Chef and Owner, Odette  
Three Michelin Stars, 2019

**03 Manjunath Mural**  
Executive Chef, The Song of India  
One Michelin Star, 2019

**04 Diego Chiarini**  
Cook and Partner, OSO Ristorante

**05 Kenjiro 'Hatch' Hashida**  
Chef and Owner, Hashida Sushi

**06 Haikal Johari**  
Executive Chef, Alma by Juan Amador  
One Michelin Star, 2019

**07 Justin Quek**  
Chef and Owner  
Chinoiserie and JustIN Flavours of Asia

**08 Violet Oon**  
Chef and Culinary Curator, Singapore

**09 Zeng Feng**  
Executive Chef, Si Chuan Dou Hua Restaurant  
PARKROYAL on Beach Road

**10 Tony Khoo**  
Corporate Executive Chef  
Pan Pacific Hotels Group

# Events



## NNI 20<sup>th</sup> Anniversary Gala Dinner

(15 November 2019)

In celebration of NNI's 20<sup>th</sup> Anniversary, staff, partners and supporters gathered for an evening of celebration. Fundraising initiatives during the celebration included the specially curated recipe book, silent auction and outright donations which raised a total of \$168,532.



# Events



## NNI Brain Awareness Roadshow 2019

(18 – 19 May 2019)

The NNI Brain Awareness Roadshow 2019 at Toa Payoh HDB Hub is a bi-annual roadshow held in the heartlands of Singapore to raise awareness of neurological conditions. The roadshow also raised \$65,331 to support financially challenged patients at NNI.

## Care Concert VI by Echo of Love Society

(25 May 2019)

Echo of Love Society, a volunteer-run singing group, organised a fundraising concert for the second time to raise \$363,155 for the procurement of innovative delivery care system for patients with neurological conditions.



## Get in Touch

**Angela • Cheryl • Clarisse**

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[www.nni.com.sg/giving](http://www.nni.com.sg/giving)