



National  
Neuroscience Institute  
SingHealth



GIVING REPORT 2020/2021

*Content Page*



'Thank you' card specially designed by NNI Fund's beneficiary, Jasmine Yau, to convey her gratitude for your support of the NNI Fund.

Please refer to page 08 to read Jasmine's story.

Meet Our Chairman and Our Inspiring Board .....	4
Your Giving Helps Us Transform Lives .....	6
Your Giving Brings Hope .....	8
Your Giving Makes Better Care Possible .....	10
Your Giving Empowers .....	11
Your Support Can Help Us Succeed .....	12
Your Support is Our Greatest Strength .....	14
Your Giving is an Inspiration to Us .....	16
Look Who's Joining Our NNI Family .....	17
Your Giving Goes a Long Way .....	18
Join Us as a Corporate Partner .....	20

## Meet Our Chairman

2020 was a year like no other. COVID-19 affected all our lives, changing the way we work, live and play. Many staff from the National Neuroscience Institute (NNI) spent time at the frontline, swabbing and treating COVID-19 patients during the peak of Singapore's outbreak while others stayed back and developed innovative solutions such as video consultations to ensure our patients could continue to receive the care they need from the safety of their homes.

Similarly, we had to change the way we fundraise for NNI Fund, pivoting from traditional large scale events such as gala dinners to online solutions. This resulted in the inaugural 'One Heart, One Mind' Hope Hamper Draw in November and December 2020, which raised close to \$80,000 thanks to the generosity of the many companies that donated 160 hampers for the draw and participants who gave to the cause.

Every crisis creates an opportunity and we seized the online shift to focus our efforts on raising awareness of neurological conditions through the launch of our Facebook page and the new NNI Fund ambassador, Denni.



NNI campuses and partner sites across Singapore



Your donations to NNI Fund support our patients through patient care, medical research or education, meeting the greatest needs we have at NNI.

Patients like Jasmine and Bee Lian who benefitted from your kind generosity to rise above their physical challenges inspire us with their courage and tenacity. You can refer to pages 08 and 09 to read their full stories.

On behalf of our patients and the NNI Fund, thank you for journeying with us through thick and thin to transform the lives of persons with neurological conditions and we look forward to your continued support.

*Seng*  
Yours Gratefully  
Assoc Prof Au Wing Lok  
Medical Director, NNI  
Chairman, NNI Fund Committee

## ... and Our Inspiring Board



Mr Seng Han Thong



Mr Tan Puay Hiang



Mr Tan Pheng Hock



Ms Chang Hwee Nee

The Chairman and members of the **NNI Fund Committee** have oversight of the financials, fundraising and grant making activities of the NNI Fund, driving the strategic direction for fundraising of **patient care, medical research** and **education** causes at the NNI Fund. The Committee will assess the eligibility of projects and disbursement of funds.



Assoc Prof David Low Chyi Yeu



Ms Goh Poh Kee



Prof Tan Eng King

*Your Giving Helps Us Transform Lives*



National Neuroscience Institute (NNI) is the national and regional specialist centre for conditions of the **brain, spine, nerve and muscle**. NNI serves close to 80% of Singapore's patients with neurological conditions, and offers treatment for over 20 subspecialties.

The NNI Fund is the official fundraising arm of NNI and part of the SingHealth Fund (SHF). Since its formation in 2017, NNI Fund has been supporting the NNI in the areas of patient care, medical research and education towards transforming lives of persons with neurological conditions such as dementia, stroke, Parkinson's disease and brain tumour. All donations to NNI Fund are used in accordance to the donors' intents for neuroscience causes.

The NNI Fund supports NNI's **3 pillars** to help our patients cope with their conditions better:



### Patient Care

Enhances patient care through the innovation of treatment methods, care models and equipment for neurological conditions; also supports financially challenged patients with their medical bills comprising medication, consultations, therapy sessions and assistive devices to support better breathing and mobility.



### Medical Research

Accelerates medical research discoveries to better understand, prevent, diagnose, and treat neurological conditions. Research efforts will help to advance medicine and ultimately, transform patient care.



### Education

Supports the medical training of healthcare professionals to be equipped with up-to-date treatment methods. Advancement in education will raise the next generation of neuroscience leaders in improving the quality of care for neurological conditions.

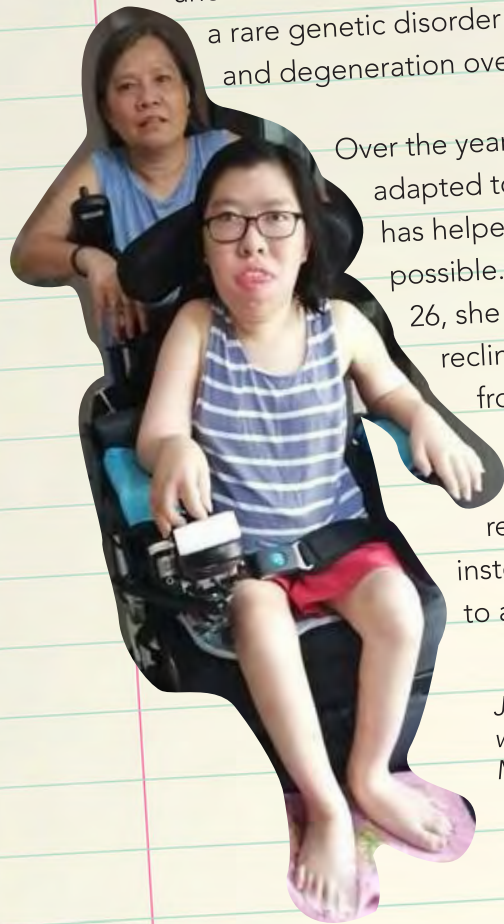
## Your Giving Brings Hope

### Jasmine Yau

When Jasmine was one, her parents noticed that she was still not able to stand or flip over. They took her to a specialist and Jasmine was diagnosed with spinal muscular atrophy, a rare genetic disorder which causes muscle weakness and degeneration over time.

Over the years, Jasmine and her family have adapted to her condition and technology has helped her remain as independent as possible. Last year, when Jasmine turned 26, she received her first motorised reclining wheelchair with the support from NNI Fund. It is more convenient to use than her old wheelchair as it allows Jasmine to recline and relax her muscles when she is tired instead of having to be transferred to a bed.

Jasmine on the motorised wheelchair with her mother, Monica



“

Thank you for helping me buy the motorised wheelchair. I am much more comfortable in it and can even control it on my own for short distances.

”



A passionate artist, Jasmine attends digital art lessons at the Muscular Dystrophy Association (Singapore). This piece is titled "Singapore is an Island", which shows Jasmine and her friend appreciating Singapore's iconic landmarks.



'Thank You' note written by Sing Choy (above), Bee Lian's husband and main caregiver.

"Thank you for helping our family pay for the medical bills. It means a lot to us."

### Ong Bee Lian

Bee Lian has neuromyelitis optica, an autoimmune condition which causes the body's immune system to damage the spinal cord and nerves of the eyes. It all began seven years ago when she felt a numbness in her right leg. Now at age 56, Bee Lian is unable to move her arms and legs, relies on a wheelchair to move around and uses a ventilator every night to help her breathe.

Her husband had to leave his job as a security guard to look after her full-time. Paying for Bee Lian's sight saving medication is challenging as their son is currently looking for a job and their daughter is studying at the Institute of Technical Education.

## Your Giving Makes Better Care Possible

### Redefining Risk Identification of Cerebral Aneurysms with Technology

A cerebral aneurysm is a weak or thin spot on blood vessels in the brain that balloons out and fills with blood. It can rupture any time and cause bleeding, leading to serious health consequences or even death.

Neurosurgeons face the challenge of balancing the risk of an aneurysm rupturing against the risk of treating it. Risk stratification strategies currently include looking at the aneurysm size and location through Magnetic Resonance Imaging (MRI) scans, but this is not detailed enough.

As part of the Neurosurgery Cerebrovascular Programme, the purchase of a Computational Flow Dynamics (CFD) software can group patients according to their risk level of aneurysm rupture.

Thanks to the bi-plane interventional angiography system with 4D imaging capabilities at the NNI Endovascular Centre, specialists can now retrieve detailed images of the brain to identify different blood vessels and blood flow patterns during procedures. With the integration of CFD software to enable further risk stratification of cerebral aneurysms, patients can look forward to improved clinical outcomes.



*Dr Vincent Ng*  
Senior Consultant, Department of Neurosurgery, Co-Director, Endovascular Centre and Co-Director, Joint Neurovascular Service, NNI

“We are very grateful for the donation, which will greatly help our clinical intervention of cerebral aneurysms to improve outcomes for patients.”

## Your Giving Empowers

### The New Way Forward with Team-Based Care

It takes a well-coordinated team of various healthcare professionals to provide holistic care. Every one of them plays an important role in helping patients with complex neurological conditions cope better with their conditions.

In February, the Persistent Post-Concussion Clinic was set up as part of NNI's Interprofessional Education Programme in Healthcare funded by the Lee Foundation. The medical team uses principles of Interprofessional Education and Collaborative Practice, where healthcare professionals work together closely on a patient's care plan to improve health outcomes. Prior to a patient's clinic session, the neurosurgeon, nurse, physiotherapist and occupational therapist come together to share their individual assessments, interventions and plans for the patient. A shared care plan is then formulated by the medical team.

Through coordinated team intervention, the medical team has found that early identification of symptoms such as vertigo and headache helps patients return to work and their usual activities earlier.

The Interprofessional Education Programme Co-Directors Assoc Prof Nigel Tan, Deputy Group Director, Education (Undergraduate), SingHealth and Assoc Prof Kevin Tan, Education Director, NNI plan to share this interprofessional learning and care model with other institutions in the SingHealth cluster, shaping patient care across disciplines for better health outcomes.



An interprofessional team working together to deliver care



*Ng Suan Gek*  
Senior Nurse Clinician - Advanced Practice Nurse, Department of Nursing, NNI

“Through these discussions, I have gained a better understanding on the non-pharmacological ways in helping patients with post-head injury symptoms. I also learnt about the various assessment tools and techniques used by the therapists, which I can apply while assessing these patients.”

Your Support Can Help Us Succeed

### Diagnosis of Brain Injuries with Artificial Intelligence (AI)

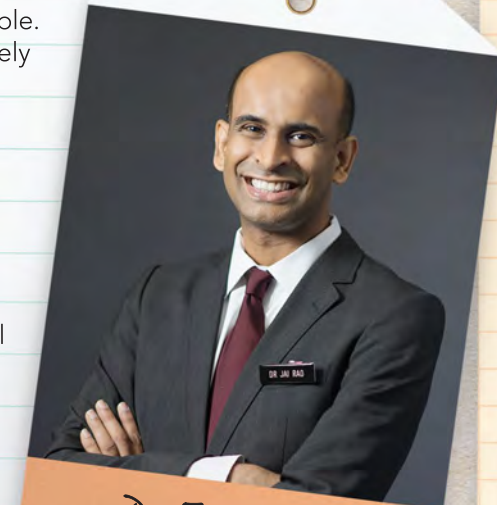
Traumatic Brain Injury (TBI) is the leading cause of trauma-related deaths in Singapore. It usually results from a violent blow or jolt to the head or body, and those who survive can face significant disability and socio-economic costs.

The first step of diagnosis involves a Computed Tomography (CT) scan of the brain. NNI takes 70 to 100 brain scans every day, representing a large number of scans for neuroradiologists to interpret. It is crucial that head injury CT scans with urgent, abnormal findings are communicated to the treating doctors as fast as possible. This enables treatment to be administered immediately for improved patient recovery and outcome.

With funding support, we can develop an Artificial Intelligence (AI) algorithm to speed up the diagnosis of TBI. The AI algorithm will enable CT brain scans to be diagnosed automatically and the diagnosis will be sent to the treating doctor over encrypted instant messaging systems. With this new system, diagnosis of a brain scan will only take seconds. Time saved will allow clinical intervention to take place as soon as possible, maximising the chances of recovery for the patient with TBI.



**Dr Justin Ker**  
Associate Consultant,  
Department of  
Neurosurgery, NNI



**Dr Jai Rao**  
Senior Consultant,  
Department of  
Neurosurgery, NNI

### Person-Centred Care for Young-Onset Dementia

Dementia affects predominantly patients older than 65 years but NNI is increasingly seeing more people aged between 35 and 65 years with dementia symptoms. Over the last 10 years, the number of patients with Young-Onset Dementia (YOD) has significantly increased by 300%, with close to 200 new patients seen at NNI in 2019.

The Supportive Care and Holistic Intervention in Early-Onset Dementia (SHIELD) study will be the first in Singapore to investigate palliative care in YOD. SHIELD aims to understand and manage the complex psychosocial issues faced by persons with YOD and their families from the time of diagnosis until they pass on. These issues include loss of employment, raising younger children and dealing with an unexpected change of the future.

With funding support, we will be able to establish a unique telephone-based supportive care intervention for recently diagnosed YOD patients and their caregivers with comprehensive measurement scales and evaluation tools to assess their holistic well-being.

Through holistic intervention tailored for the unique needs of YOD patients and their caregivers, patients can receive individualised and person-centred supportive care throughout their disease journey. Results from the SHIELD study will also have broad and long-term impact in improving the quality of life for patients with YOD and their families, while establishing a blueprint for similar interventions of other neurodegenerative conditions as well.



**Dr Adeline Ng**  
Deputy Director, Research (Clinical  
Research) and Senior Consultant,  
Department of Neurology, NNI

For more information on the proposals listed in pages 12 and 13 or how you can stand together with our patients to help them receive the support they need to manage their conditions better, get in touch with Clarisse from the NNI Corporate Development Office at [Clarisse\\_Lim@nni.com.sg](mailto:Clarisse_Lim@nni.com.sg).



*Your Support is Our Greatest Strength*



35

Needy patients benefitted



5

Assistive devices supported



574

Donors



185

Staff donors

**\$628,736**  
Total gifts received in FY2020

For more information on the NNI Fund, please refer to page 06.

**NNI Fund**

The NNI Fund raises what is needed to address and bridge the gap between existing government grants and support schemes to help patients cared for by NNI to cope with their conditions better. The fund seeks to enhance patient care, provide financial assistance to patients who have exhausted all funding schemes; advance medical research in neuroscience and nurture the next generation of neuroscience leaders.

**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. Singapore citizens and permanent residents who have exhausted all other funding schemes will be supported by the NNI Fund.



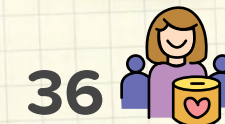
>50

Research grant funded projects



>140

Clinical trials and research studies



36

Donors



22

Staff donors

**\$154,060**  
Total gifts received in FY2020

**NNI Health Research Endowment Fund**

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. Funds raised for neurological disease research at NNI are channelled towards the NNI Fund in view of the impending transition and transfer of the NNI HREF's funds to the NNI Fund.

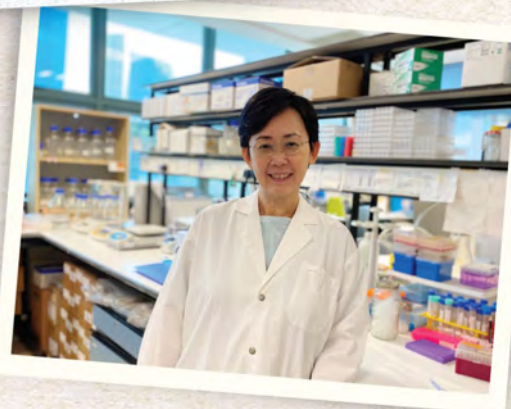


## Your Giving is an Inspiration to Us

“Medical research is important in changing lives. As a researcher, giving back to research gives me a sense of ownership. I realised that by giving back to the NNI Fund, I can also play a part to help fund the development, exploration and testing of new therapies to improve patient care.”

*Dr Ivy Ho*

Principal Investigator, Molecular Neurotherapeutics Laboratory, Research, NNI



“It saddened me to see patients who could not afford to pay for the medical investigations they needed, such as scans and blood tests. This led me to make my first donation to the NNI Fund. I feel content seeing the smiles on our patients' faces, knowing my contribution has helped ease their burden.”

*Nur Nazaria Baharudin*

Senior Staff Nurse, Department of Nursing, NNI



“Giving to the NNI Fund is my way of reminding our patients that they are not forgotten. I believe any form of giving can be a symbol of hope to the beneficiaries, and I am grateful to be able to play a part in contributing back to the community.”

*Ma Guangrui*

Senior Engineer, Facilities and Biomedical Engineering, NNI



## Look Who's Joining Our NNI Family...

### Meet Denni, our NNI Fund ambassador!

Denni is a young neuron who is passionate about science and making new discoveries to improve the lives of others. On a trip to NNI, Denni met a number of patients who are living with challenging conditions that affect the brain, spine, nerves and muscles.

This helped Denni better understand the impact these neurological conditions have on patients' lives. The chatterbox that he is, Denni loves to tell his peers about his adventures with his friends from NNI. During these conversations, Denni also shares his knowledge of neurological conditions, particularly **dementia, stroke, Parkinson's disease, and brain tumour**. One day, Denni hopes to be a neuroscience researcher to help find a cure for neurological conditions.



Scan the QR code to follow Denni on his adventures and be updated on the latest news of the NNI Fund by giving a 'like' on our Facebook page!



#### Fun fact!

Denni's name is a combination of 'Dendrite', which is the branched extension of a neuron, and 'NNI'.

Your Giving Goes a Long Way



### Lucky donors walking away with attractive prizes

The inaugural 'One Heart, One Mind' Hope Hamper Draw 2020 took place in November and December last year with **160** hampers up for grabs! In collaboration with 29 corporate partners for the sponsorship of hampers, a minimum donation of \$4 entitled the participants to a chance at the draw.

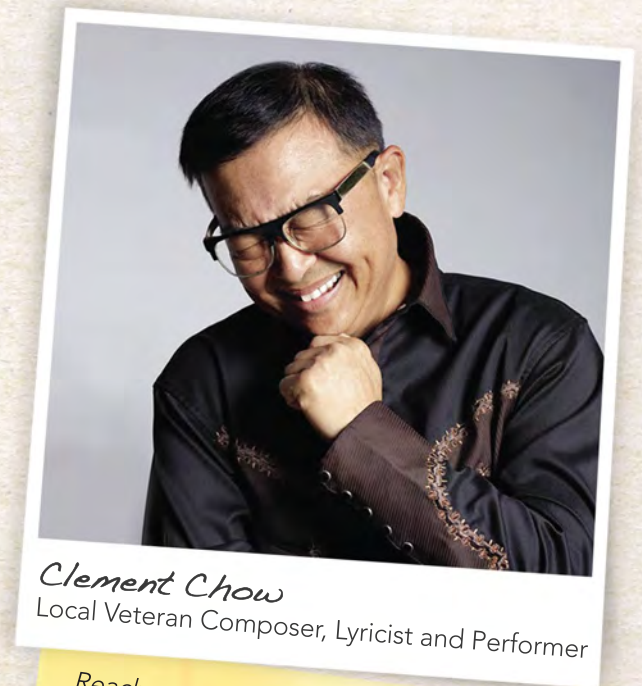
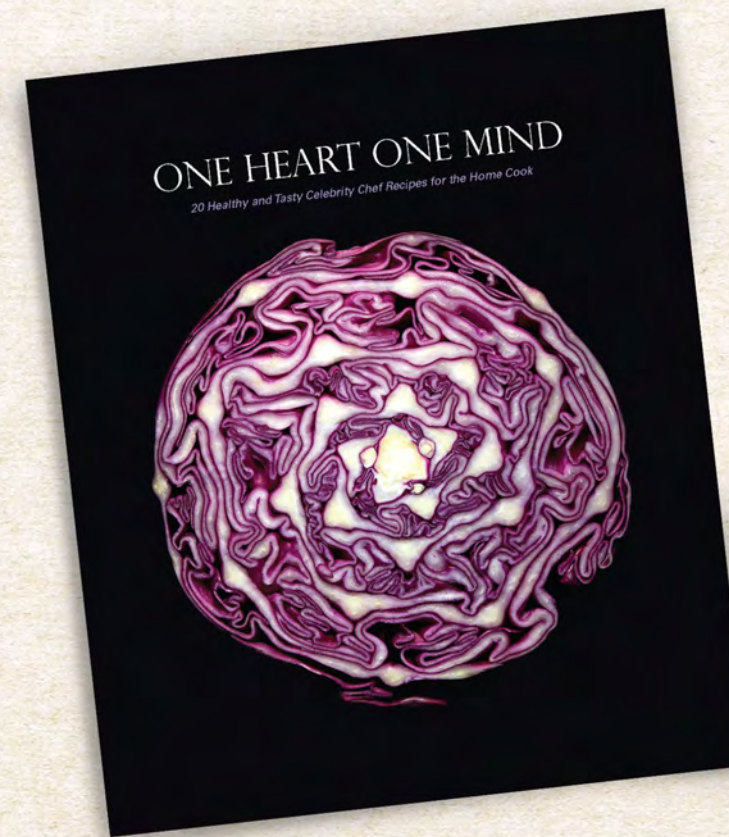
More than **\$77,000** was raised to support patient care, medical research, neuroscience education and other unmet needs at the NNI Fund.

### Specially Curated Online Food Series by Clement Chow in Support of the NNI Fund

In celebration of NNI's 20th Anniversary in 2019, a specially curated recipe book with 20 healthy recipes was produced in collaboration with 10 celebrity chefs. Local veteran composer, lyricist and performer, Clement Chow, also starred as the special guest home cook in the recipe book. To top this off and as part of his additional contribution to NNI Fund, Clement also helped to produce a video series featuring a selection of these recipes on NNI Fund's newly launched Facebook page.



Scan the QR code to visit the NNI Fund Facebook page to sharpen your cooking skills with these celebrity chef recipe videos!



**Clement Chow**  
Local Veteran Composer, Lyricist and Performer

Reach out to [CorpDev@nni.com.sg](mailto:CorpDev@nni.com.sg) to find out how you can get a copy of the recipe book!

*Join Us as a Corporate Partner!*

**Create a culture of giving in your organisation with the NNI Fund!**

The 'One Heart, One Mind'

**Corporate Partnership Programme**

can be tailored to meet the needs of your organisation and staff. Donations to the NNI Fund will go towards patient care, medical research or neuroscience education to support persons with brain, spine, nerve or muscle conditions caused by dementia, stroke and other neurological conditions. All outright donations to the NNI Fund are eligible for 250% tax deduction till 31 December 2023.

A **Corporate Social Responsibility Programme**

can also be developed for your organisation and staff to participate in voluntary work and help make a difference to patients. Contact us today at [CorpDev@nni.com.sg](mailto:CorpDev@nni.com.sg).



Our heartfelt thanks to all our donors and corporate partners for your contributions!

*Yours Gratefully,*  
Your friends at NNI Fund  
XOXO





*Forget-me-not:*  
(Myosotis-Scorpion grasses)  
The flower symbolises  
remembrance. It is a promise  
of long-lasting connection that  
endures all challenges and  
measure of time.

## *Keep In Touch*

Angela • Cheryl • Clarisse • Irsalina

Corporate Development Office  
National Neuroscience Institute  
11 Jalan Tan Tock Seng, Singapore 308433  
Email: [CorpDev@nni.com.sg](mailto:CorpDev@nni.com.sg)  
Find us: [www.nni.com.sg/giving](http://www.nni.com.sg/giving)  
Connect with us: [www.facebook.com/nnifund](http://www.facebook.com/nnifund)