SINGAPORE — Singapore’s first national brain bank resource to study neurological disorders was launched on Wednesday (27 November).
Brain Bank Singapore is co-funded by Nanyang Technological University (NTU) Lee Kong Chian School of Medicine (LKCMedicine), National Healthcare Group (NHG), and National Neuroscience Institute (NNI).

Hosted at LKCMedicine, the brain bank aims to be a research repository for brain and spinal cord tissues from donors who have passed away, said a joint statement by the three institutions.

Donations from both healthy donors and from those with neurodegenerative conditions and neurological disorders will be stored and used for ethically-approved research.

The brain bank aims to recruit about 1,000 brain donors over the next four years, the statement said, adding that it has recently begun donor recruitment after receiving approval from the SingHealth and NTU’s institutional review boards.

LKCMedicine’s Prof Richard Reynolds, who is also Professor of Cellular Neurobiology at Imperial College London, which jointly established LKCMedicine with the NTU, will head the brain bank.

“We now know that genetic background is very important in determining the onset and course of neurodegenerative and neuropsychiatric disorders. It is essential that neuroscientists in Singapore have access to brains from patients with the appropriate genetic and ethnic background,” said Prof Reynolds.

NHG Group CEO Prof Philip Choo highlighted the timeliness of research into neurological conditions – such as stroke, Parkinson’s disease, and dementia – given Singapore’s aging population. One in four here will turn 65 years old by 2030.

Age-related neurological disorders are expected to increase with Singapore’s increased life expectancy of 84.8 years. These disorders rose from the eighth leading cause of Disability-Adjusted Life Years (DALYs) in 1990 to fifth in 2017, according to a report entitled “The Burden of Disease in Singapore 1990-2017”.

“It is our hope that establishing a robust data bank and conducting safe brain tissue research will expand our understanding of the underlying disease mechanisms of neurological disorders,” said Prof Choo.

Singapore’s first brain bank will bring the local medical community one step closer to understanding brain disease, said NNI medical director associate professor Ng Wai Hoe.

“With this knowledge, we can make earlier diagnosis, improve care outcomes and raise the quality of life for our patients. This will help Singaporeans live long and live well,” said Prof Ng.