

New brain bank to boost research into neurological disorders

Researchers can access Asian brain tissues to develop treatments; facility seeking donors

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Last week, Ms Lovely Fernandez, 41, signed up to donate her brain after her death to Singapore's first brain bank.

"I was diagnosed with multiple sclerosis, a disease with no cure that has kept the left side of my body numb for the last 10 years. I hope that by donating my brain, scientists can find a cure for others," she said yesterday.

She was at the launch of Brain Bank Singapore in Novena, which gives researchers access to Asian brain tissues and could improve the

treatment of brain disorders here.

The \$500,000 facility, located on the 11th floor of the Lee Kong Chian School of Medicine, is completely reliant on donors giving their brains post-mortem for research.

It has set an initial target of getting 1,000 people to sign up as donors within the next four years. Factoring in mortality rates, this will work out to about 20 to 30 brains making their way to the facility each year.

The brain bank is believed to be the first of its kind in South-east Asia, with similar centres already established in China, Europe and the United States.

Scientists say the bank is important as there are significant differences in the way Caucasian and Asian brains are affected by neurological disorders such as Alzheimer's disease and Parkinson's disease. This means research and treatments developed in the West are not directly applicable to the Singapore context.

Professor Richard Reynolds, the director of the new brain bank, said: "We now know that genetic background is very important in determining the onset and course of such disorders. It is essential that neuroscientists in Singapore have access to brain tissues from patients with the appropriate genetic and ethnic background."

Previously, scientists here could rely only on imported non-Asian brain samples, animal tissues, or



A projection of the "Anatamage", a virtual dissection tablet, during the launch of Singapore's first brain bank, named Brain Bank Singapore, at the Lee Kong Chian School of Medicine yesterday. ST PHOTOS: KUA CHEE SIONG



Ms Lovely Fernandez signed up to donate her brain after her death, as she hopes to help scientists in their research.

brain scans. Brain scans could not reach the molecular level with current technology, while animal tissues and non-Asian samples did not map on perfectly to Asian brain behaviour, neurologists said.

The brain bank, which took two years to set up, is a collaboration be-

tween Nanyang Technological University, the National Neuroscience Institute and the National Healthcare Group.

Upon a donor's death, Prof Reynolds said the brain will be extracted within 24 hours, quick enough for bodies to be returned to families for funeral proceedings.

Brain tissues will then be stored in a minus 80 deg C environment, preserving them for decades, he added.

Brain Bank Singapore said the brain tissues collected will be anonymised, with donors' personal details kept strictly confidential.

Researchers who apply to use the tissues will also have to be vetted by ethics boards.

To date, three people have signed up for the scheme, after the recruitment process began at clinics and community events last week.

One of them is Ms Fernandez, who did so despite her family's misgivings.

She said: "If I die at 55 or 60, my brain will still be relatively young. Instead of my body just lying there, I would feel much more useful if it could help scientists."

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