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#### **MEDIA RELEASE**

ARTIFICIAL INTELLIGENCE (AI) TO ENHANCE DIAGNOSTICS FOR NEUROLOGICAL CONDITIONS – NATIONAL NEUROSCIENCE INSTITUTE (NNI) SIGNS MOU WITH IOTA MEDTECH

- All technology to augment diagnostics for neurological conditions such as brain injury, in acute treatment phase
- NNI signs MOU with IOTA Medtech Pte Ltd, a Singapore medical technology firm specialising in AI and Robotics

**Singapore**, **11 June 2019** – More than 500 patients are affected by brain injury in Singapore every year. Brain injuries are the highest cause of disability and death in adults under 40 years old in Singapore. National Neuroscience Institute signs MOU with lota Medtech to co-develop Artificial Intelligence (AI) diagnostics and clinical solutions to improve outcomes for patients with neurological conditions such as brain injury.

## **Augmenting Brain Injury Acute Treatment with AI**

The National Neuroscience Institute (NNI), national specialist centre for neurological conditions and Iota Medtech Pte Ltd (Iota Medtech), a Singapore company specialising in the next-generation AI and surgical robotics are collaborating to develop diagnostics solutions for radiological efficiency and patient outcomes. The partnership will leverage on the clinical and research expertise from NNI, augmented by the engineering, software development, and regulatory affairs support from Iota Medtech.

Harnessing AI technology, Iota Medtech will develop software solutions addressing unmet needs in neuroradiology. An immediate area of collaboration is the utilisation of an AI algorithm to help pick up and classify abnormalities in brain scans, specifically acute haemorrhages more rapidly. This complements the role of radiologists, by flagging cases that require immediate medical attention amidst the high volume of brain scans. With the time from diagnosis to treatment minimised, treatment can be given more rapidly.

Associate Professor Ng Wai Hoe, Medical Director, NNI, said, "NNI is looking forward to collaborate with IOTA Medtech and advance diagnostics for better therapeutics through AI technology. This partnership presents new diagnostic and therapeutic possibilities in the management of conditions such as traumatic brain injury for better neuroscience care." This partnership brings forth new possibilities for healthcare delivery, such as the potential application of more accurate and rapid diagnosis to initiate faster treatment.

"With rising numbers in Singapore affected by neurological conditions, we must continue to improve and innovate care. A main concern for head injuries, currently the leading cause of disability and death for adults under 40 in Singapore, is time reduction in the acute treatment stage. Employing the use of AI technology can save critical time during diagnostics and transform care outcomes for patients," added A/Prof Ng Wai Hoe.

Mr. Benjamin Hong, CEO of lota Medtech Pte Ltd, elaborates, "We are extremely excited to establish this partnership and collaboration with NNI. We believe that this collaboration will result in viable solutions to improve on current methods through the use of cutting-edge AI technology."

Mr. Hong also added, "By combining our expertise and embracing the burgeoning field of artificial intelligence in the clinical setting, we are also bringing AI solutions beyond Singapore's shores to the world stage, addressing similar concerns in other regions. We foresee IOTA Medtech advancing the potential of AI solutions for the global healthcare landscape."

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### **About the National Neuroscience Institute (NNI)**

The National Neuroscience Institute (NNI) is the national specialist and regional centre of care for the brain, spine, nerve and muscle. NNI offers Neurology, Neurosurgery and Neuroradiology services with advanced technology and multi-disciplinary care teams. Committed to improving patients' lives, NNI aims to shape neuroscience for a better tomorrow through innovation, research and education. NNI is a member of the Singapore Health Services (SingHealth) – a public healthcare cluster which manages four hospitals, five specialty centres, eight polyclinics and a network of community hospitals. For more information, visit www.nni.com.sq.

### **About IOTA Medtech Pte Ltd**

lota Medtech is a medical technology company based in Singapore, with a mission to use artificial intelligence and robotics to transform healthcare. Iota Medtech believes that embracing technology is the next step forward in healthcare, and together with healthcare professionals and world-class industry partners, we are working to translate research into products that can improve on current diagnostic and treatment options. For more information, visit www.iotamedtech.com.

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# **Brain Injury**

- Traumatic brain injury, or more commonly called "head injury", is a broad term that describes a variety of injuries and damages to the scalp, skull, brain and underlying tissue and blood vessels in the head.
- In Singapore, head injury is the leading cause of disabilities and deaths in adults under 40 years of age. As a result, it has significant impact on the brain-injured patient, family and society. Head injury occurs most commonly after motor vehicle accidents, falls at home or at work, acts of violence, sports and recreational injuries.
- Traumatic brain injury can cause a variety of complications. The risk of complications increases with the severity of the trauma and the degree of brain damage caused. In severe brain injuries, with no treatment, the chances of permanent brain damage are high.
- However, even mild traumatic brain injury can result in disabilities that interfere with social interactions, employment, and everyday living. Traumatic brain injury can cause a variety of problems including long-term physical, cognitive, emotional, and behavioural complications.