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NUS SINAPSE director elected as Fellow of prestigious NAI

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Personalised medicine expert is the only Singapore-based academic inventor to receive this esteemed professional accolade this year

Singapore– Professor Dean Ho, Director of the Singapore Institute for Neurotechnology (SINAPSE) at the National University of Singapore (NUS), has been elected as a Fellow of the United States National Academy of Inventors (NAI), the highest professional accolade for academic inventors.

Prof Ho, whose research covered artificial intelligence (AI) and its application towards personalised and precision medicine, as well as emerging areas of nanomedicine and nanodiamond-based drug delivery, is recognised for demonstrating a prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on quality of life, economic development, and welfare of society. He is the only Singapore-based academic inventor to be elected as an NAI Fellow this year. This is also the first time an NUS academic has achieved this professional distinction.

The Fellowship will be conferred on 11 April 2019 as part of the Eighth NAI Annual Meeting which will be held at the Space Center Houston in Houston, Texas.

“I am deeply honoured to be elected as an NAI Fellow, and to join a distinguished community of innovators who have pioneered industry-changing advances across a broad spectrum of disciplines. I look forward to advance the fields of medicine, AI, and digital health with my team of dedicated and innovative researchers, and to create a positive impact for the future of patient care,” shared Prof Ho, who is also a Provost’s Chair Professor from the Biomedical Engineering and Pharmacology departments at NUS, as well as a member of the Biomedical Institute for Global Health Research and Technology (BIGHEART) at NUS.

Prof Ho was nominated for his role in developing CURATE.AI, a powerful artificial intelligence (AI) platform that drives personalised and precision medicine, and successfully translating it to multiple human studies. Currently, he is co-leading multiple combination therapy studies pertaining to oncology and transplant medicine to dynamically modulate multi-drug regimens with CURATE.AI. These trials have already demonstrated a complete halt in disease progression, resulting in

durable patient responses that far outperformed conventional dosing. CURATE.AI trials have also shown improvement in patient treatment outcomes in preventing organ transplant rejection.

This prestigious accolade is also a tribute to Prof Ho's pioneering work in the development of platforms using nanodiamonds for drug delivery and imaging, and for initiating a first-in-human clinical trial to validate a nanodiamond-biomaterial device to enhance root canal therapy.

Reflecting on the inspiration behind his inventions, Prof Ho said, "The ability to take an idea and watch it evolve into a scalable platform that can directly improve patient outcomes has been a major driver of my enthusiasm for inventing new technologies. The pathway to realising a clinically impactful technology may involve a lot of troubleshooting, but the successful implementation of an idea that has taken years to bring to fruition is a deeply rewarding experience. It is most gratifying when a patient ultimately benefits from an approach which I am deeply involved in."

On top of being a prolific scientist, Prof Ho has also been very active in promoting technology transfer and commercialisation. He is Co-Founder and Chairman of KYAN Therapeutics, a clinical and revenue stage company that has commercialised CURATE.AI, and is advancing novel oncology and liver disease therapies towards the clinic. He has also advised multiple publicly traded technology companies and private equity/venture funds in the areas of technology development and investment management.

He was formerly President of the Board of Directors of the Society for Laboratory Automation and Screening (SLAS), a global drug development organisation comprised of senior executives from the pharmaceutical and medical device sectors, as well as academic visionaries. During his tenure, Prof Ho led a team to expand SLAS into Asia and Europe, and also established the SLAS Graduate Fellowship Grant Program with a generous funding of US$1 million to support graduate students pursuing careers at the intersection of drug development, diagnostics, and bioengineering.