



PRESS RELEASE

Temasek Life Sciences Laboratory Appoints New NRF Fellow to Study Diabetes and Neurodegenerative Diseases

3rd November 2014, Singapore - Temasek Life Sciences Laboratory (TLL) is pleased to congratulate Dr Koh Tong Wey for being awarded the 7th Singapore National Research Foundation (NRF) Fellowship. Dr Koh joined TLL as a Principal Investigator in September this year and he brings along his experience and expertise in the area of neurobiology and genetics where he will be focusing on the relationship between Type 2 Diabetes (T2D) and neurodegeneration in TLL.

Dr Koh aims to investigate the effect of insulin signaling on degenerating brains in flies which can help to improve an experimental insulin-based therapy for neurodegeneration. Dr Koh also aims to identify genetic variations that predispose a diabetic individual to neurodegeneration through the use of fruit flies as a model and subsequently identify the corresponding variations in humans.

Achieving these objectives will enable the identification of diabetes patients who are likely to develop neurodegenerative diseases and provide individualized preventive medical care. Dr Koh Tong-Wey is awarded the Singapore NRF Fellowship and it recognizes that his outstanding project proposal has high likelihood of a research breakthrough.

Dr Koh developed his interest in the relationship between T2D and neurodegeneration during his post-doc stint at Yale University. In humans, T2D is associated with a two-fold increase in risk of neurodegenerative diseases such as dementia. Hallmarks of T2D are high blood glucose and the failure of tissues to respond to insulin which may emphasize links between T2D and

neurodegeneration. Recent clinical trials on dementia patients involving brain-directed delivery of insulin showed promising preliminary results. Using fruit fly as a model, Dr Koh discovered that a T2D-like condition predisposes flies towards neurodegeneration. Thus, this suggests that the link between the two diseases is common to both flies and humans.

“It is my pleasure to join TLL and I look forward to interacting with the multi-national group of dynamic researchers to generate new research ideas,” said Dr Koh Tong-Wey. “My training in fly genetics and neurobiology allows me to tackle the fundamental aspects of Type 2 Diabetes and its associated neurodegenerative diseases. I hope that this basic research will be translated into clinical applications that can benefit the lives of diabetes patients, improve an experimental insulin-based treatment of dementia and other neurodegenerative disease and contribute positively to the society.”

Dr Koh received his Bachelor of Science (with Honors) in Cell and Molecular Biology from the National University of Singapore in 1996. He went on to work at the Institute of Molecular and Cell Biology from 1996 to 2001, where he received his Master of Science, before attending summer training at the Tata Institute of Fundamental Research (TIFR) in India. The short encounter with the fruit fly at TIFR has left Dr Koh fascinated in this model system and it led to his experimental use of fruit flies in many of his research work. Dr Koh received his Ph.D from the Baylor College of Medicine, Houston, Texas and thereafter, he pursued his post-doctoral programme at Yale University, where he studied how the sense of taste affects sexual behavior in fruit flies.

Professor Chan Soh Ha, Executive Director of TLL says, “We warmly welcome Dr Koh Tong Wey into the TLL research community. With his outstanding achievements and exposure, I look forward to the development of research breakthroughs from his team.”



Dr Koh Tong Wey is the recipient of several competitive awards and fellowships such as the Best Talk Award at the Cold Spring Harbor Asia Conference on Invertebrate Neurobiology in 2012 and the Best Graduate Student's Publication at Baylor College of Medicine, Department of Molecular & Human Genetics in 2004.

About Temasek Life Sciences Laboratory (TLL)

TLL, a beneficiary of Temasek Trust, is established in 2002 to undertake cutting-edge research in molecular biology and genetics utilising a broad range of model organisms. It is affiliated with the National University of Singapore and Nanyang Technological University. The research institute aims to create an environment which can attract the brightest young minds worldwide, support their research and challenge them to be leaders in their own fields.

For more information, please visit www.tll.org.sg

About National Research Foundation (NRF) Fellowship

The Singapore NRF Fellowship Scheme is a globally competitive programme to attract and root young scientists and researchers to conduct independent research in Singapore. It is open to all areas of science and technology. Outstanding young scientists and researchers of all nationalities are welcome to apply.

For more information, please visit <http://www.nrf.gov.sg/about-nrf/programmes/nrf-fellowship>

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