



Joint News Release

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NTU Singapore and Japan's RIKEN collaborate in human biology research to develop innovative healthcare solutions

Singapore's Nanyang Technological University (NTU Singapore) and Japan's flagship research institute in the natural sciences RIKEN are working together to advance research in human biology.

The two top research institutions in Asia aim to leverage their deep scientific expertise and state-of-the-art research facilities to establish a joint research centre each in Singapore and Japan.

The initial research projects will focus on how the mind and body interact, as well as understanding various diseases, especially during the pre-clinical phase when important feasibility testing and data collection are conducted.

NTU Chief of Staff and Vice President (Research), Professor Lam Khin Yong said, "This exciting collaboration will open fresh opportunities for RIKEN scientists to collaborate with NTU experts to explore new areas of research in human biology. Combining our strengths can spark off new ideas and insights. It will also provide our students with opportunities to be exposed to ground-breaking research by top scientists working in state-of-the-art facilities at both institutions.

"More importantly, the partnership will see the scientists work together to address major health challenges, such as diabetes, neurological and psychiatric diseases, for the betterment of society."

Mr Shigeharu Kato, Executive Director of RIKEN, said, "This agreement marks the start of the first research collaboration with NTU, one of Asia's leading universities. I am hopeful that in addition to developing the field of human biology, this collaboration will grow and expand to include the many other diverse RIKEN centers and NTU faculties as we strive together for important interdisciplinary research breakthroughs that will benefit all humanity."

Under the three-year agreement, a RIKEN-NTU Research Centre for Human Biology will be set up at NTU Singapore while a corresponding NTU-RIKEN Research Center will be set up at RIKEN in Japan.

Professor Balázs Gulyás from NTU Singapore's Lee Kong Chian School of Medicine and Dr Atsushi Iriki from RIKEN will serve as the Co-Directors of the research centres.

Several projects have been identified, involving about 20 researchers as well as students at a later stage.

One initial study aims to discover the complex mechanisms of how the mind and body interact, including how social stress affects the microorganism ecosystem in the intestines and vice versa. The results would lead to more naturalistic therapies based on understandings of how our cognitive functions are closely linked to bodily physical states.

Leveraging chemical engineering technologies and biomedicine, a research group aims to develop novel biomarkers for early predictive diagnoses and treatment of diseases. The researchers will also apply artificial intelligence, such as machine learning or big-data processing, to patients' digital medical records so that they can detect diseases early, before serious symptoms show.

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About Nanyang Technological University

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,500 undergraduate and postgraduate students in the

colleges of Engineering, Business, Science, Humanities, Arts, & Social Sciences, and its Interdisciplinary Graduate School. It also has a medical school, the Lee Kong Chian School of Medicine, set up jointly with Imperial College London.

NTU is also home to world-class autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI), Energy Research Institute @ NTU (ERI@N) and the Institute on Asian Consumer Insight (ACI).

Ranked 13th in the world, NTU has also been ranked the world's top young university for the last three years running. The University's main campus has been named one of the Top 15 Most Beautiful in the World. NTU also has a campus in Novena, Singapore's medical district.

For more information, visit www.ntu.edu.sg

About RIKEN

RIKEN is Japan's flagship research institute for basic and applied research. Over 2500 papers by RIKEN researchers are published every year in leading scientific and technology journals, covering a broad spectrum of disciplines including physics, chemistry, biology, engineering, and medical science. RIKEN's research environment and strong emphasis on interdisciplinary collaboration and globalisation have earned a worldwide reputation for scientific excellence.

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