

**FACILITY AT NTU AIMS TO TAILOR THERAPIES FOR INDIVIDUALS, HELP PEOPLE LEAD HEALTHIER LIVES**

# New centre to study how the environment affects genes

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**SINGAPORE** – Diseases such as diabetes and cancer cannot be explained by genes alone. Research in recent years has shown how genes are affected by one’s environment — the

food consumed, the air breathed and one’s lifestyle.

A new centre at Nanyang Technological University was launched yesterday to delve into such research, with the aim of tailoring therapies for individuals and identifying new biomarkers that can be used to help peo-

ple lead healthier lives.

The S\$9 million Singapore Phenome Centre already has several projects underway.

It is partnering Khoo Teck Puat Hospital and Tan Tock Seng Hospital to characterise factors that contribute to complications in diabetes, for one.



**A student demonstrating the use of the equipment at the Singapore Phenome Centre, which already has several projects underway. It is partnering Khoo Teck Puat Hospital and Tan Tock Seng Hospital, and also working with national water agency PUB.**

PHOTO: DARYL KANG

It is also working with national water agency PUB to investigate microbial products from waste water treatment systems.

A phenome is the sum total of phenotypes, which are “particular descriptions of the components of your body”, said Professor Jeremy Nicholson, director of the National Phenome Centre at Imperial College London, which will be working with the Singapore Phenome Centre. “Philosophically, the phenome is where genes meet environment.”

The Singapore Phenome Centre will be chaired by the dean of NTU’s Lee Kong Chian School of Medicine, Professor James Best. He said the centre intends to characterise the unique Asian phenotypes by working with doctors here in order to offer tailored therapies to patients.

“We also hope to identify new biomarkers that can be used at a population level to assist people to lead healthier lives.”

Most research on common global diseases such as diabetes was done in Europe and the United States, said NTU President Bertil Andersson.

“Diabetes in an Asian population — in a Chinese population like here — is very different. There is not much data for it. So, all the medicine we have for many diseases are for Western people, and not for Asian people,” he said.

“And Singapore is quite advanced today (in) research and medicine, so Singapore has a fantastic opportunity to elucidate how diseases are developed in an Asian population.”

The Singapore Phenome Centre is part of the NTU Integrated Medical, Biological and Environmental Life Sciences Cluster, which was also launched yesterday.

It will be led by Professor Staffan Kjelleberg, a world expert in environmental biology, microbial ecology and biofilm biology.

The new cluster offers a unique research environment that takes advantage of the “interface between life sciences and excellence in engineering to find solutions to health issues”, said Prof Kjelleberg.

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**Mr Bertil Andersson**  
NTU PRESIDENT