

A*Star, NUS team up to study liver disease in Asians

Research with Novo Nordisk focuses on illness that affects up to a third of S'poreans

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It is a disease that is estimated to affect up to one-third of Singapore's population and is rising in incidence in the region, yet little is understood about the illness in Asians.

In an effort to address this, the Agency for Science, Technology and Research (A*Star) and National University of Singapore (NUS) are teaming up with health-care company Novo Nordisk to study liver disease in Asian populations.

The new research collaboration, announced yesterday, will focus on one of the most common types of liver disease which affects more than a quarter of the global adult

population, called non-alcoholic fatty liver disease (NAFLD).

NAFLD is characterised by the building up of fat in the livers of people who consume little to no alcohol, and is often associated with obesity and Type 2 diabetes.

Over time, it can progress to a more severe form called non-alcoholic steatohepatitis in which liver scarring and inflammation set in.

Non-alcoholic steatohepatitis is among the leading causes behind the need for liver transplants worldwide. There are currently no approved therapies for treating NAFLD, with typical treatment recommendations centring around dietary and lifestyle changes.

As NAFLD tends to present differ-

ent characteristics in Asian people compared with Westerners, the research team aims to discover new molecular hallmarks and biomarkers of the disease specific to Asian populations in order to develop effective treatment strategies.

"Non-alcoholic fatty liver is increasing in incidence in Asia and very little is understood about the disease in our multi-ethnic population," said Associate Professor Dan Yock Young, head of the Department of Medicine at the NUS School of Medicine and the collaboration's lead researcher.

"This collaboration with our strategic partners offers us the opportunity to... develop better screening, diagnostic, predictive and effective therapies that can avert the complications of this disease for Asians."

Asian NAFLD tends to have a higher prevalence in leaner and younger individuals, compared with Westerners, for example.

Professor Patrick Tan, executive director of A*Star's Genome Institute of Singapore, also noted that there are currently no non-invasive diagnostic tests for NAFLD.

"Research on an Asian cohort provides a unique opportunity to identify common and divergent disease drivers of Asian and Western NAFLDs... and potentially result in alternatives to invasive biopsy in the future," he said.

The A*Star-NUS collaboration is not the first local research project to zero in on liver disease in recent years.

Last May, a team from the Duke-NUS Medical School, the National Heart Centre Singapore and biotech firm Enleofen Bio found that deactivating a protein called interleukin 11 with human antibodies reverses inflammation and scarring of the liver in patients suffering from non-alcoholic steatohepatitis.

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