

COMPANION DIAGNOSTIC ASSAY FOR EFFECTIVE IMMUNOTHERAPY IN LIVER CANCER PATIENTS



The GIS' Translational Research Group and Lion TCR team, from left: Dr Kanika JAIN, Ms Valencia PHUA, Ms Jacelyn PHUA, Dr KONG Say Li, Dr Alexander LEZHAVA, Dr Lu-En WAI, Ms Jennifer NG, and Dr Stanley NG

A*ccelerate has awarded the Accelerate Technologies Gap-fund to Dr Alexander Lezhava and Dr Kong Say Li, from the GIS' Translational Group, for their project on companion diagnostic assay for effective personalised immunotherapy for hepatitis B virus (HBV) related liver cancer patients.

Chronic HBV infection affects up to 350 million people globally and causes higher risk of contracting liver cancer¹. Although treatment options for liver cancer patients include surgery and liver transplantation, patients who suffer from recurrence have limited treatment options and low long-term survival rate. Therefore, there is an urgent need for novel therapies.

Lion TCR, a clinical-stage biotechnology company based in Singapore and Guangzhou (China), focuses on the commercialisation and development of adoptive T cell therapy to target HBV-related liver cancer in Asia. It is currently conducting clinical trials that harness the power of a patient's own immune system to eliminate HBV-related hepatocellular carcinoma (HCC).

The GIS' Translational Research Group (certified with ISO 13485 for design and development of medical devices) has developed a companion diagnostic (CDx) assay that enables detection of target sequences that are specific to Lion TCR's adoptive T cell therapy. The utilisation of the CDx assay could provide critical information for effective personalised immunotherapy for HBV-related liver cancer patients.



“This project highlights how GIS utilises its expertise in the genomic sciences and technology for advancement in precision medicine.”

Dr KONG Say Li
Scientist
Translational Research
Genome Institute of Singapore

“The CDx assay will be tested on cohorts from Singapore and China. Hence, this project provides an excellent opportunity to showcase Singapore's discoveries and innovation both locally and internationally.”



Dr Alexander LEZHAVA
Associate Director
Strategic Alliances and Knowledge Management
Senior Group Leader
Translational Research
Programme Director
POLARIS
Genome Institute of Singapore



“The collaboration has strengthened the bridge between GIS and our industry partner, Lion TCR, where we work together to achieve impactful healthcare outcomes.”

Prof Patrick TAN
Executive Director
Genome Institute of Singapore

Reference:

1. [Kane M. Global strategies for the control of hepatitis B. In: Zuckerman AJ, editor. Prevention of hepatitis B. London: Royal College of Physicians; 1996. pp. 87–96](#)