

## Duke-NUS researchers win top accolades at NMRC Awards

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**The NMRC STaR and CSA-SI awards support excellent clinician scientists to do leading-edge translational and clinical research in Singapore.**



Duke-NUS researchers Professor Karl Tryggvason, Professor David M. Virshup and Professor Antonio Bertolotti were awarded the prestigious Singapore Translational Research (STaR) Investigator Award, while Professor Ooi Eng Eong and Associate Professor Ong Sin Tiong bagged the esteemed Clinician Scientist Award – Senior Investigator (CSA-SI) presented by the Singapore Ministry of Health's NMRC.

Professor Karl Tryggvason, Tanoto Professor in Diabetes Research at Duke-NUS' Cardiovascular and Metabolic Disorders Programme received the STaR award for his work in diabetes. "Our research aims to develop new cell therapy based treatments for prevention and treatment of diabetes complications that cause loss of insulin production, severe skin ulcers, damage to the retina of the eyes and non-alcoholic liver disease. This project is both novel and innovative, as well as feasible, and it may strengthen Singapore's position in diabetes care and regenerative medicine," said Professor Tryggvason.

Professor David M. Virshup from the Cancer and Stem Cell Biology Programme at Duke-NUS received the STaR award for his research on the Wnt signalling pathway. Wnt signalling is an important regulatory mechanism in the body associated with both normal development and the renewal of tissues in adults. Abnormal Wnt signalling is often found in diseases such as cancer. "Our research has led to the discovery of a novel drug that blocks the Wnt pathway. This drug is now in clinical trials in Singapore and abroad. We are cautiously optimistic that this drug, ETC-159, will help patients with otherwise untreatable

cancers,” said Professor Virshup.

The STaR award was also presented to Professor Antonio Bertoletti from Duke-NUS’ Emerging Infectious Diseases Programme for developing a new immunotherapy technique called TCR-T cell therapy, where the immune cells in the body are engineered to treat liver cancer patients with hepatitis B virus infection. “My group has gathered scientific knowledge, produced therapeutic tools and established a network of collaborations with academic and industrial partners that allow us to effectively translate this treatment approach from bench to clinical use,” said Professor Bertoletti.

Professor Ooi Eng Eong from the Duke-NUS’ Emerging Infectious Diseases Programme, received the CSA-SI award this year for finding a new approach to develop viral vaccines. “Vaccine is an effective tool for controlling diseases. Vaccines against viruses such as dengue are challenging to develop, as it has to be both safe and efficacious while maintaining a longterm immunity to prevent infections. Our work focuses on understanding the mechanisms behind successful vaccines that will pave way for new strategies in vaccine design and development,” said Professor Ooi.

Associate Professor Ong Sin Tiong from Duke-NUS’ Cancer and Stem Cell Biology Programme who was recognised with the CSA-SI award for his blood cancer research said: “Our work seeks to understand how we can cure patients with blood cancers for good, which will allow them to stop taking expensive medications that only control these diseases. We will also find ways to identify patients at increased risk of developing drug resistance, and either find new treatments to prevent resistance from happening, or treat it when it happens.”