



National Cancer Research Institute Singapore





BACKGROUND

Headed jointly by Professor Teh Bin Tean (SingHealth) and Professor David Virshup (Duke-NUS), the newly established SingHealth Duke-NUS National Cancer Research Institute Singapore (NCRIS) seeks to provide leadership, strategic direction and coordination for cancer research between SingHealth and Duke-NUS, and to serve as a bridge between SingHealth National Cancer Centre of Singapore (NCC) and the Duke-NUS Cancer and Stem Cell Biology (CSCB) Programme, and the Academic Medicine Research Institute (AMRI).

ROLE

SingHealth and Duke-NUS will be each other's preferred partners for cancer research in the AMC; NCRIS will initiate and form system-wide workgroups in strategic areas of cancer research, each co-led by a Duke-NUS and SingHealth researcher. The two parties will continue the cross-institutional sharing of cancer-related information, research, and skills. On one hand, NCCS and SGH bring a wealth of clinical, translational, and basic science research. On the other hand, CSCB will offer basic and translational science research. This collaboration will further facilitate cancer-relevant research from other institutes within the SingHealth portfolio.

The vision and mission for cancer research in the SingHealth Duke-NUS Academic Medical Centre (AMC) are:

VISION

To be in the forefront of cancer research through cross-institutional collaboration and scientific excellence.

MISSION

To coordinate cancer research from basic bench investigation to bedside therapies through the nurturing of research talent, continuous cross-institutional sharing of knowledge, research, and capabilities; and an enhanced focus on disease.

KEY STRATEGIES

● **Mentorship**

The experienced researchers of the Duke-NUS, NCCS and SGH faculties will offer both aspiring and professional clinician researchers at the Outram campus unique mentorship opportunities to further develop their careers. Potential NCRIS clinician researchers will be matched with resources and relevant faculty members, who will in turn work closely alongside their mentees for the purposes of furthering cancer-based research.

● **Starter Collaborative Research Grants**

NCRIS supports the efforts of high-potential researchers with attractive starter grants of up to two years. Senior Principal Investigators (PI) from each institution (with a grant of \$100k per PI per year) will facilitate and mentor projects to help lead and guide junior researchers. These initiatives aims to encourage further collaboration within the AMC and develop the careers of new talent within the cancer-research community, which, in turn, will improve existing cancer related research.

● **Joint Symposia**

NCRIS will host an annual joint symposia featuring a variety of internationally-recognised presenters with a focus on disease and disease processes. Speakers are selected upon recommendation by disease focus group champions. Sponsored symposia will have joint chairs and content to be eligible for the joint institute funding. The Joint Symposia aligns with NCRIS's goal of cross-institutional sharing of knowledge and research.

● **Joint Retreats**

Joint retreats between the senior management of SingHealth and Duke-NUS are held regularly to facilitate discussions on ongoing research, achievements, and avenues for future research and collaboration. The constant communication between all relevant parties ensures that NCRIS remains a key institute facilitating cancer-relevant research for all institutes within SingHealth.

● **Disease Focus Areas and Novel Therapies**

As cancer is an identified research focus area in both the RIE2020 and AMC Masterplan, NCRIS has identified several key disease focus areas and novel therapies with the aim of developing them into internationally competitive programmes. Disease work focus groups are in place to ensure that researchers align their strategies with NCRIS's vision as a leader of cancer research.

The targeted disease focus areas include:



Liver



Gastric



Lung



Breast



Leukaemia and lymphoma

Platforms and Approaches include:

- Mechanism-focused Science
- Genetics – Genomics
- Preclinical Disease Modelling
- Advanced Imaging
- Computational Biology
- Therapeutics & Diagnostics
- Advanced Radiation Therapy
- Clinical Trials

● **Impact of NCRIS on Health Services Research (HSR)**

As a joint research office headed by researchers who pair research and clinician outcomes, NCRIS is in a unique position of having access to valuable data from basic bench investigation to bedside therapy. Researchers will be able to pinpoint the most efficient means to organize and provide better healthcare, thereby improving overall patient outcomes.



CO-DIRECTOR'S BIO

David Virshup, MD, is the inaugural Director of the Program in Cancer and Stem Cell Biology at the Duke-NUS Medical School in Singapore and Professor of Pediatrics at Duke University School of Medicine. A native of California, prior to moving to Singapore in 2007, he spent 17 years at the University of Utah, where he directed an active research program and was also a practicing pediatric hematologist/oncologist. His research laboratory studies Wnt Signaling and signaling through protein phosphorylation with a secondary focus on circadian rhythms and Protein Phosphatase 2A. Virshup received his medical degree and research training from Johns Hopkins University School of Medicine. He is a member of the American Society of Clinical Investigation, the Association of American Physicians, a Fellow of the American Association for the Advancement of Science and was the Asia Editor for the Journal of Clinical Investigation.



CO-DIRECTOR'S BIO

Dr Teh obtained his MD (1992) from the University of Queensland, Australia and his PhD (1997) from the Karolinska Institute, Sweden. Following postdoctoral works at Karolinska Institute, he joined the Van Andel Research Institute (VARI), USA in 2000 as a Senior Scientific Investigator heading the Laboratory of Cancer Genetics. From 2003, he served as the Deputy Director (Research Operations) of VARI and from 2008, Director of VARI International. He is a Singapore Translational Research (STaR) Investigator and Principal Investigator (PI) at the National Cancer Centre Singapore (NCCS). He was the founding Director of the NCCS-VARI laboratory, which serves as a bridge between translation research and clinical medicine. He served as the SingHealth Group Director for Translational Research from 2010-2012. His laboratory focuses on Asian Cancer Genomics and have made seminal discoveries in the field including biliary tract cancer, T-cell lymphoma, urological cancer, kidney cancer and breast tumors. He holds Adjunct Professorships at several universities worldwide including Baylor College of Medicine, USA, Nanjing University and Sun Yat-Sen University, China and the Karolinska Institute, Sweden. Dr. Teh has published extensively, with over 350 publications in high impact scientific journals.