

PRESIDENT'S SCIENCE AND TECHNOLOGY MEDAL 2022

Professor Hong Wanjin

Executive Director, Institute of Molecular and Cell Biology, Agency for Science,
Technology and Research

Professor, Yong Loo Lin School of Medicine, National University of Singapore

“For his outstanding contributions in building up the biomedical sciences research ecosystem in Singapore, particularly through strengthening public sector, academic and clinical research partnerships, nurturing scientific talent, and promoting innovation to support Singapore’s economic development”

Professor Hong Wanjin is an internationally renowned leader in molecular and cell biology. He is currently the Executive Director of A*STAR’s Institute of Molecular and Cell Biology (IMCB) and Professor at the NUS Yong Loo Lin School of Medicine’s Department of Biochemistry. Professor Hong has dedicated over 30 years of his career to supporting the development of Singapore’s biomedical research ecosystem. In addition to pushing scientific excellence at IMCB, he has forged strong ties with institutes of higher learning (IHLs), the academic medical centres and hospitals, and industry partners, creating greater synergies across Singapore’s biomedical research ecosystem. He has also nurtured many local talents, who have gone on to become a critical part of Singapore’s scientific talent pool today.

Prof Hong joined IMCB in 1989, before it became an autonomous research institute under A*STAR. He was appointed Executive Director in 2011. Under his leadership, IMCB fostered strong collaborative relationships with the National Cancer Centre Singapore (NCCS), SingHealth, Duke-NUS Medical School, Nanyang Technological University (NTU), and NUS. He also set up joint programmes like the IMCB NCCS Max Planck Institute of Biochemistry (MPIB) Singapore Oncogenome Laboratory, IMCB-NCCS Joint Programme, and SingHealth @ IMCB Fellows. These efforts allowed for more knowledge exchange and facilitated the translation of upstream discoveries to bring better benefits to patients.

During the 2003 SARS outbreak in Singapore, Prof Hong oversaw IMCB researchers in the development of two antibody-based tests to diagnose SARS, with GeneLab Diagnostics. As a result, IMCB received a National Day Award commendation for contributing to combating and containing SARS. He also established a collaborative anti-viral research lab that worked together with Tan Tock Seng Hospital and Baxter Vaccines.

Under Prof Hong's leadership, IMCB has translated scientific discoveries into impact for A*STAR and Singapore. 15 spin-offs have come out of IMCB during the past seven years, which have raised approximately \$30 million collectively to date. IMCB has also established joint labs with biotech companies like Tessa Therapeutics and LionTCR, to support their growth.

Prof Hong has played an active role in nurturing young scientists in A*STAR and the ecosystem. Working under Prof Hong's leadership at IMCB, 17 scientists have been conferred prestigious national accolades and achievements including the Young Scientist Awards, and National Research Foundation Fellowships and Investigatorships. Others have gone on to become scientific entrepreneurs, university faculty members, and more, to contribute to better healthcare and social outcomes for Singapore. To date, IMCB has also trained more than 400 PhD students, and developed more than 1,000 postdoctoral fellows.

Prof Hong also has a distinguished career in the area of molecular and cell biology research. He has contributed significantly to the global scientific community's understanding of membrane transport in the secretory and endocytic pathways, and the Hippo signaling pathway in human cancer. His contributions extend to editorial board appointments for top scientific journals like the journal of Biological Chemistry, Traffic, and Science Signaling; and he has been consistently invited to speak at international scientific symposia by Keystone and the American Association for Cancer Research.

Prof Hong's research in Singapore has resulted in more than 300 peer-reviewed publications which have garnered over 27,000 citations internationally. He is a National Science Award winner (1999) and the recipient of many other prestigious awards including the CUSBEA Fellow (1983) and the 19th A-IMBN Arthur Kornberg Memorial Lecture Award (2016). This year, he was conferred the prestigious Singapore National Academy of Science Fellowship.

Prof Hong has held leadership positions in leading scientific associations, such as the President of the Science Council of Asia and member of the Board of Trustees for the Human Frontier Science Program. He has also held a range of local and international appointments on review and award selection panels.