

## CITATIONS OF WINNERS

### PRESIDENT'S SCIENCE AND TECHNOLOGY MEDAL 2017

#### **Professor Edward Warren Holmes**

Department of Medicine, Yong Loo Lin School of Medicine, NUS

Senior Fellow, A\*STAR

Advisor, National Research Foundation

***“For his pioneering work in developing the human capital, programmes and infrastructure that galvanised translational and clinical research in Singapore’s health and biomedical sciences ecosystem”***

Professor Edward Holmes is a world-renowned academic leader in translational and clinical research (TCR), and has been deeply committed towards helping Singapore build its biomedical sciences ecosystem. Professor Holmes has contributed greatly to Singapore’s talent development, R&D culture, infrastructure and development of research strategy within Singapore’s health and biomedical sciences (HBMS) sector since 2006. These contributions have resulted in significant scientific, technology and economic benefits in Singapore.

Professor Holmes is regarded particularly for his visionary leadership in building consensus amongst healthcare leaders and clinician scientists on Singapore’s strategy in translational scientific research, and establishing internationally competitive translational and clinical research capabilities for Singapore.

Professor Holmes had a key role in leading efforts to develop Singapore’s translational and clinical research initiative as part of the second phase of the development of Singapore’s biomedical sciences ecosystem. He was appointed Executive Deputy Chairman of the Biomedical Research Council (BMRC) in the Agency for Science Technology and Research (A\*STAR), the Executive Chairman of the National Medical Research Council (NMRC) in the Ministry of Health (MOH), and the Lien Ying Chow Professor of Medicine at the Yong Loo Lin School of Medicine in the National University of Singapore (NUS).

His leadership in these organisations was instrumental in enabling Singapore's healthcare institutions to participate fully in the national biomedical sciences initiative and build up their translational and research capabilities to internationally competitive levels. In these roles he helped to develop award schemes that have underpinned the training, recruitment and support of clinician scientists across Singapore’s public research institutions, such as the Singapore Translational Research (STaR) Investigator Award, the Clinician Scientist Award (CSA), and the Transition Award

(TA). In encouraging the development of clinician scientists, Professor Holmes has created a pipeline of local talent.

Through his leadership as Co-Chair of the Strategic Steering Committee which developed the funding schemes for the HBMS domain of the Research Innovation Enterprise 2020 (RIE2020) funding cycle, and other steering committees, Prof Holmes helped to lay the blueprint for the creation of a research ecosystem which supported translational scientific research, and advised and helped formulate Singapore's health and economic strategies.

He also played a major role in designing and implementing research programmes such as the NMRC TCR Flagship Programme, that bring together basic and clinical investigators across the biomedical ecosystem to address important health problems facing Singaporeans. Over the years, he has led NMRC to achieve its mission in promoting TCR excellence, nurturing Singapore's research community and enhancing knowledge exchange to improve human health. He has also been instrumental in helping to develop the two academic medical centres in Singapore and has served on the Board of Directors of both the National University Health System (NUHS) and the SingHealth System.

In conjunction with building these TCR programmes, Professor Holmes has played a significant role in working with A\*STAR and the Economic Development Board (EDB) to foster initiatives promoting the commercialisation of scientific and medical discoveries made in Singapore. Through his diverse networks he has also helped to build bridges to top multinational pharmaceutical companies that have developed collaborative research programmes with Singapore investigators, and located research operations in Singapore.

Professor Holmes' contributions extend beyond Singapore. He has also played an integral role in nurturing the next generation of scientific leaders, holding leadership positions in the areas of science and medicine across Duke University, Stanford University, the University of Pennsylvania, and the University of California, San Diego.

He also chaired the GlaxoSmithKline Research Advisory Board and served on the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Advisory Council of the National Institutes of Health in the United States (US). In recognition of his contributions to biomedical research and academic medicine in the US, he has been elected to membership in the American Society of Clinical Investigation, the Association of American Physicians, and the National Academy of Medicine.

Professor Holmes continues to be active in contributing to the development of Singapore's biomedical landscape, designing and promoting programmes that foster research across institutions and between basic and clinical investigators. He is

currently a Senior Fellow in A\*STAR, Advisor to the National Research Foundation (NRF), and Advisor to MOH. He sits on the BMRC Board in A\*STAR, the NMRC Board, and the HBMS ExCo where he is Co-Chair of the Open Fund Subcommittee.

For his service to Singapore, Professor Holmes was conferred the award of Honorary Citizenship in 2011, the highest form of national recognition for foreigners, to acknowledge their contributions of extensive and valuable services to Singapore and its people.

For his pioneering work in developing the human capital, programmes and infrastructure that galvanised translational and clinical research in Singapore's health and biomedical sciences ecosystem, Professor Edward Holmes is awarded the 2017 President's Science and Technology Medal.