

WACBE WEBINARS

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SATURDAY: JULY 11, 2020

10:00 AM (New York) | 3:00 PM (London) | 4:00 PM (Europe) | 10:00 PM (Beijing)

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DISTINGUISHED BIOMEDICAL ENGINEERING WEBINAR



“Mechanobiology of Human Diseases and Applications
in Diagnosis and Therapy”

Chwee Teck (C.T.) Lim, Ph.D.
NUS Society Chair Professor, National University of Singapore

ABOUT THE WEBINAR

The human body, as a physical entity, is constantly subjected to stresses and strains throughout life. As such, the functions of the organs, tissues, cells and even biomolecules can be affected by these physical interactions and their associated biophysical properties. Cell mechanobiology which deals essentially with forces acting on individual living cells and the effects produced by such forces, can play an important role in the study of human diseases. For example, any deviations in the structural and biomechanical properties of a living cell can not only affect its physiological functions, but can also lead to onset of diseases. Using mechanobiological approaches, we study and quantify minute mechanical influences acting on individual cells and reveal ways by which diseased cells differ from healthy ones. Here, we will highlight studies on two human diseases: malaria and cancer. Such studies can not only provide better insights into the onset and pathophysiology of human diseases, but can also lead to development of novel diagnostic approaches for better disease detection and diagnosis. In addition, these studies can also help researchers develop appropriate assays to quantitatively evaluate the efficacy of drugs and agents being developed to control or treat some of these diseases.

ABOUT THE SPEAKER

Professor Chwee Teck (C.T.) Lim

NUS Society chair Professor, National University of Singapore

Director, Institute for Health Innovation and Technology (iHealthtech)

Founding Director, Singapore Health Technologies Consortium

Professor Lim is the NUS Society Professor and Director of the Institute for Health Innovation and Technology at the National University of Singapore. His research is in mechanobiology and microfluidics. He has coauthored over 400 peer-reviewed journal papers and given over 390 invited talks. He is an elected Fellow of AIMBE, IAMBE, Academy of Engineering, Singapore and the Singapore National Academy of Science. He has co-founded six spin-offs. He and his team have garnered over 100 research awards and honors including Highly Cited Researcher 2019, Asian Scientists 100 2016, Wall Street Journal Asian Innovation Award (Gold) 2012 and President's Technology Award 2011.