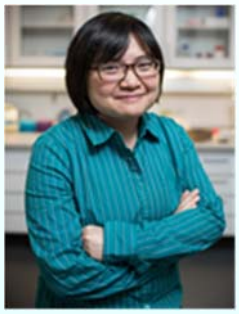
The Chinese University of Hong Kong

Department of Biomedical Engineering

Time: 10am, 17 August 2020 (Monday) (on Zoom)

Seminar Link:
https://cuhk.zoom.us/j/98834482172?pwd=a2RzbldJRXVtTml1clJTRGpzTlR1QT09

Microfluidics for Biomedical Applications



Professor Megan Yi-Ping Ho

Assistant Professor

Department of Biomedical Engineering
The Chinese University of Hong Kong

Abstract

Existing development of microfluidics has shown great success in biomedical applications, particularly the analysis of targeted biomolecules from minute amount of samples. This talk will discuss how microfluidics has enabled an effective detection of live pathogens associated with major infectious diseases, such as malaria and tuberculosis. This presentation will also highlight our recent initiatives on exploiting microfluidics for the manipulation and analysis of individual cells and subcellular organelles. The established platform technologies have shown promising for the study of molecular activities at the single cell and single organelle level. Looking forward, we plan to study the fundamentals of cell plasticity and how individual cells alter their phenotypes in response to environmental and therapeutic stimuli. The effort is expected to find clinical applications in diagnostics, prognostics and treatment evaluation of infectious and chronic diseases, as well as to expand our fundamental understanding towards disease development.

Biography

Megan Yi-Ping Ho is currently an Assistant Professor in the Department of Biomedical Engineering at The Chinese University of Hong Kong. She received her B.S. and M.S. in Power Mechanical Engineering from National Tsing-Hua University, Taiwan. She received her Ph.D. in Mechanical Engineering from the Johns Hopkins University in USA. After her postdoctoral training with Duke University in USA, she received the Young Elite Researcher Award from the Danish Research Council for Independent Research and started her independent career in the Interdisciplinary Nanoscience Centre and the Department of Molecular Biology and Genetics at Aarhus University in Denmark. She is a co-founder of two start-up companies situated in Demark, Zymonostics and vPCiR, focusing on enzyme-based diagnostics. She has published 57 peer-reviewed journal articles, 5 book chapters, 78 conference papers and holds 2 granted patents. The results that she presented have been recognized internationally by the American Society of Gene Therapy and Controlled Release Society. Her research team is focused on developing nanosensors and microfluidics as diagnostic tools to expand the capacity of disease detection and treatment evaluation.

***** ALL ARE WELCOME *****

For enquiries, please contact Ms Heidi Chan, Department of Biomedical Engineering at 3943 8261