

Igniting New Insights with CyTOF®

中國醫藥大學 27 October 2021

Abstract

Mass cytometry, or Cytometry by Time-Of-Flight (CyTOF), is a powerful platform for high-dimensional single-cell analysis of the immune system.

In this seminar, you will learn about

- Technology Introduction to Mass Cytometry for cells in suspension and Imaging Mass Cytometry for Cellular Tissues
- Workflow and Analysis of High Dimensional Cytometry and High Multiplex Imaging
- Publications and use-cases in immune profiling and applications into tissue immune microenvironment

When:

Wed, July 2021

10:00 AM – 12:00 PM

Location:

英才校區互助大樓5F

Webinar:

Zoom Webinar

Presenter:



Boon-Eng TEH

Senior Manager,
Applications Support
Fluidigm Greater Asia

Program Agenda

10:00 am Igniting New Insights with Helios for Cells in Suspension

10:45 am Deep Characterisation of Tumor and Tissue Microenvironment with Highly Multiplex Imaging Mass Cytometry using Hyperion Imaging System

11:30 am Maxpar® Antibody and Panel Kit

Live Discussion and Q&As following presentation
A seminar held in conjunction with

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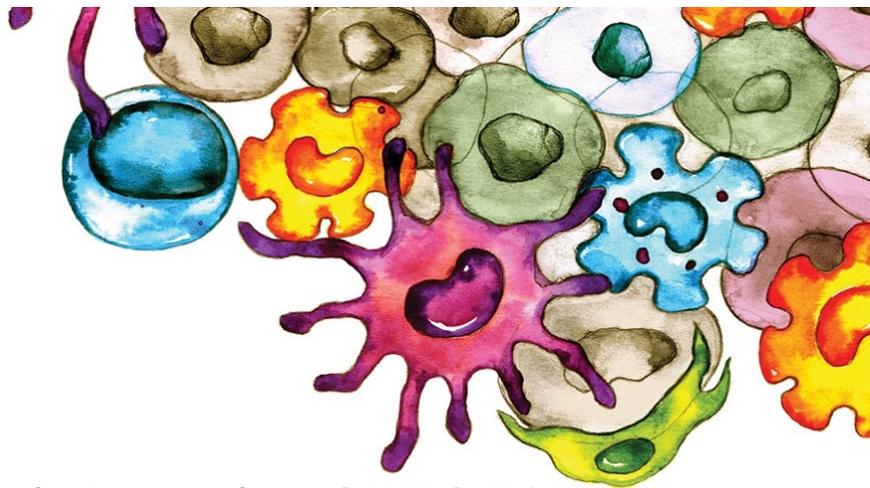
中國醫藥大學
China Medical University



Register at

https://zoom.us/webinar/register/7816347432356/WN_TzBvcPaTRM2PUm22haUDdw

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Igniting new insights with CyTOF®

with Highly Multiplex Mass Cytometry and Imaging Mass Cytometry

Speaker:

Boon-Eng Teh, Ph.D

Senior Manager, Applications Support
Fluidigm Greater Asia

When: Wed, 27 Oct 2021, 10:00am – 12:00pm

Location: 英才校區互助大樓5F

Webinar: Zoom Webinar

Register at



Abstract of Technical Seminar

Mass cytometry (CyTOF) enables researchers to perform comprehensive profiling of cell phenotypes and signalling pathways at single cell resolution. In mass cytometry there are 2 modes, the *suspension mode* and the *imaging mode*.

In *suspension mode*, antibodies tagged with stable metal isotopes are used to stain cells in suspension to identify the different markers expressed on an individual single cell. By using the metal-tagged antibodies, we could bypass the inherent limitation of fluorescence-based cytometry and build large panel size of more than 50-plus surface and intracellular markers simultaneously in a single tube without fluorescence spectral overlap. This allows us to understand the heterogeneity of a complex sample. The platform is now routinely used to study complex diseases such as cancer due to the high dimensional ability of the system which allows for observation of phenotypic diversity, plasticity and functional behaviour of a sample all in a single tube.

In *imaging mode*, highly multiplex immunohistochemistry data at sub cellular resolution could be obtained to reveal immune cell composition and spatial heterogeneity. Spatial information is the key to understanding health and disease as it allows deeper understanding by providing the extra layer of information of a microenvironment in the organization of cellular phenotypes, functions and interactions all in the context of tissues. Tissue in the format of formalin-fixed paraffin-embedded (FFPE), fresh frozen tissue or cytological preparations on standard glass slides are all supported by the imaging platform.

The capabilities of suspension mass cytometry and imaging mass cytometry in the context of deep immune profiling and applications into tissue immune microenvironment will be discussed here.

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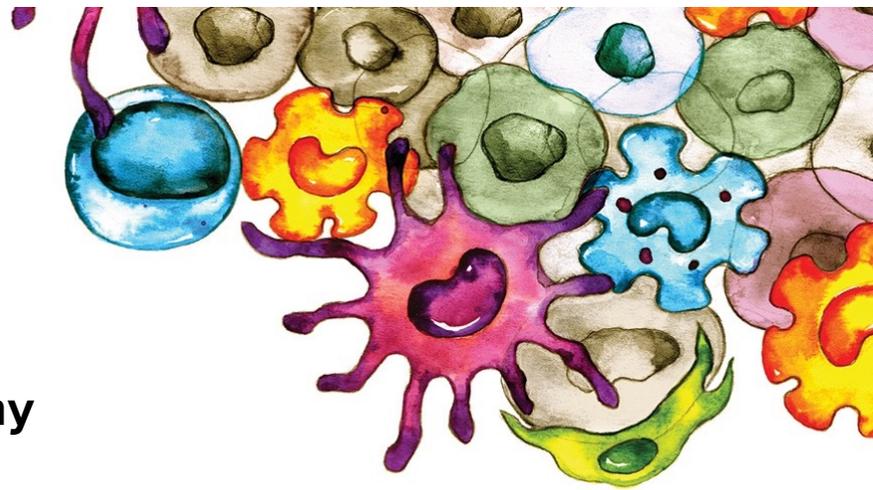
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FLUIDIGM®



Speaker Biography



Boon-Eng, Teh

Senior Manager, Applications Support – Greater Asia

Expertise

Broad experience with immunology, microbiology, infectious disease, clinical research, molecular biology and *in vitro* diagnostic assay development. Proven success in supporting direct users with their early adoption of breakthrough technologies.

Boon-Eng has been supporting Fluidigm mass cytometry line of products which includes mass cytometry and imaging mass cytometry for over 5 years. Both of these innovative products enable ultra-high dimensional cytometry and highly multiplex immunohistochemistry studies.

Fluidigm Corporation - 2015 till current

Senior Manager, Service and Support (Greater Asia Region) – Jan 2021

Leads Field Application Specialists and Engineers for Mass Cytometry, microfluidics and Laser Capture microdissection businesses across the Greater Asia Region

Field Application Specialist (Greater Asia Region) - 2015 to 2020

Proteomics – Mass Cytometry and Imaging Mass Cytometry

Pre-Sales Support, Post-Sales Support, Training Support and Technical Support

Vela Diagnostics - 2013 - 2015

Field Application Specialist, Global Service and Support

Training Support, Technical Support, Product Development Support and Post Product Launch Support

Scientist / Project Lead

Project management, in vitro diagnostics assay design and development

Education

- Doctor of Philosophy, Immunology and Microbiology (Department of Biochemistry, Yong Loo Lin School of Medicine, National University of Singapore)
- Bachelor of Science (Hons) (Concentration in Molecular Cell Biology) (National University of Singapore)

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