

BioSyM Seminar Series 2017

Precision Microfluidics for Customised Cell Isolation and Real-time Immuno-profiling from Whole Blood

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Date : 18th December 2017, Monday

Time : 12 pm to 1 pm

Venue : Level 5, Perseverance Room



Abstract

Precision microfluidics for bio-particle separation is of great importance for medical diagnostics and therapeutics. Deterministic lateral displacement (DLD) method is one of the most precise cell isolation techniques. It uses a slanted pillar array to control the separation of particles down to a resolution of 20nm. In this seminar, Dr Kerwin will discuss applications of DLD for targeted cell isolation in stem cell cultures and real-time immuno-profiling of leukocytes using novel biophysical and biochemical assays. These applications show the robustness and versatility of DLD as a tool for precision cell selection as well as direct point-of-care processing of biological samples.

Short Biography

Dr. Kerwin Completed his PhD at National University of Singapore (2014) and joined SMART-BioSyM in 2016 as postdoctoral associate in Prof Jongyoon Han's Group. His previous postdoctoral experience was at Singapore Institute of Neurotechnology (SINAPSE). His research interest is to develop turn-key platform technologies for isolation, detection and analysis of cells and bio-molecules.