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SIgN Immunology Seminar

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Drop-based microfluidics: Biology a picoliter at a time

Host
Dr Evan Newell
Singapore Immunology Network, A*Star

Date
Tuesday
17 November
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Time
11am – 12pm

Venue
SIgN Seminar Room
Immunos Building
Level 4
Biopolis

This talk will describe the use of microfluidic technology to control and manipulate drops whose volume is about one picoliter. These can serve as reaction vessels for biological assays. These drops can be manipulated with very high precision using an inert carrier oil to control the fluidics, ensuring the samples never contact the walls of the fluidic channels. Small quantities of other reagents can be injected with a high degree of control. The drops can also encapsulate cells, enabling cell-based assays to be carried out. Examples of the application of these devices to the study of fundamental biology will be described. In addition, I will describe the impact this class of microfluidics is having on biotechnology.