

# Microfluidics for Disease Diagnosis and Monitoring

*Chwee Teck Lim\**

Department of Biomedical Engineering, Mechanobiology Institute,  
Institute for Health Innovation & Technology  
National University of Singapore, Singapore  
[\\*ctlim@nus.edu.sg](mailto:*ctlim@nus.edu.sg)

Microfluidics has emerged as a powerful technology not only for biological but also clinical research and applications. In fact, microfluidics has also been used in many other areas such as biotechnology, pharmaceuticals, public health and environment. For example, the ability to manipulate and analyse minute volume of fluids and samples has led to a wealth of new biological assays which can provide unique microenvironments for better cell manipulation and capture. Innovative microfluidic-based clinical assays have also been developed to enable more high-throughput rapid testing and readout. Here, I will present several microfluidic technologies that we have developed for both biological and clinical applications relating to diseases such as cancer, diabetes and wound care. These includes microfluidic chips for rare diseased cell separation, for cancer diagnosis, single cell isolation to wearable sensors for physiological signal and wound monitoring.

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