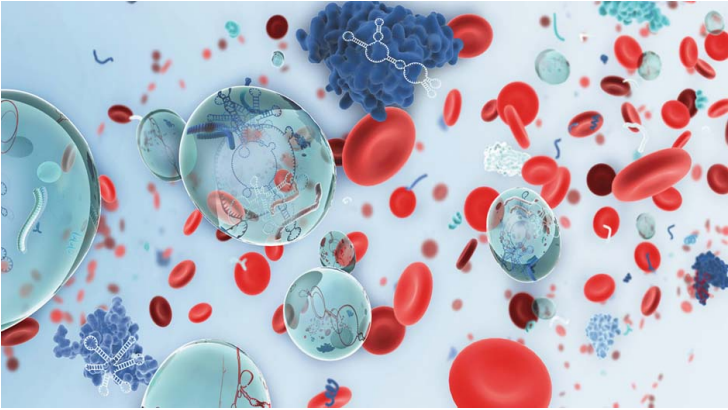


Scientists create platform to carry out liquid biopsy

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The teams are working towards further developing the technology to enhance its speed and efficiency.



Scientists from Duke University, Massachusetts Institute of Technology (MIT) and Singapore based Nanyang Technological University have found that a microfluidic platform based on sound waves can rapidly carry out liquid biopsies.

The study showed that the technology can separate circulating tumour cells (CTCs) from 7.5ml of a blood sample with at least an 86% efficiency within one hour.

Fast and efficient extraction of CTCs and their growth is expected to enable a liquid biopsy that can assess individual CTC profiling to facilitate diagnosis, prognosis and treatment decisions.

According to the scientists, the risk of damage to CTCs is decreased with the new approach because each tumour cell is exposed to the sound waves only for a fraction of a second. The sound waves also eliminate the need for labelling or surface modification, allowing retaining of natural functions and states of the cells.

Currently, the teams are working towards further developing the technology to enhance its speed and efficiency, while determining its feasibility in various culturing and profiling projects to validate its clinical use.