

On-Chip Pumps Achieve High-accuracy, Ultra-high-speed Sorting of a Single Cell

Background

Recent research has investigated the mechanical properties of cellular physiology. In order to measure the mechanical properties of a single cell precisely, various methods of on-chip cell sorting have been proposed by researchers. However, single cell sorting at ultra-high-speed remains hampered by the difficulty of efficient and accurate single cell isolation.

Technology Overview

To sort a single cell with high speed, high accuracy and high viability, the researchers developed a single cell sorting device by utilizing on-chip pump at ultra-high-speed. The technique allows the sorting of a single *Euglena gracilis* cell with 100% cell viability according to test results.

Figure

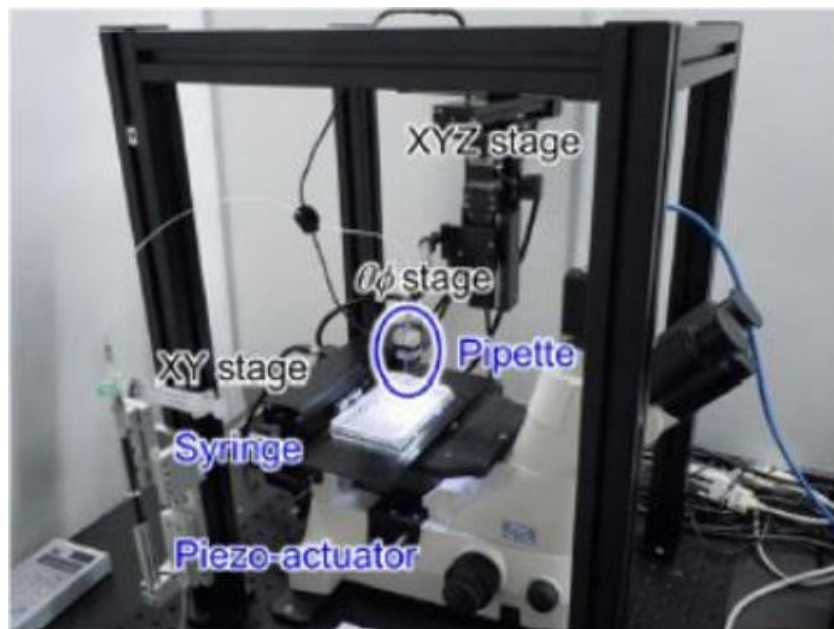


Figure1. Single Cell Sorting Device

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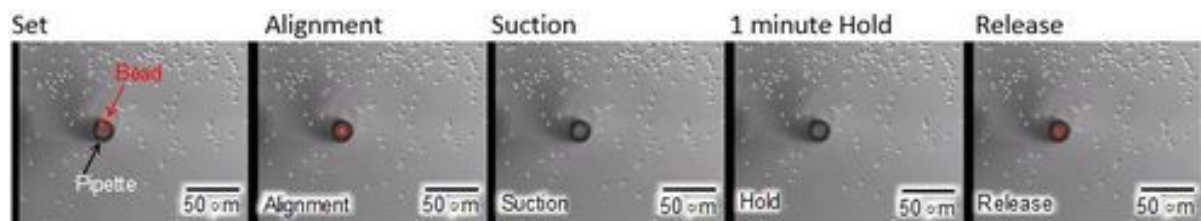


Figure 2. Suctioning Test by 1µm Beads.

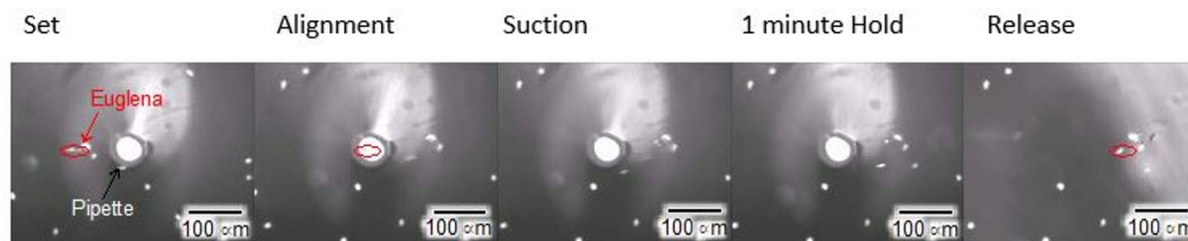


Figure 3: Releasing Test by Using Euglena Living Cell.

Seeking

Licensing

IP Status

Patent application submitted

Patents

A patent application has been submitted in Japan

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