Supplementary Information

A lab-on-a-chip device for investigating the fusion process of olfactory ensheathing cell spheroids

Ahmed Munaz\textsuperscript{a}, Raja K. Vadivelu\textsuperscript{b}, James A. St John\textsuperscript{b} and Nam-Trung Nguyen\textsuperscript{a}\textsuperscript{**}

\textsuperscript{a}Queensland Micro- and Nanotechnology Centre, Griffith University, Brisbane, QLD 4111, Australia
\textsuperscript{b}Eskitis Institute for Drug Discovery, Griffith University, Brisbane, QLD 4111, Australia

List of Contents:

\textbf{Figure S1.} Numerical particle tracing in the trapping mode with a flow rate of (A) 10 µL/min, (B) 30 µL/min, (C) 60 µL/min, (D) 90 µL/min (units are in \textit{ms}^{-1} for the initial particle velocity). [Time step 0.1 sec, time from 0 to 360 sec]

\textbf{Figure S2.} Unfused OECs spheroids inside of the microfluidic chamber for (A) 1 Hour of time; (B) 4 hours of time; (C) 8 hours of time; (D) 12 hours of time (composite photos of at least nine frames are taken on 10X zoom) with closed well setup.

\textbf{Figure S3.} OECs spheroids fused inside of the microfluidic chamber cultured up to 48 hours in Device 1

\textbf{Figure S4.} OECs spheroids fused inside of the microfluidic chamber cultured up to 48 hours in Device 2

\textbf{Figure S5.} OECs spheroids fused inside of the microfluidic chamber cultured up to 48 hours in Device 3
Fig. S1 Numerical particle tracing in the trapping mode with a flow rate of (A) 10 µL/min, (B) 30 µL/min, (C) 60 µL/min (units are in ms$^{-1}$ for the initial particle velocity). [Time step 0.1 sec, time from 0 to 360 sec] (D) 90 µL/min (units are in ms$^{-1}$ for the initial particle velocity). [Time step 0.1 sec, time 0 to 360 sec]
Fig. S2 Unfused OECs spheroids inside of the microfluidic chamber for (A) 1 hour incubation; (B) 4 hours incubation; (C) 8 hours incubation; (D) 12 hours incubation (composite photos of at least nine frames are taken on 10X zoom) with closed well setup.
**Fig. S3** OECs spheroids fused inside of the microfluidic chamber cultured up to 48 hours in Device 1.
Fig. S4 OECs spheroids fused inside of the microfluidic chamber cultured up to 48 hours in Device 2.
Fig. S5 OECs spheroids fused inside of the microfluidic chamber cultured up to 48 hours in Device 3.