

Supporting Information for “A Microfluidic Chip with Integrated Electrophoretic Immunoassay for Investigating Cell-Cell Interactions”

Microfluidic Capillary Electrophoresis Immunoassay

Figure S-1. Microfluidic chip channel layout.

Figure S-2. Modeling of flow and NEFA distribution in chips.

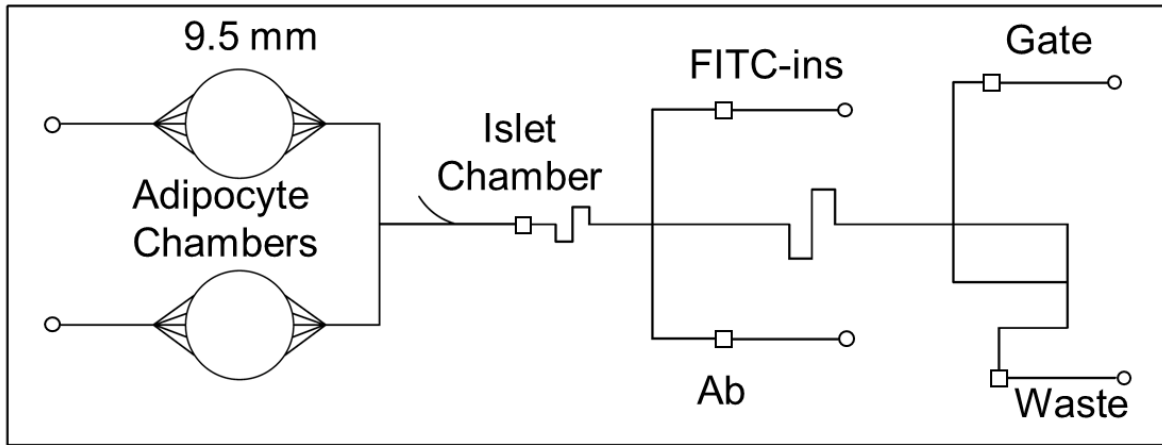
Figure S-3. Measurements of NEFAs by enzyme assay.

Microfluidic Capillary Electrophoresis Immunoassay

In this work, extensive use is made of a microchip based immunoassay to monitor insulin secretion. competitive assays encompass unlabeled antibody (Ab), the target antigen (Ag) and a labeled analog of the antigen (Ag*) where the two forms of antigen compete for binding sites on antibody. Determination of the distribution of bound and free species containing a labeled component (detectable) is applied for quantification, where separation of bound and free species is essential. As previously measured, K_d for bovine insulin with monoclonal anti-insulin C-terminal pentapeptide of β -chain is 0.52 nM.¹

Figure S-1

A



B



1 cm

Figure S-2

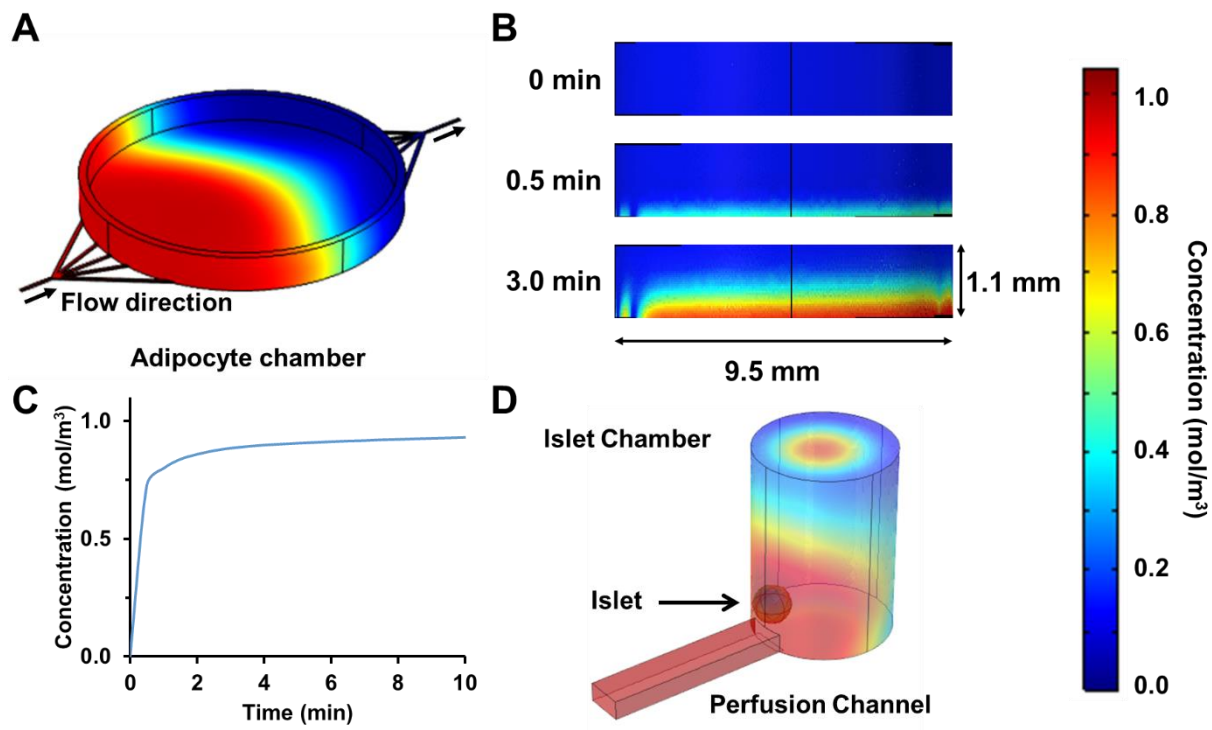
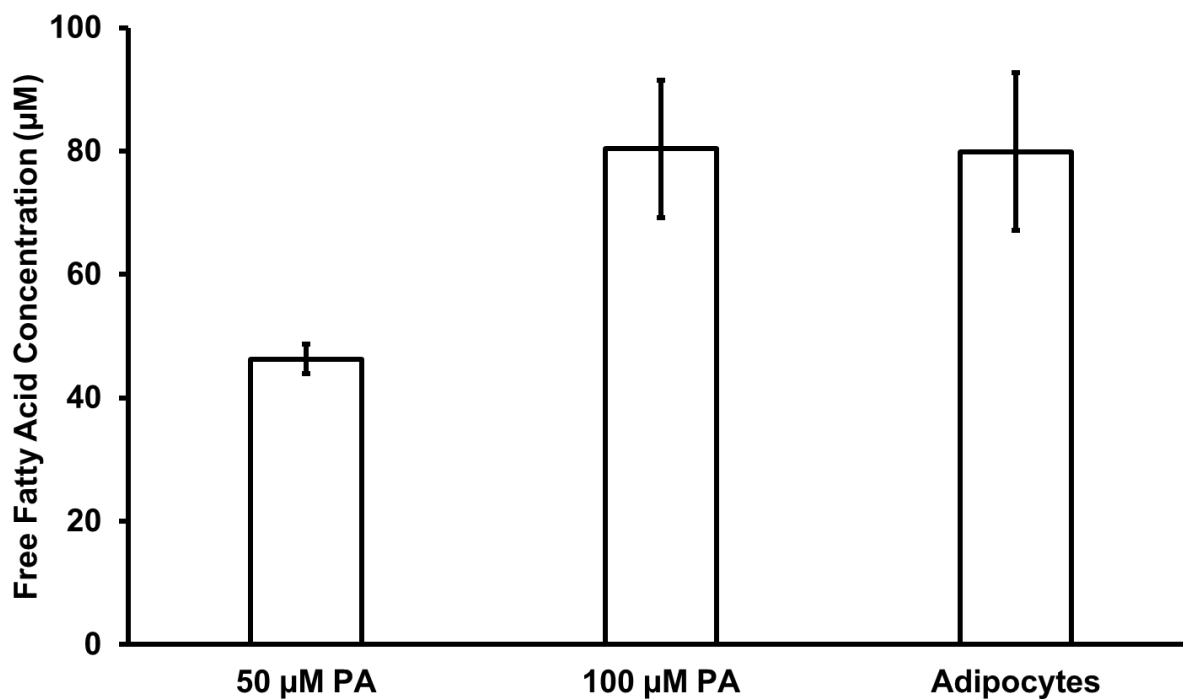


Figure S-3



Reference

- (1) Tao, L.; Kennedy, R. T. *Electrophoresis* **1997**, *18*, 112–117.