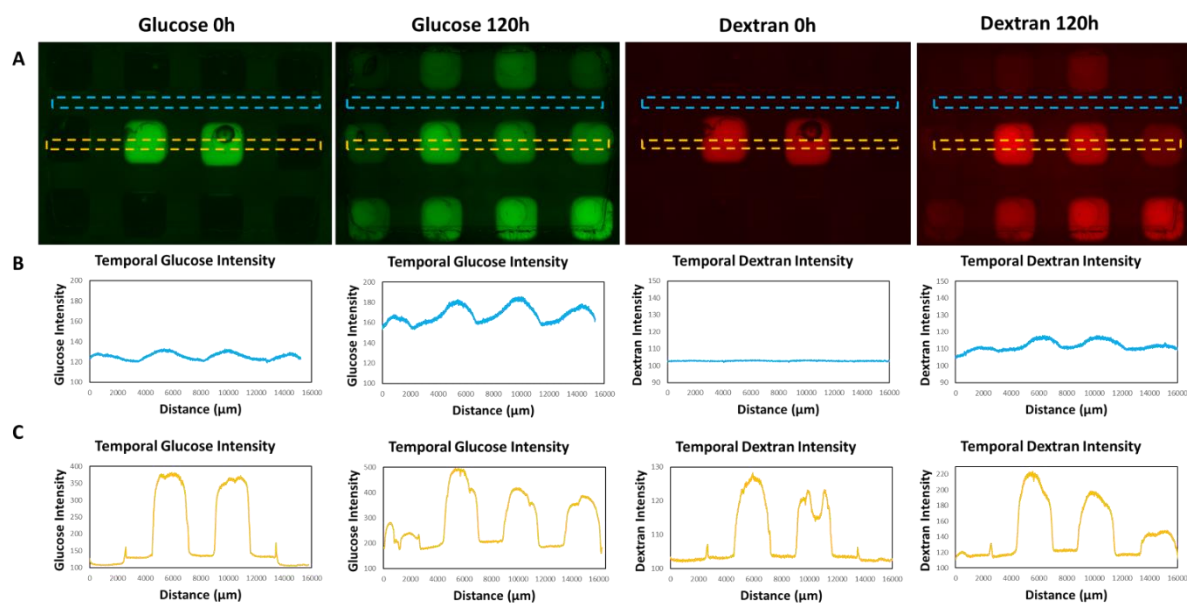
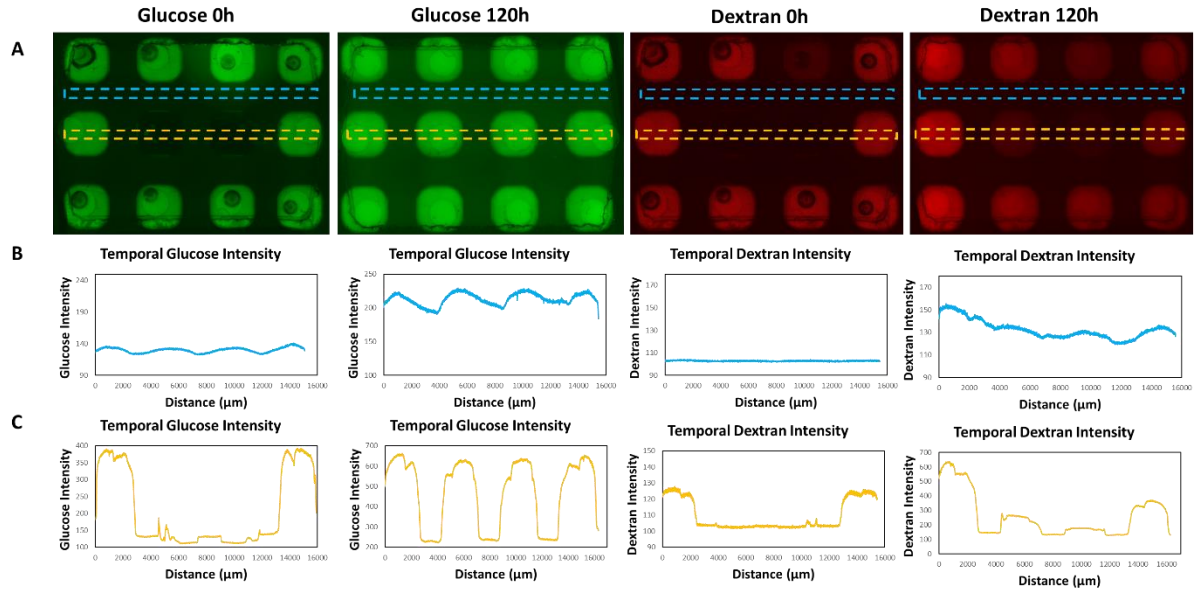


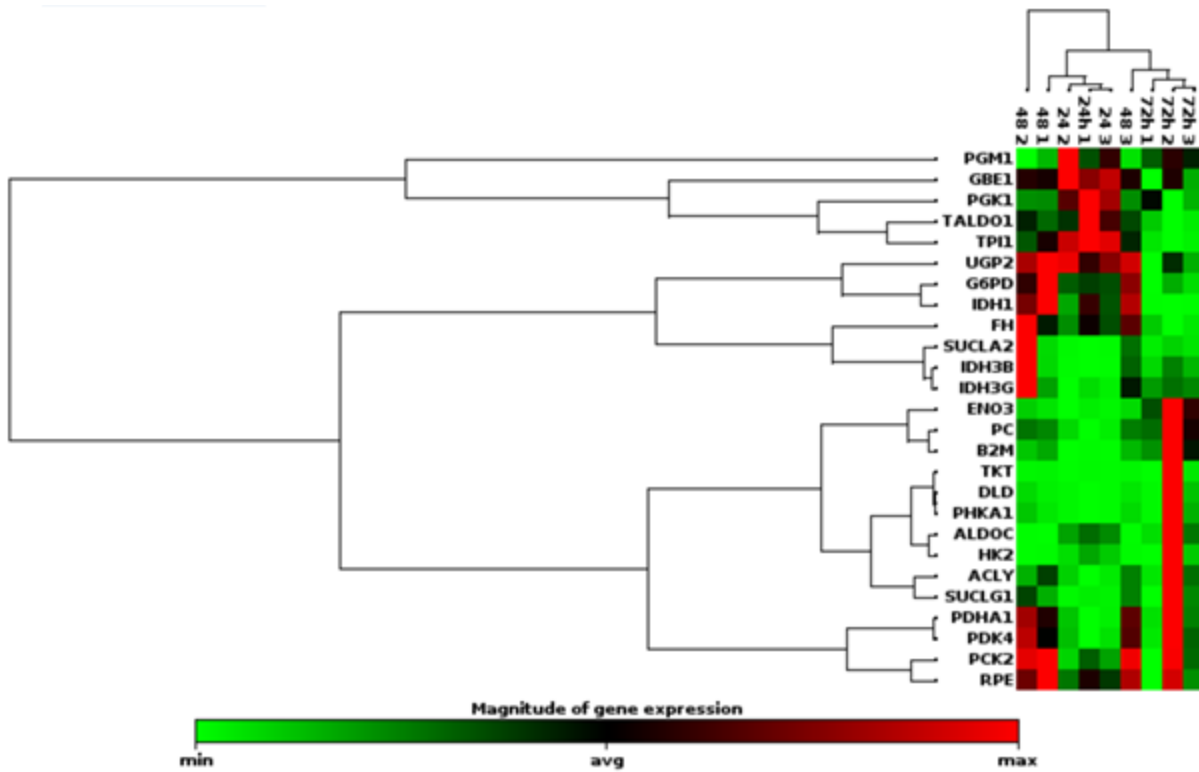
Supplementary information



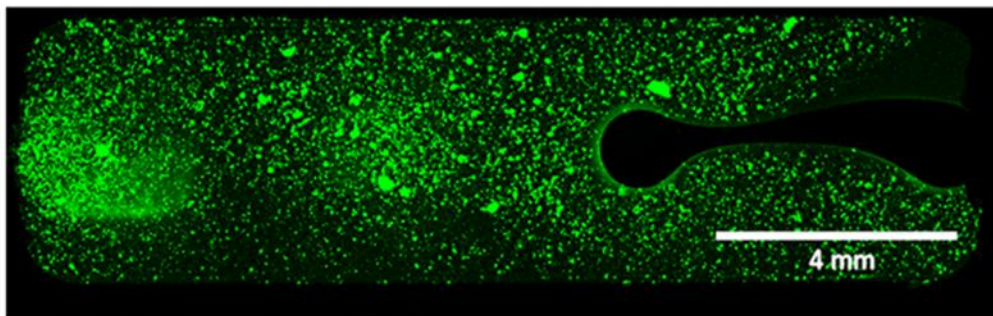
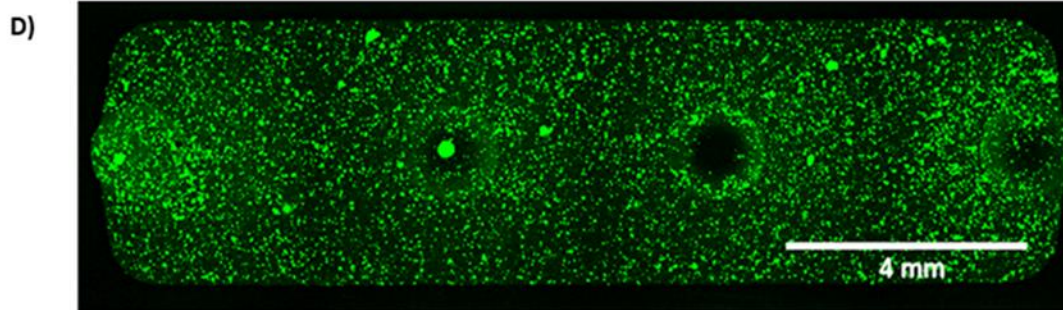
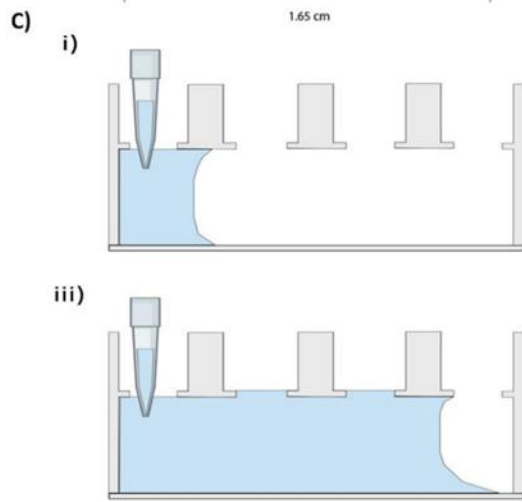
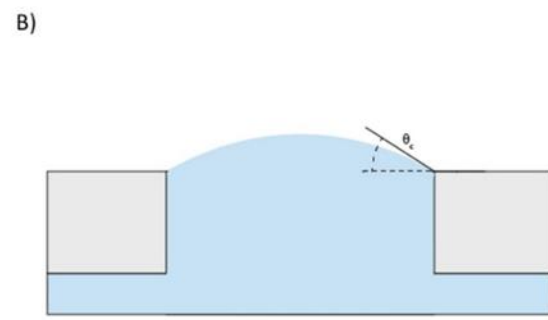
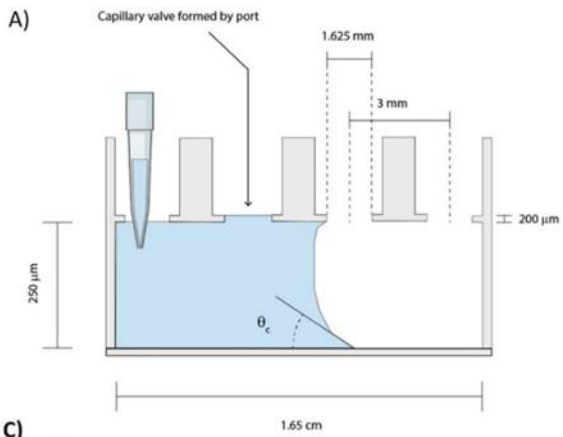
Supplemental Figure 1. Glucose and Dextran Diffusion (A) Fluorescence microscopy images of 2-NBDG in green and dextran in red showing diffusion in *Griddient* chamber over 5 days in a necrotic ring pattern. From left to right 2-NBDG at 0h, 120h, dextran at 0h, 120h. (B) Graphical representation of fluorescent signal intensity for region of interest 1 (blue boxes in A) following same pattern as A. (C) Graphical representation of fluorescent signal intensity for region of interest 2 (yellow boxes in A) following same pattern as A.



Supplemental Figure 2. Glucose and Dextran Diffusion (A) Fluorescence microscopy images of 2-NBDG in green and dextran in red showing diffusion in *Griddient* chamber over 5 days in a necrotic core pattern. From left to right 2-NBDG at 0h, 120h, dextran at 0h, 120h. (B) Graphical representation of fluorescent signal intensity for region of interest 1 (blue boxes in A) following same pattern as A. (C) Graphical representation of fluorescent signal intensity for region of interest 2 (yellow boxes in A) following same pattern as A.



Supplemental Figure 3. Clustergram showing glucose metabolism genes analyzed under normal, starvation, and reversal conditions.



Supporting Figure 4: Device dimensions and operation. A) Cross-section of the device with dimensions. B) Schematic representation of the capillary valves formed by the ports. C) Loading of the device. Liquid fills the device by capillary action and capillary valves prevent hydrogel leakage into reservoir wells. D) Device loading with plasma treatment (top panel) and without (bottom panel).