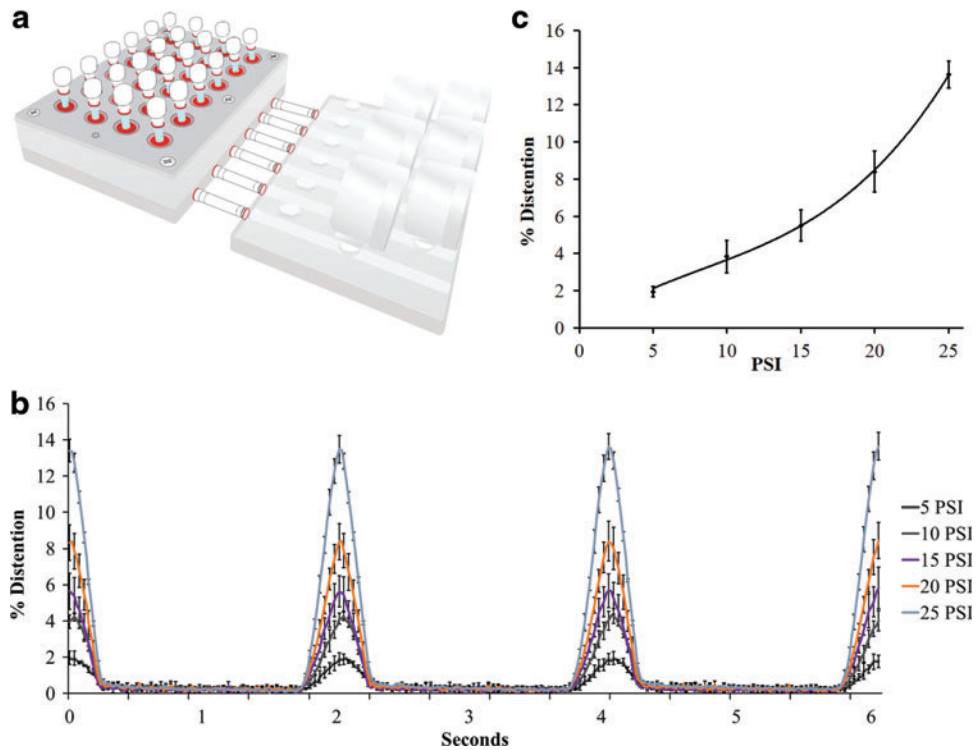


## Supplementary Data



**SUPPLEMENTARY FIG. S1.** Twenty-four-well pulsation plate design. (a) Schematic of the 24-well pulsation plate (24-PP). Four wells per row were connected to a common air source allowing identical distention. The 24-PP had six independent rows in total. Air leading to the 24-PP was filtered through a 0.22- $\mu\text{m}$  filter (not shown). (b) The distention of silastic tubing at various pressures was measured in real time using a laser micrometer. No significant variance of silastic tubing distention was observed over extended periods of time. (c) Distention–pressure relationship was determined by plotting the distention peaks of silastic tubing as a function of pressure at the plate entrance. Data fitting was done using second-order polynomial regression ( $R^2 > 0.99$ ).