

Figure S1. Fabrication of macrofluidic single use bioreactor for Aloe vera scaffold cultivation. a. Design of the macrofluidic device on Adobe illustrator (Blue: Weld, Red: Cut). b. Laser welded single-use bioreactor c. Autoclaved flexible tubes and 0.22-micron membrane filter, tube cap, and zip ties. d. Peg and Backboard. e. Assembled bioreactor. f. Macrofluidic single use bioreactor operating in a standard CO<sub>2</sub> incubator with controllable aeration, Aloe vera scaffolds are seen inside the MSUB.

