

Supplementary materials

Cell viability between electrocompacted collagen layers

The assembly of several thin electrocompacted collagen layers, stacked sequentially, can result in a construct with higher thickness and also as an approach for cell encapsulation between the layers. To demonstrate the viability of cells between the multi-electrocompacted collagen sheets, mesenchymal stem cells was cultured between 3 layers of collagen sheet in a sandwich form and the cells were cultured for two days in construct. Live-dead cell imaging at Day 2 revealed that the cells encapsulated between the layers remained viable demonstrating that layer-by-layer sandwiching the cells between the electrocompacted collagen layers can be used as an approach to form cell encapsulated construct (**Figure s1**).

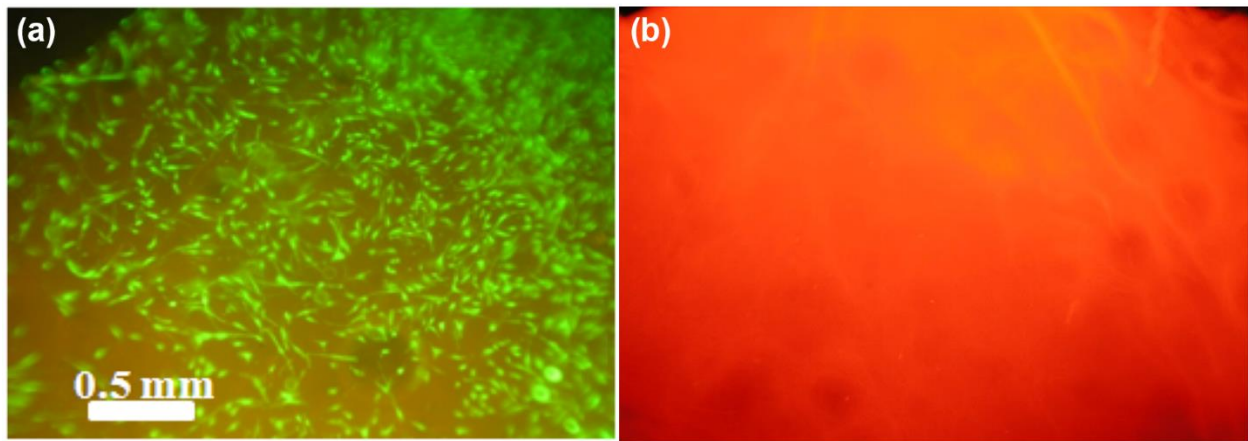


Figure 1s. Live-dead assay confirms the layer-by-layer assembly can be used as an approach for cell encapsulation in electrocompacted collagen construct. Result show most of the encapsulated cell between layers are alive (a) with no significant cell dead (b).