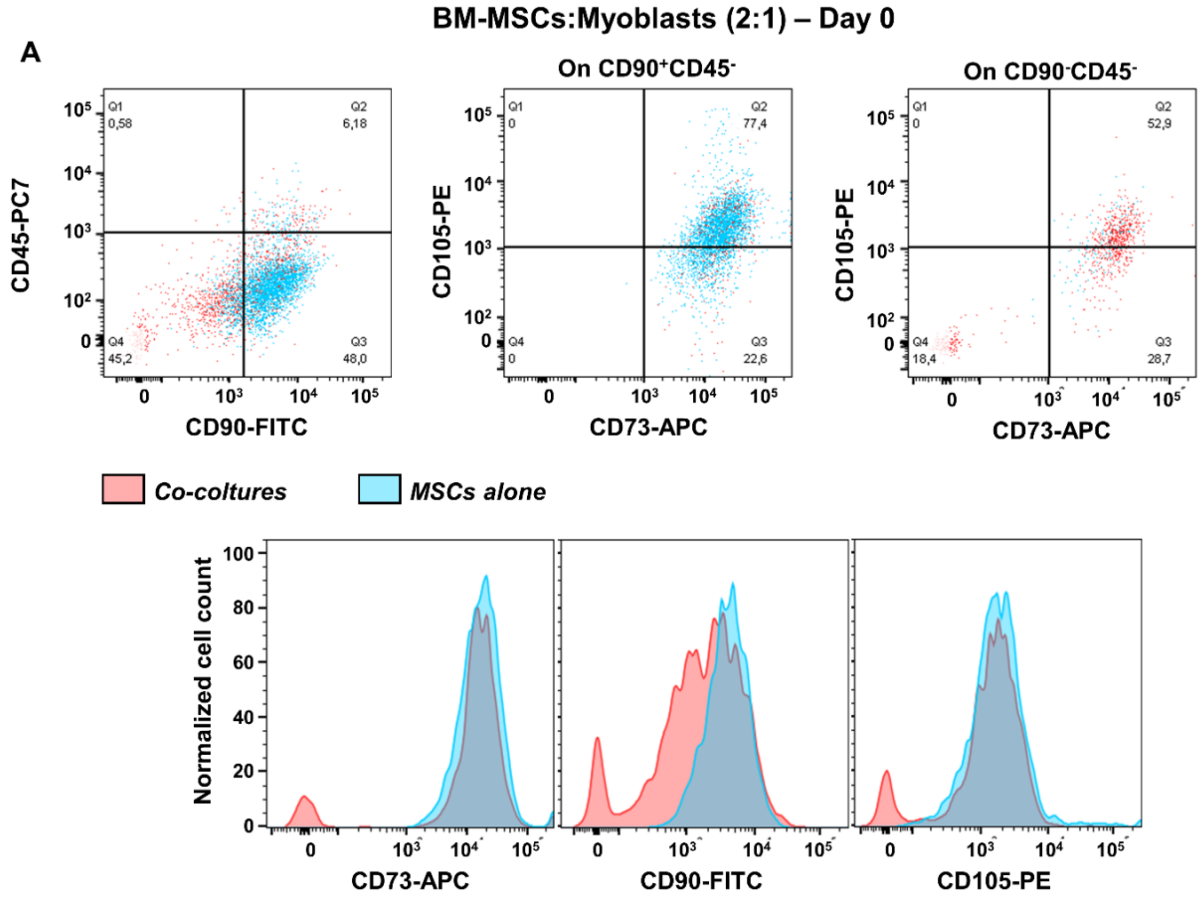
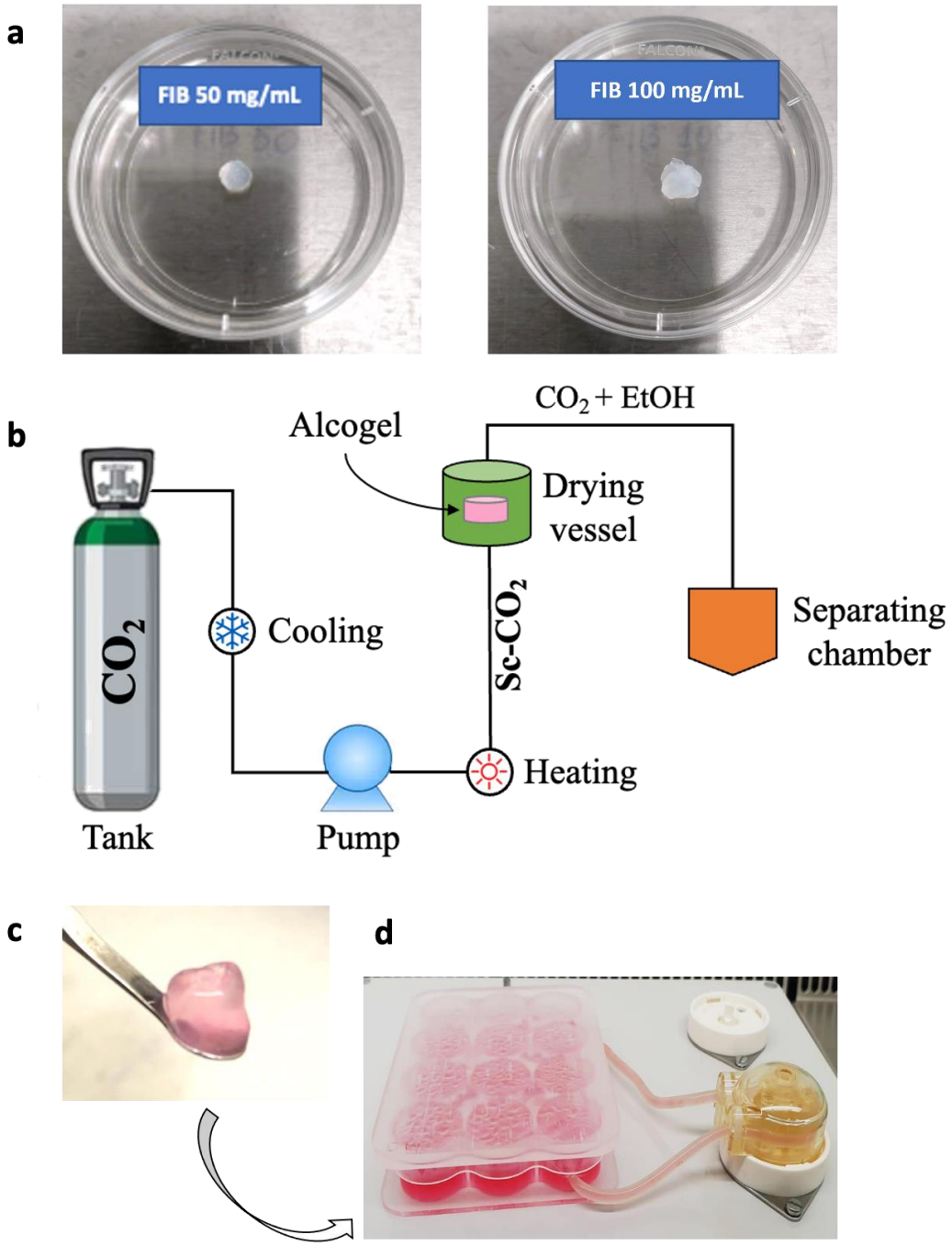
Supplementary Material



Supplementary Figure S1. Immunophenotype of *h*BM-MSCs-*h*SkMs co-culture at day 0 was performed by flow cytometry on *h*BM-MSCs-*h*SkMs co-culture and mesenchymal stem cells (MSCs) alone at day 0 (**A**), and CD90 expression was investigated on $CD45^-$ cells. Next, CD105 and CD73 expression was further studied on $CD45^-CD90^+$ and $CD45^-CD90^+$ cell populations (upper dot plots). Variations in marker expression are also displayed as normalized cell count histograms on single cells. On single cells, CD90 and CD45 expression was explored, and $CD90^+CD45^-$ cells were further studied for CD105 and CD73 expression. Similarly, on single cells, HLA-DR and CD34 expression was investigated, and $CD34^-HLA\text{-}DR^-$ cells were further studied for CD14 expression.



Supplementary Figure S2. Images of fibrin scaffold aerogels obtained at fibrinogen concentration of 50 mg/mL and 100 mg/mL after hydrogel processing by dense gas; aerogels were obtained, after conversion of hydrogel in alcohol-gel, then dried by dense carbon dioxide operating at 200 bar and 38°C **(a)**. Apparatus layout for scaffold drying using dense carbon dioxide: it consists of a high-pressure pump for dense carbon dioxide pumping and of a reactor in where the drying process is performed. Ethanol and carbon dioxide continuously flow through the reactor chamber and are collected in a separator located downstream **(b)**. Fibrin hydrogel scaffold image **(c);** perfusion bioreactor that allows a constant medium flow rate of 1 mL/min **(d)**.