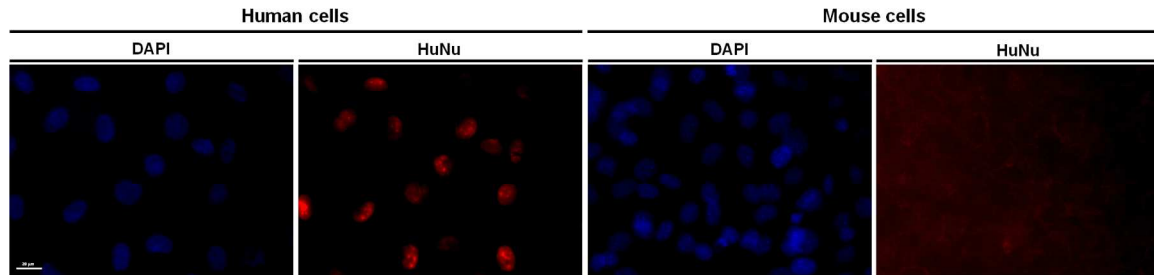
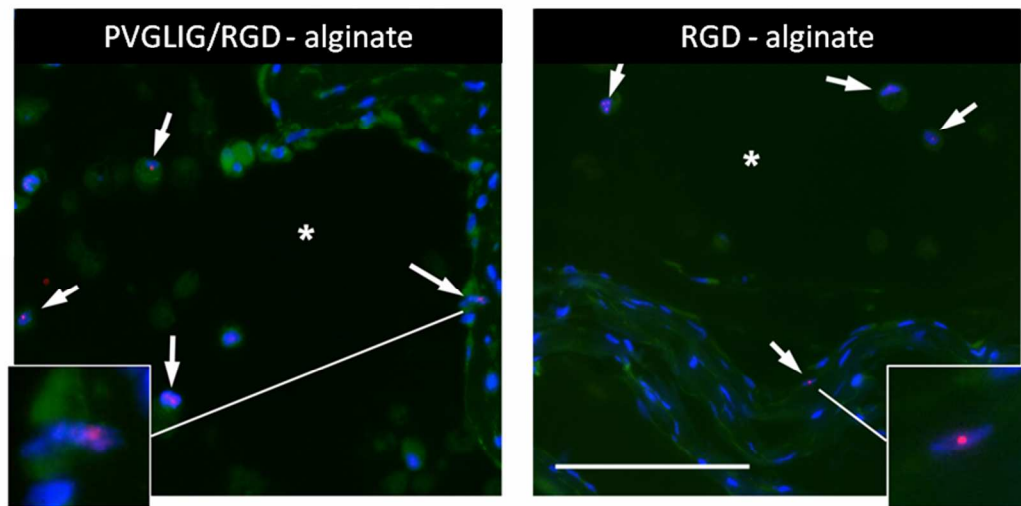


## Supporting Information for publication

A



B



**Figure 1.** Immunolabeling to distinguish human from mouse cells. (A) 2D *in vitro* labeling of hMSCs and mouse cells (MC3T3-E1 cell line), with DAPI (blue) and HuNu human nuclear antibody (red). Scale bar= 20  $\mu\text{m}$ . (B) Identification of hMSC at the implant site (*in vivo*). Representative images of tissue sections immunolabeled with a human-nuclei (HuNu) specific antibody, showing HuNu+ hMSC (in red) inside and outside 4 wt% alginate hydrogels (arrows, \* denotes alginate). Nuclei are stained with DAPI (in blue), and cells present some autofluorescence (in green). Scale bar: 50  $\mu\text{m}$ .