

Potential Implantable Nanofibrous Biomaterials Combined with Stem Cells for Subchondral Bone Regeneration

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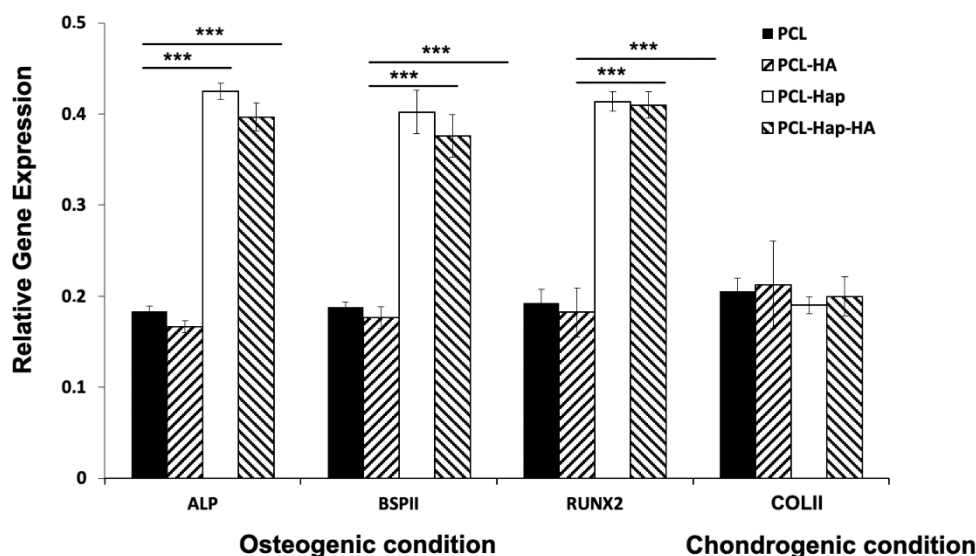


Figure S1. Relative gene expression of ALP, BSP11, and RUNX2 genes in hBM-MSCs cultured for 3 days in osteogenic condition and COL11 gene for 3 days in chondrogenic condition. *** $p < 0.01$ as compared to PCL.

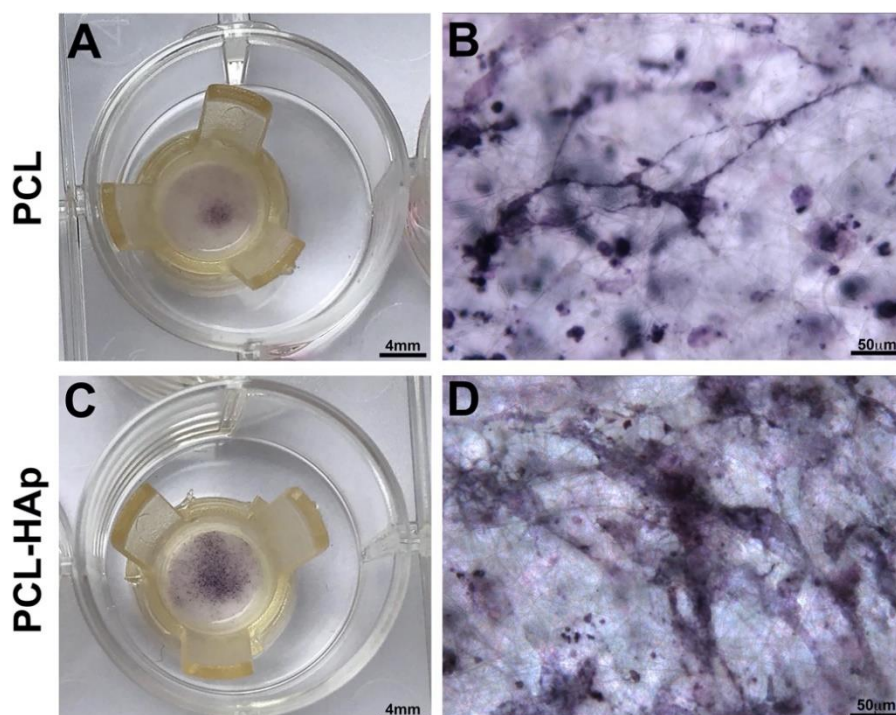


Figure S2. Staining with Alkaline Phosphatase after 7 days of culture of hBM-MSCs on the two types of scaffolds (PCL and PCL-HAp) in an osteogenic medium. Bars represent 4 mm in (A,C) and 50 µm in (B,D).

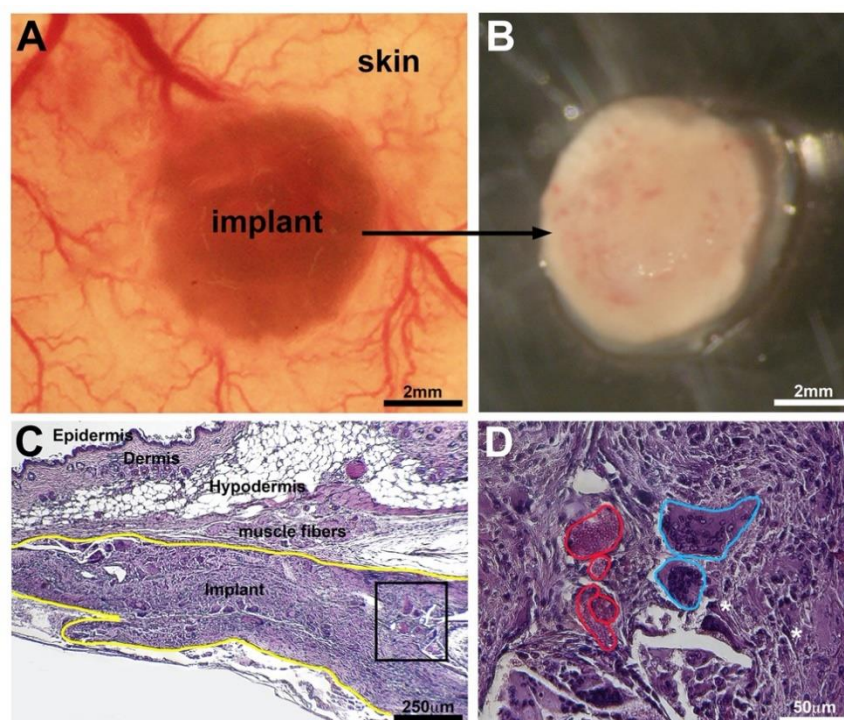


Figure S3. In vivo subcutaneous implantation of a sterilized scaffold for two weeks. (A,B) Macroscopic analyses showing the good integration and vascularization of the implant, (C,D) Haematoxylin-Eosin (HE) staining, yellow zone: implanted membrane; red zones: blood vessels; blue zones: immune cell aggregates; and white asterisk: fibrocytes.

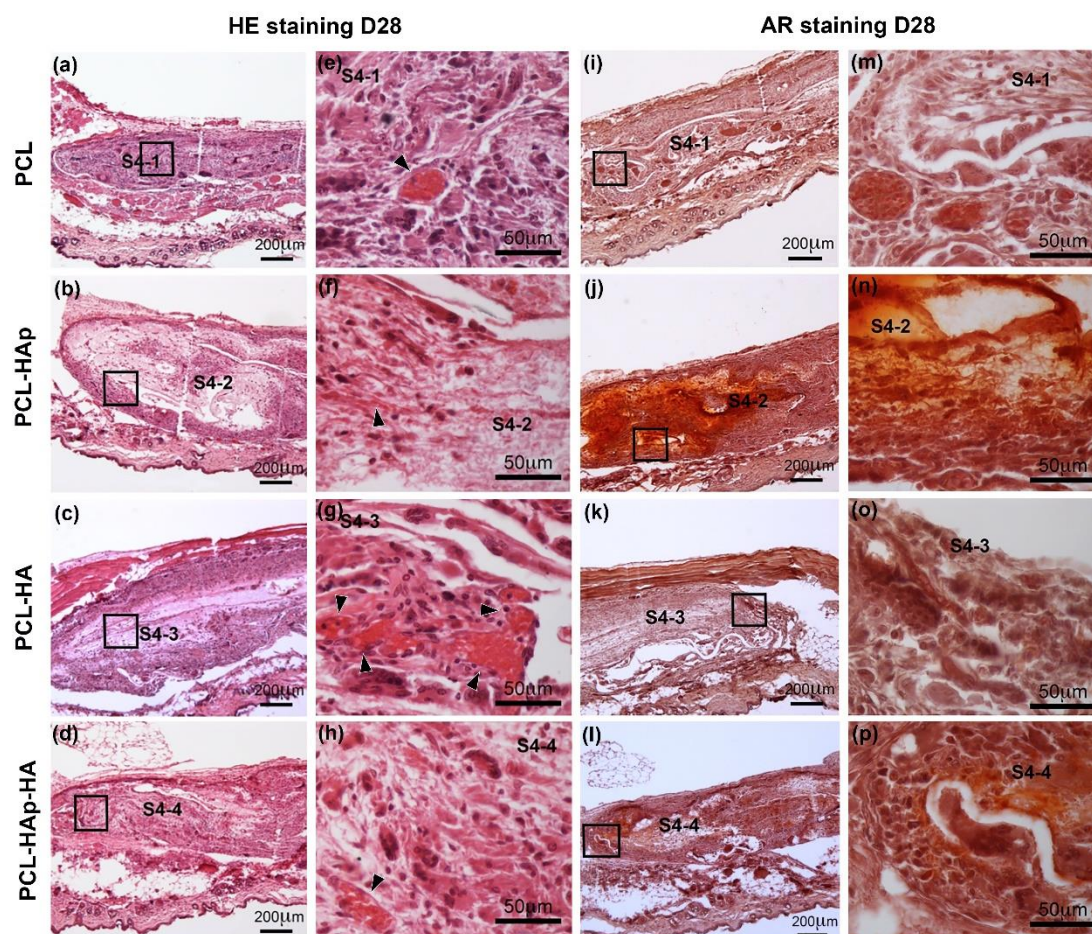


Figure S4. Haematoxylin-Eosin (HE) staining (a–h) and histological staining with Alizarin Red S (i–p) for PCL, PCL-HAp, PCL-HA, and PCL-HAp-HA scaffolds subcutaneously implanted for 4 weeks without cells in ICR mice. S4-1 in (a,e,i,m), for the PCL scaffold S4-2 in (b,f,j,n), for the PCL-HAp scaffold; S4-3 in (c,g,k,o) for the PCL-HA scaffold; and S4-4 in (d,h,l,p) for the PCL-HAp-HA scaffold. Black arrowheads indicate vascularization. Black squares indicate the enlarged areas.



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