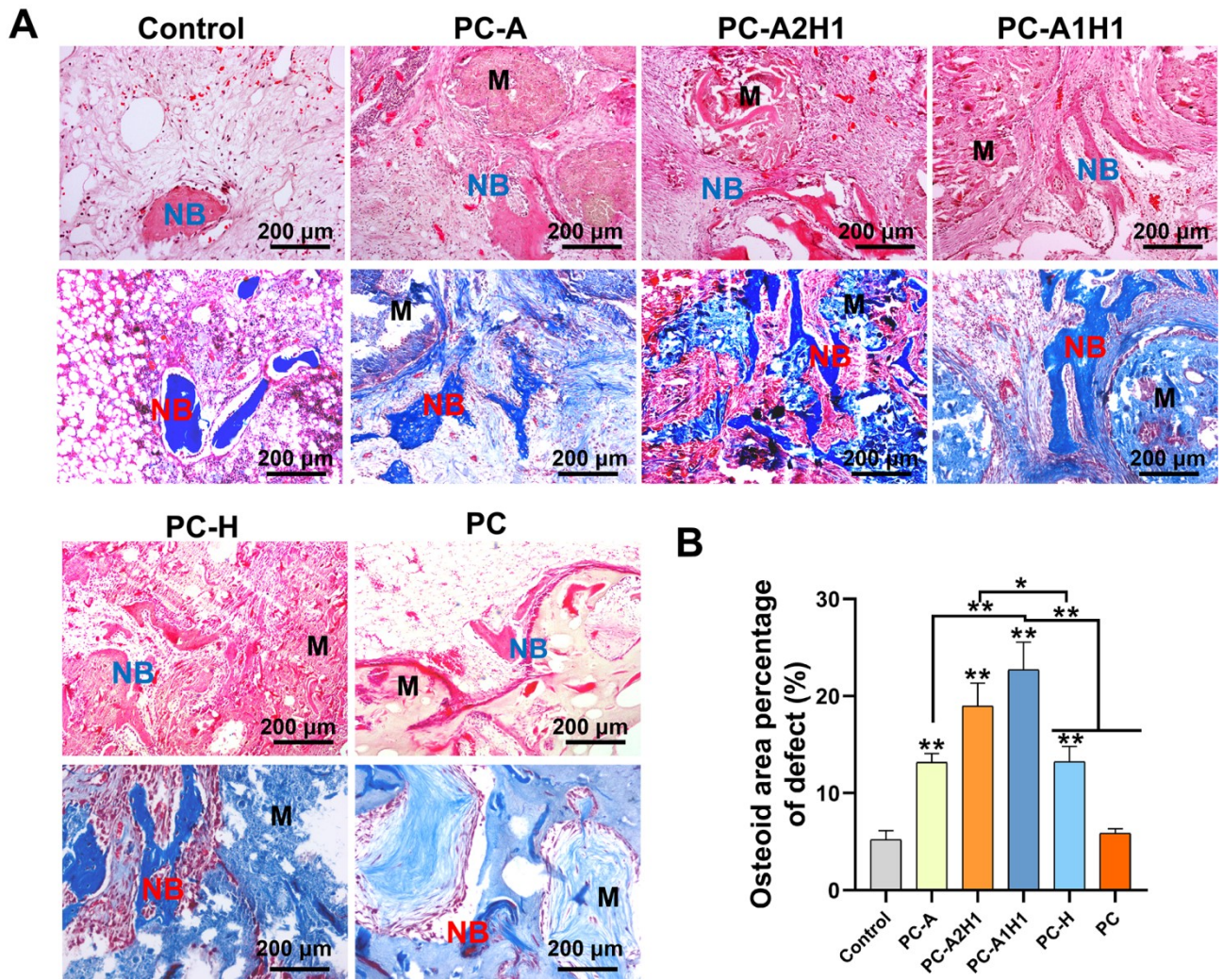


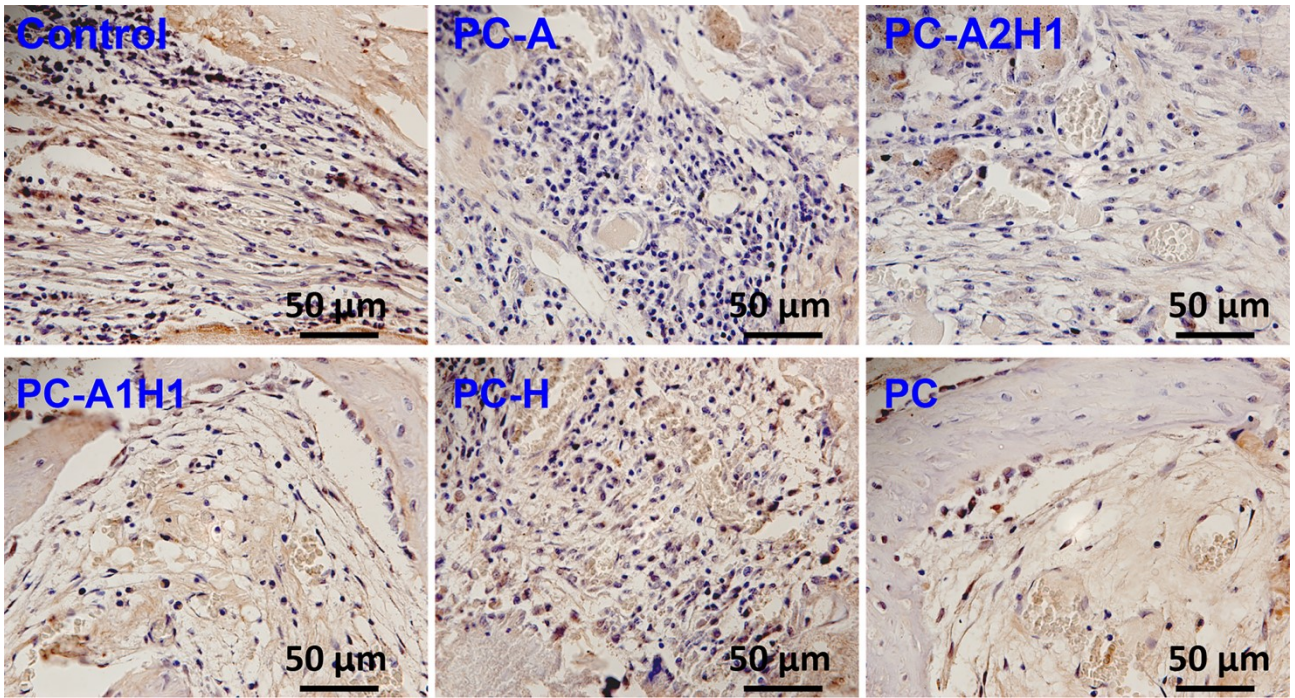
1 **Table S1. The primer sequences used for RT-qPCR analysis**

| Gene | Primer/probe | Primer sequences |
|--------------------|---------------------|---------------------------------|
| Mouse-GAPDH | Forward | 5'-CACCACCAACTGCTTAGC-3' |
| | Reverse | 5'-TTCACCACCTTCTTGATGTC-3' |
| ALP | Forward | 5'-GCAGTATGAATTGAATCGGAACAAC-3' |
| | Reverse | 5'-ATGGCCTGGTCCATCTCCAC-3' |
| RUNX 2 | Forward | 5'-CTGCAAGCAGTATTTACAACAGAGG-3' |
| | Reverse | 5'-GGCTCACGTCGCTCATCTT-3' |
| COL1 | Forward | 5'-GACATGTTTCAGCTTTGTGGACCTC-3' |
| | Reverse | 5'-GGGACCCTTAGGCCATTGTGTA-3' |
| OCN | Forward | 5'-ACCATCTTTCTGCTCACTCTGCT-3' |
| | Reverse | 5'-CCTTATTGCCCTCCTGCTTG-3' |
| OPN | Forward | 5'-TACGACCATGAGATTGGCAGTGA-3' |
| | Reverse | 5'-TATAGGATCTGGGTGCAGGCTGTAA-3' |
| OSX | Forward | 5'-ATCGAGTACATCTTCAAGCCAT-3' |
| | Reverse | 5'-GRGAGGTTTGATCCGCATAATC-3' |
| Human-GAPDH | Forward | 5'-AATGGGCAGCCGTTAGGAAA-3' |
| | Reverse | 5'-GCGCCCAATACGACCAAATC-3' |
| VEGF | Forward | 5'-TCCCTTGCTCTACCTCCAC-3' |
| | Reverse | 5'-AGATGTCCACCAGGGTCTCGATTG -3' |
| ENOS | Forward | 5'-TCACCTTCTTCCTGGACATCACCTC-3' |
| | Reverse | 5'-ACCACTTCCACTCCTCGTAGCG-3' |
| FGF | Forward | 5'-CTTCGCCAGGTCATTGAGATCCAT-3' |
| | Reverse | 5'-TCATCTGCCGCCTAAAGCCATATT-3' |
| HIF-a | Forward | 5'-TGCTCATCAGTTGCCACTTCCAC-3' |
| | Reverse | 5'-ACAGCATCCAGAAGTTTCCTCACAC-3' |



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2 **Figure S1. Histological staining results for the different groups at 4 weeks postsurgery. (A)** Staining
 3 with haematoxylin and eosin (H&E) and Masson's trichrome. **(B)** Quantitative analysis of H&E staining and
 4 Masson's trichrome staining. Data are shown as the mean \pm standard deviation ($n = 3$). * $p < 0.05$, ** $p <$
 5 0.01 . Bar = $200 \mu\text{m}$. Abbreviations: M, scaffold; NB, new bone.



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2 **Figure S2. *in vitro* evaluation of the vascularization of different scaffolds 4 weeks after surgery. (A)**
3 Immunohistochemical (IHC) staining for CD 31 control groups (just the secondary antibody). Bar = 50 μm.

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