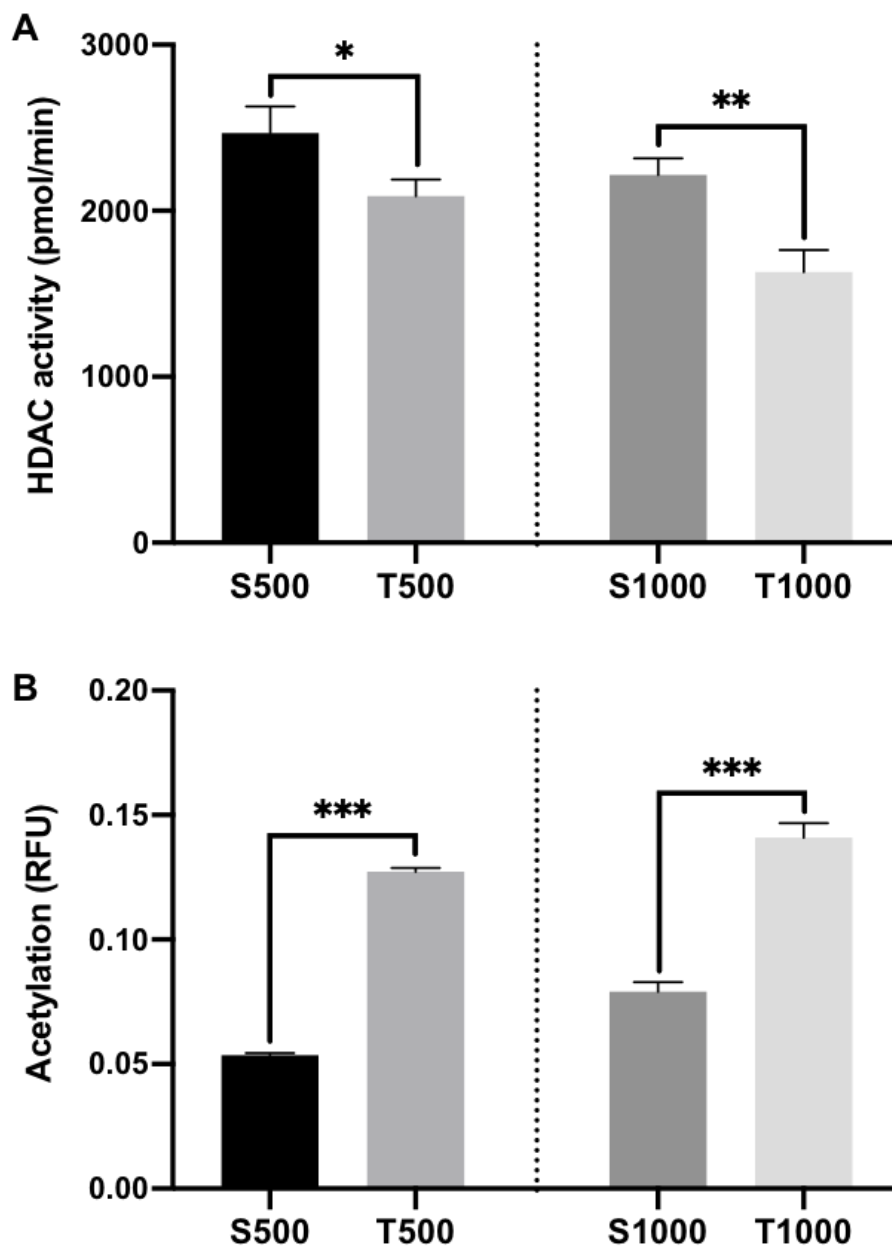


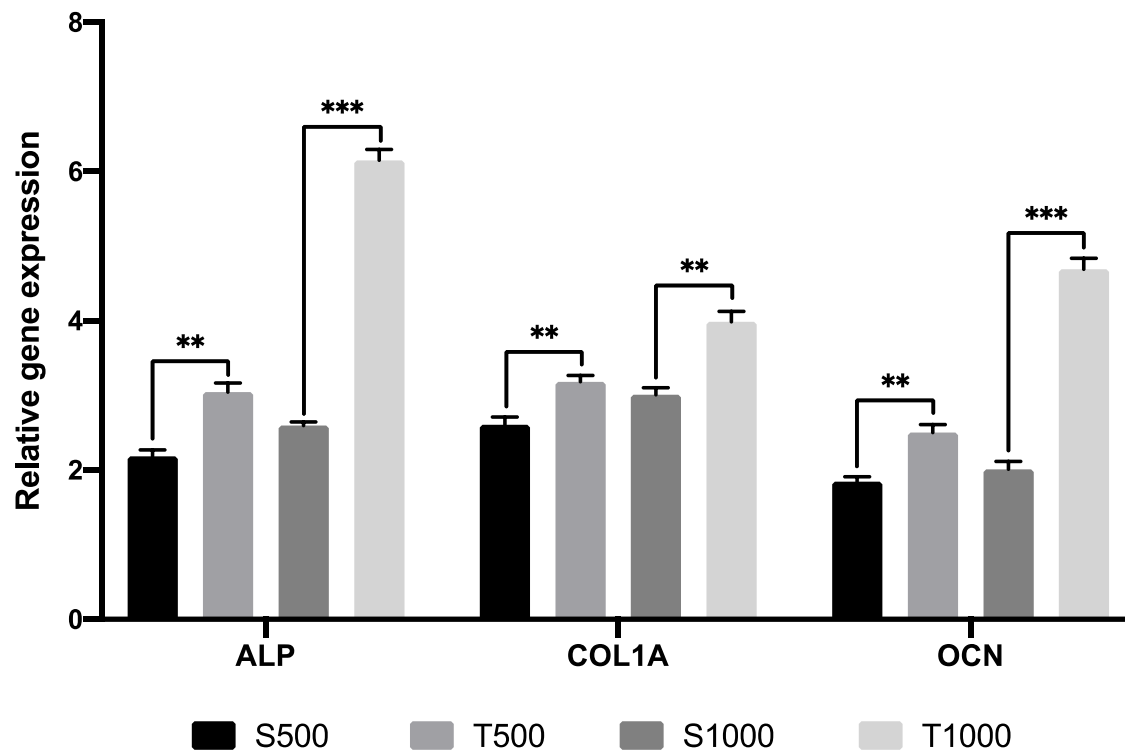
## Supplementary materials

**Supplementary Table 1.** Primer sequences used for RT-qPCR

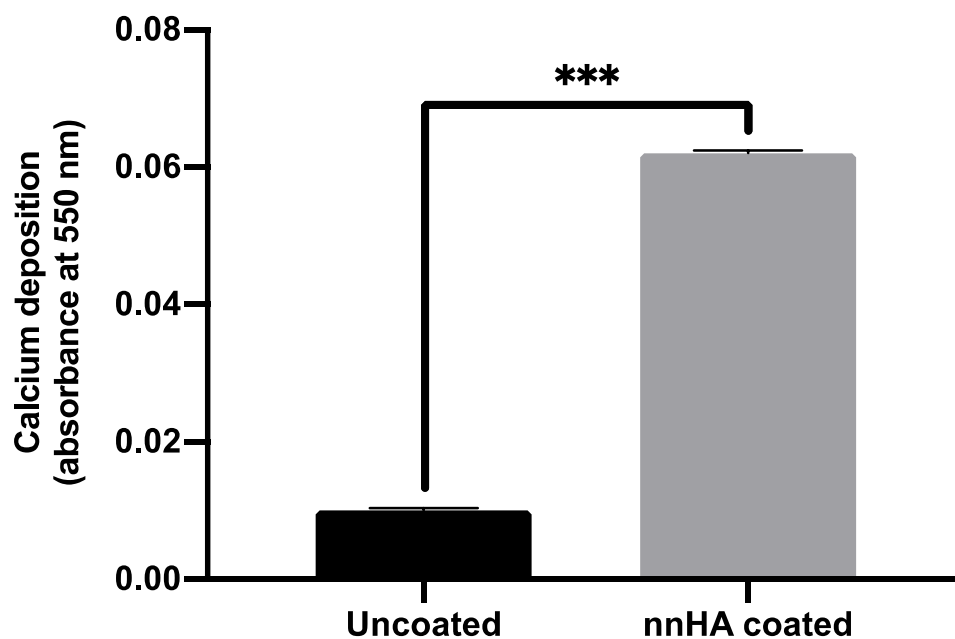
| Gene          | Forward                  | Reverse                 |
|---------------|--------------------------|-------------------------|
| <i>ALP</i>    | ATCGACGTGATCATGGGTGG     | TGGGAATGCTTGTGTCTGGG    |
| <i>COL1A1</i> | AGACAGTGATTGAATACAAAACCA | GGAGTTTACAGGAAGCAGACA   |
| <i>OCN</i>    | ACCTCACAGATGCCAAGCC-     | GCCGGAGTCTGTTCCTACTACC- |



**Supplementary figure 1.** The effect of titanium scaffold architecture on osteoblast A) HDAC activity and B) histone acetylation. Data are expressed as mean  $\pm$  SD (n=3). \*P  $\leq$  0.05, \*\*P  $\leq$  0.01 and \*\*\*P  $\leq$  0.001.



**Supplementary figure 2. Gene expression levels of *ALP*, *COL1A*, and *OCN* from scaffold-cultured osteoblasts during osteogenic culture.** Data are expressed as mean  $\pm$  SD (n=3). \*\*P  $\leq$  0.01 and \*\*\*P  $\leq$  0.001.



**Supplementary figure 3. Quantification of calcium content on nnHA coated scaffolds.** Alizarin red staining of uncoated and nnHA coated scaffolds. Data are expressed as mean  $\pm$  SD (n = 3). \*\*\*P  $\leq$  0.001.