

Supplementary materials

Micro/Nano-Net Guides M2-Pattern Macrophage Cytoskeleton Distribution via Src-Rock Signalling for Enhanced Angiogenesis

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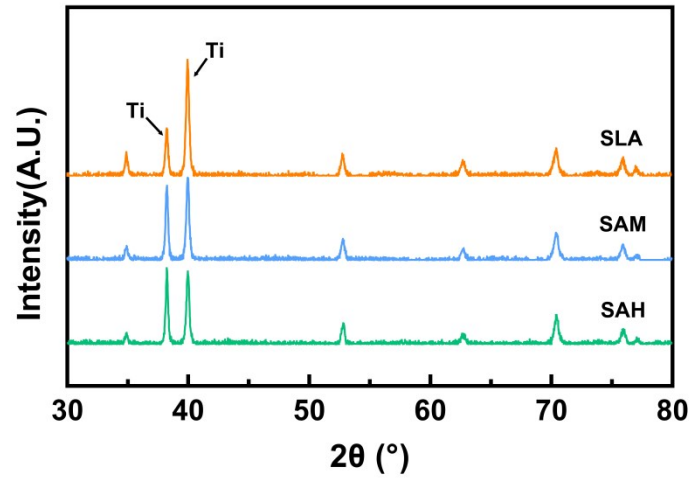


Figure S1. Titanium specimen characteristics. XRD spectra showed the crystalline phases of the samples, the diffraction peaks of Titanium were distributed at around 38° and 40°.

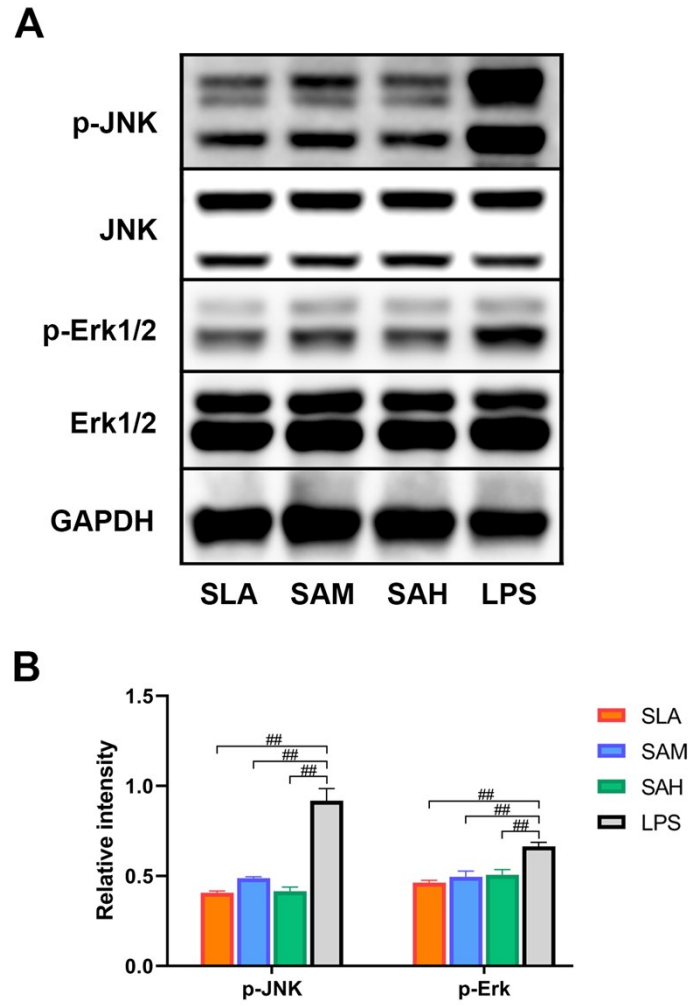


Figure S2. (A)Western blotting test of p-JNK/JNK and p-ERK/ERK at 4h. (B)The relative expression of p-ERK to ERK and p-JNK to JNK, respectively, was measured. ##P<0.01 compared with LPS.

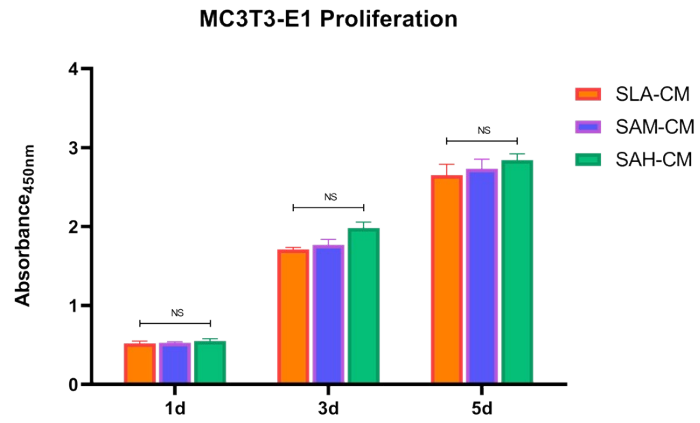


Figure S3. Effects of CM on MC3T3-E1 cell proliferation at different time points, the results showed no significant differences among three groups. NS = not significant.

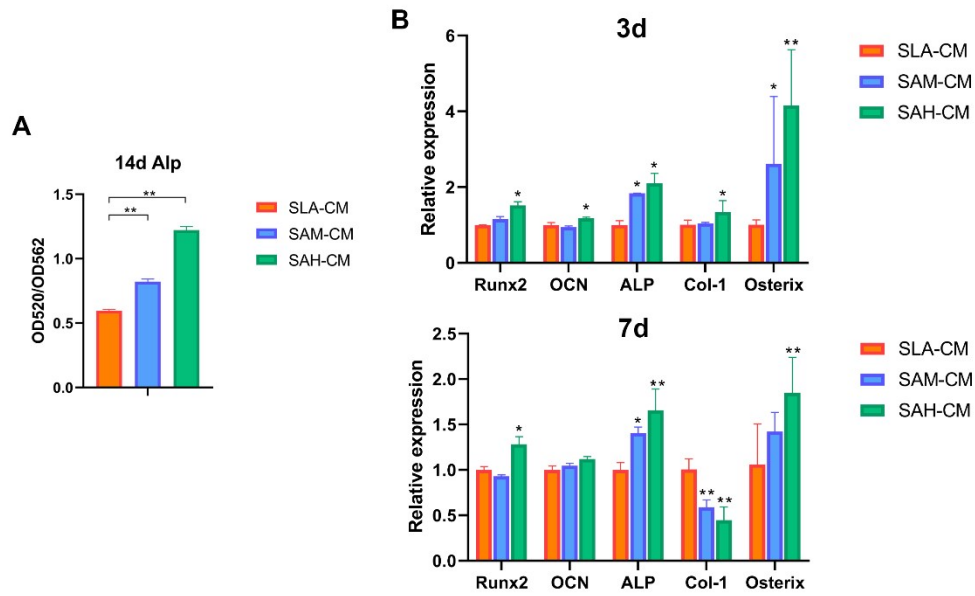


Figure S4. The osteogenesis behaviour of MC3T3-E1 cells treated with CM. (A) Alkaline phosphatase activity at 14 days of MC3T3-E1 cells, the total protein values were used for normalization. (B) The expression of osteogenesis-related genes RUNX2, OCN, ALP, COL-1, and Osterix at 3 or 7 days in MC3T3-E1 cells after culturing with CM. □P<0.05, □□P<0.01 compared with SLA-CM.

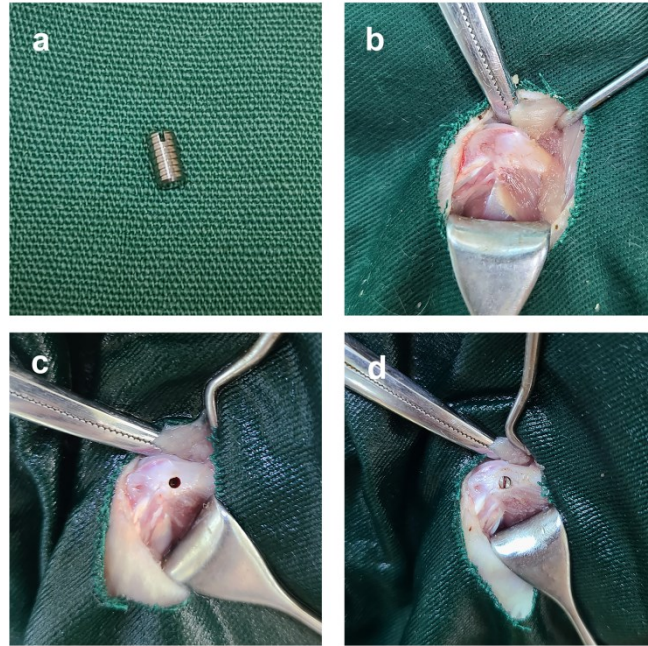


Figure S5. Surgical procedures. (a) The titanium screw used in this surgery (b) The inside of distal femur was exposed.(c) A 2.0-mm diameter hole was prepared 1 mm away from the growth plate and (d) the titanium screw was inserted in place.

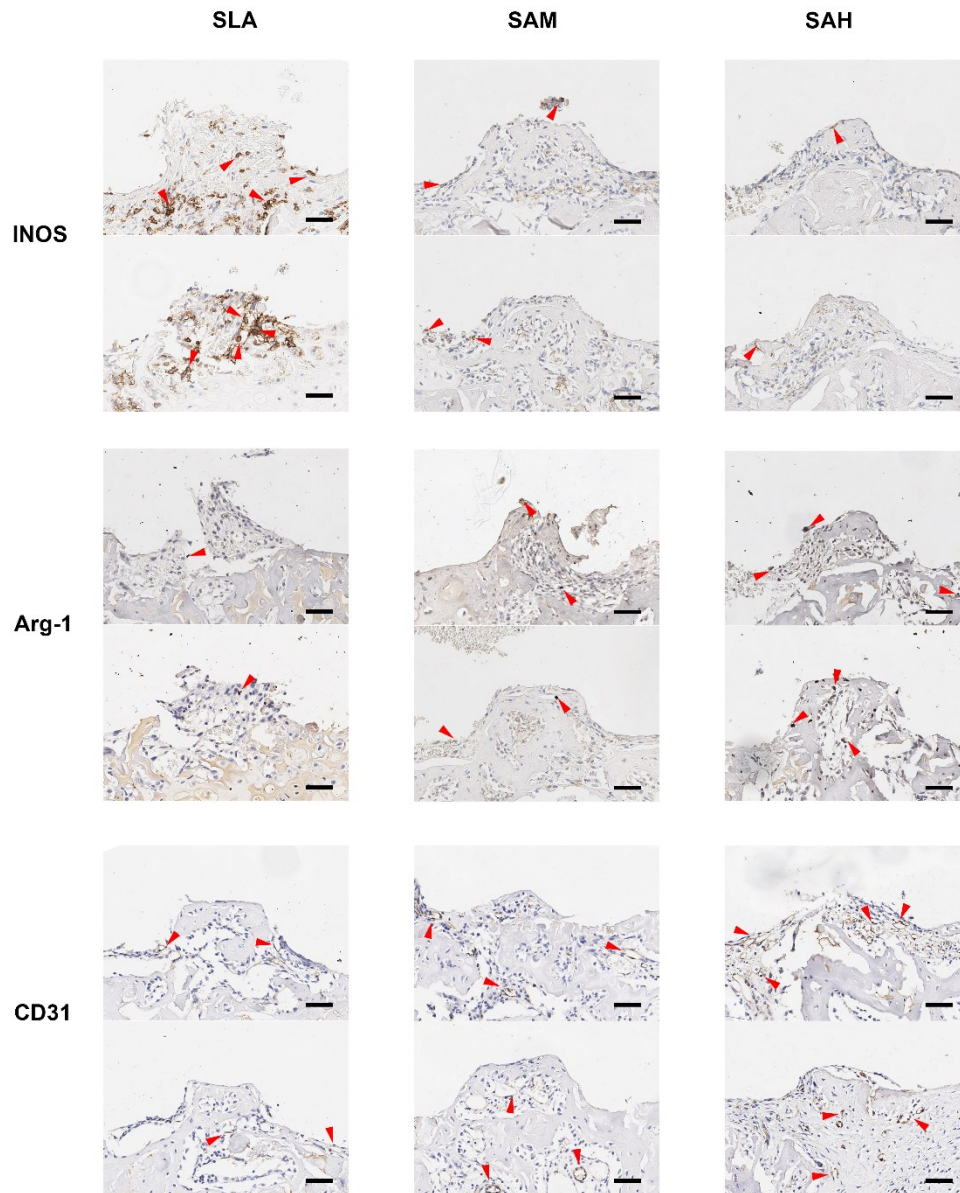


Figure S6. Supplementary representative immunohistochemical images of macrophage polarization and CD31 1 week after implantation. Arrows = Representative cells with positive staining. Scale bar = 50 μm .

Samples	Titanium	Oxygen	Carbon	Sodium
SLA	79.78	18.95	1.27	0
SAM	74.06	24.28	1.08	0.58
SAH	67.63	30.03	0.85	1.49

Table S1. X-ray energy dispersive spectrometry (EDS) analysis of the elemental composition (wt%).

Titanium, oxygen, carbon, and sodium were present on the surface of samples

Genes	Primer sequences(5'-3')
mOCN F	AGCTTAACCCTGCTTGTGACGA
mOCN R	CGGTCTTCAAGCCATACTGGTC
mALP F	TGGACGGTGAACGGGAAAAT
mALP R	TAGTTCTGCTCATGGACGCC
mRUNX2 F	ATTACAGATCCCAGGCAGGCA
mRUNX2 R	CAGAAGTCAGAGGTGGCAGTGT
mCOL1 F	TGGCAAAGACGGACTCAAC
mCOL1 R	GGCAGGAAGCTGAAGTCATAA
mOsterix F	CAACCTGCTAGAGATCTGAG
mOsterix R	TGCAATAGGAGAGAGCGA

Table S2. Osteogenesis-related gene primers used in the qRT-PCR