

Supporting Information

Synergistic Effects of Topographical Guidance and Electrical Stimulation on Modulation of BMSC Behaviors using Electrospun Nanofibers Decorated with Nanoscale Protrusions

Yuying Yan¹, Binbin Sun², Melissa LD Rayner³, Yuanfei Wang^{1,4}, Tong Wu^{1,4,*}

¹ Medical Research Center, The Affiliated Hospital of Qingdao University, Qingdao Medical College, Qingdao University, Qingdao 266000, China

² Shanghai Engineering Research Center of Nano-Biomaterials and Regenerative Medicine, College of Biological Science and Medical Engineering, Donghua University, Shanghai 201620, China

³ Department of Pharmacology, UCL School of Pharmacy, University College London, London WC1N 1AX, United Kingdom

⁴ Shandong Key Laboratory of Medical and Health Textile Materials, Qingdao University, Qingdao 266071, China

Correspondence: Tong Wu (twu@qdu.edu.cn)

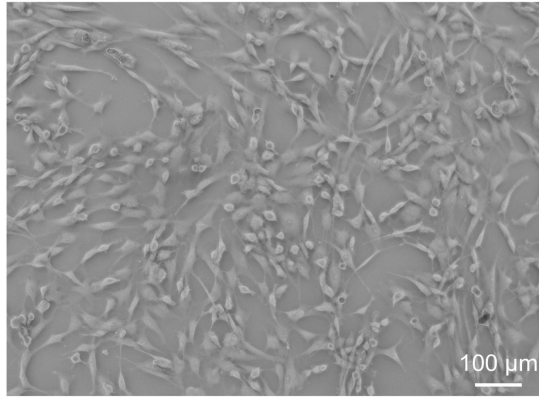


Figure S1. Representative light microscopy image showing the typical spindle-shaped and fibroblast-like morphology of cultured BMSCs.

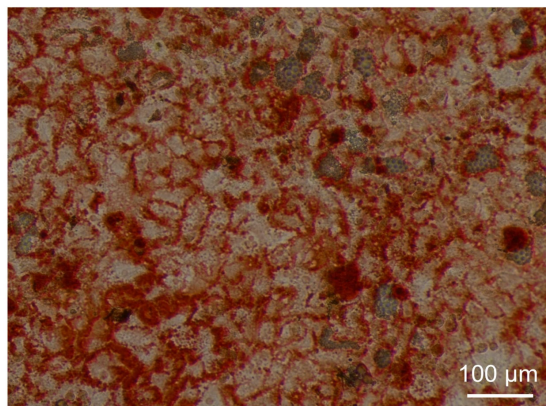


Figure S2. Alizarin red S staining showing BMSCs formed mineralized nodes under osteogenic induction, showing the formation of mineralized nodules.

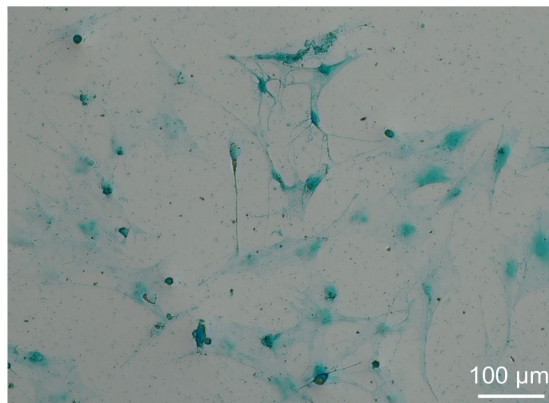


Figure S3. Alcian blue staining after chondrogenic induction, showing the deposition of cartilage-associated extracellular matrix.

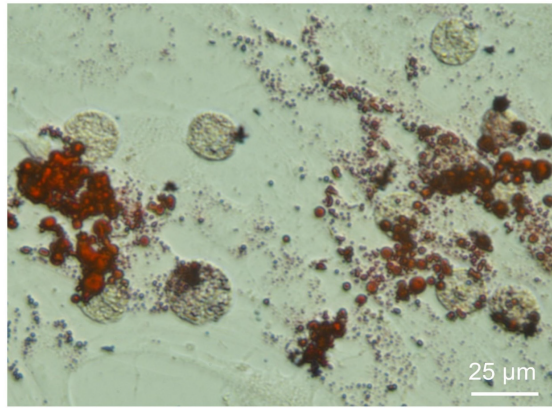


Figure S4. Oil Red O staining after adipogenic induction, showing the formation of intracellular lipid droplets.