

Supporting Information

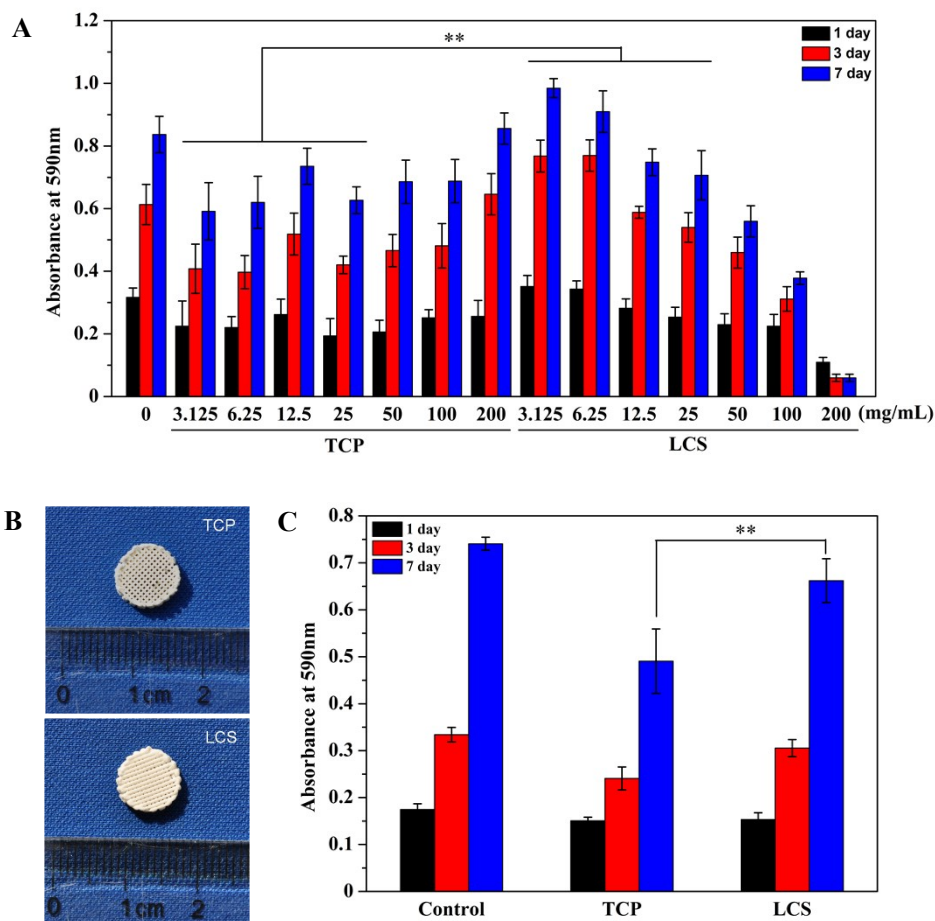


Fig.S1 The proliferation of RAW264.7 cells induced by TCP/ LCS extracts and scaffolds. (A) The proliferation of RAW264.7 cells exhibited distinctly the enhancement in LCS extracts within the concentration range of 3.125-25 mg/mL, as compared to that of TCP extracts at the same concentration range over 7 days of culture. (B) Digital photograph of TCP and LCS scaffolds. (C) The proliferation of RAW264.7 cells induced by TCP and LCS scaffolds. Each individual experiment was repeated three times. Compared with the TCP scaffolds, LCS scaffolds also promoted the proliferation of RAW264.7 cells significantly (** $p < 0.01$).

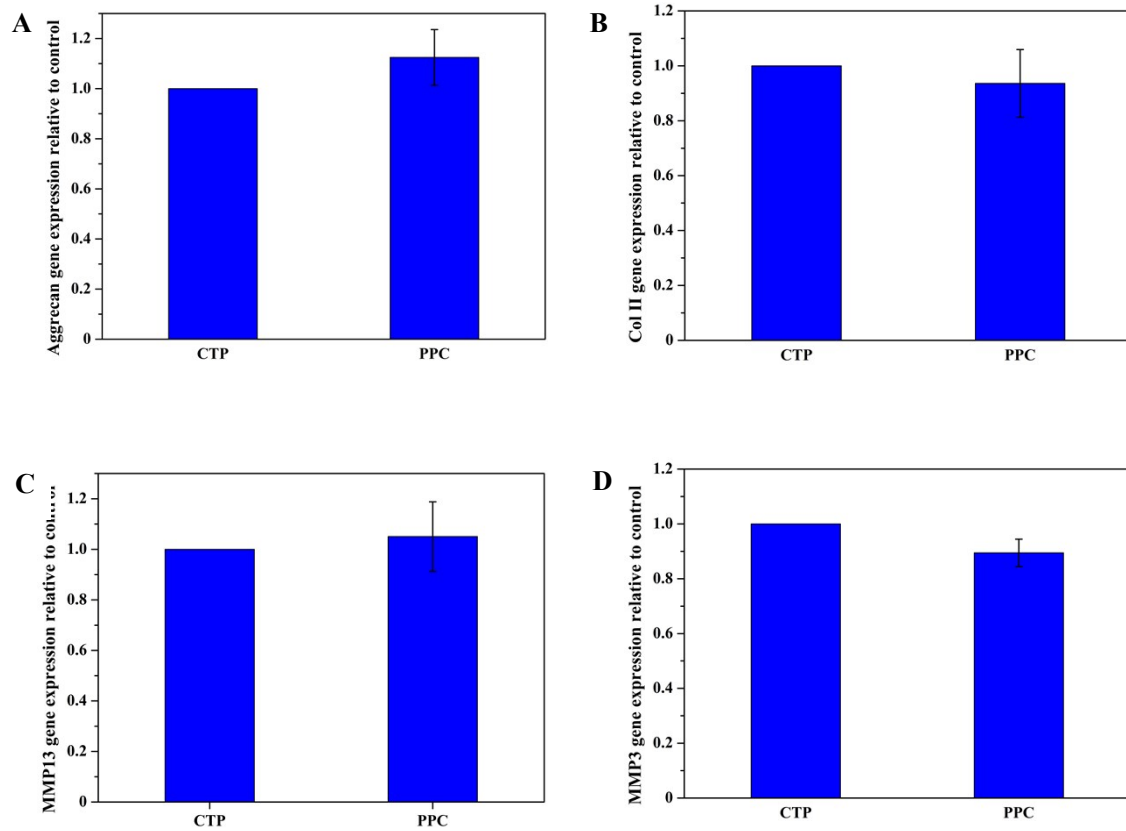


Fig.S2 A comparison of marker genes expression between the chondrocytes used in this paper (CTP) and primary passage chondrocytes (PPC) for 3 days. The gene expressions of (A) Aggrecan and (B) Col II were detected as major markers of anabolism in cartilage. The gene expressions of (C) MMP13 and (D) MMP3 were detected as major markers of catabolism in cartilage. There was no significant difference in the expression of these genes between the chondrocytes used in this paper and the primary passage chondrocytes. Data are represented as mean \pm SD of three independent experiments. (* p <0.05, *** p <0.001)

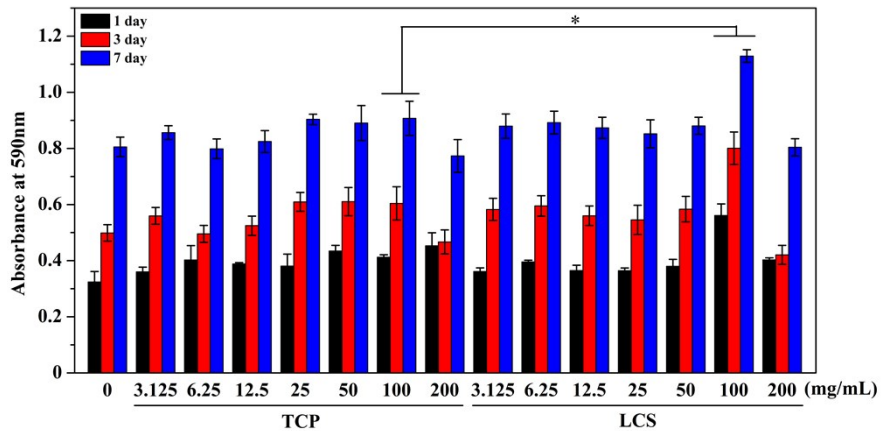


Fig.S3 The proliferation of chondrocytes cultured with TCP/LCS treated macrophage-conditioned media. LCS treated macrophage-conditioned media significantly promoted the proliferation of chondrocytes at the certain concentration (such as 100 mg/mL), as compared to that of TCP extracts at the same concentration over 7 days of culture. The experiment was repeated three times. (* $p < 0.05$).

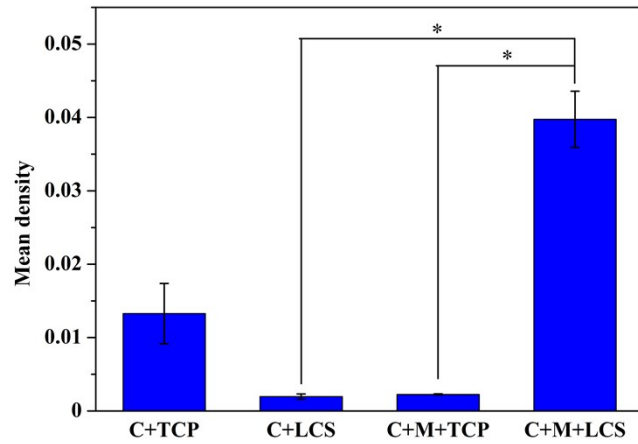


Fig.S4 Mean density analysis of aggrecan proteins in chondrocytes on TCP and LCS scaffolds in the chondrocytes and macrophages co-cultured system. Compared with chondrocytes cultured separately, LCS scaffolds promoted the expression of aggrecan protein significantly in chondrocytes in the co-cultured system. In the co-cultured system, compared with TCP scaffolds, LCS scaffolds significantly promoted the expression of aggrecan protein (* $p < 0.05$).