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Supporting Information

A dual aperture (mesoporous and macroporous) system loaded with cellfree fat extract to optimize bone regeneration microenvironment

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1. Supplemental Table

Table S1. Primers used for real-time RT-PCR.

Genes	Sequence (5'-3')	
TNF-α	5' CCT CCC TCT CAT CAG TTC TA 3'	5' ACT TGG TGG TTT GCT ACG AC 3'
IL-1β	5' CAG CTT TCG ACA GTG AGG	5' TTG TCG AGA TGC TGC TGT GA 3'
	AGA 3'	
ocn	5' CTC ACA CTC CTC GCC CTA TT	5' CCC AGC CAT TGA TAC AGG TAG
	3'	3'
osx	5' CAG TTG ATA GGG TTT CTC TTG	5' CAT AGG ACT TGA GGT TTC ACA
	TA3'	G 3
opn	5' CAT TCC GAT GTG ATT GAT AGT	5' CTT CCT TAC TTT TGG GGT CTA C
	C 3	3
alp	5' TAC AAG CAC TCC CAC TTC ATC	5' AGA CCC AAT AGG TAG TCC ACA
	3'	T 3'
vegf	5' TGT GCC CAC TGA GGA GTC 3'	5' CAT TTG TTG TGC TGT AGG AAG 3
pdgh-bb	5' GCT GTT GAG GTG GCT GTA	5' GCT GTT GAG GTG GCT GTA GAT 3
	GAT 3	
gapdh	5' GCT GTT GAG GTG GCT GTA	5' GCT GTT GAG GTG GCT GTA GAT 3
	GAT 3	

2. Supplemental Figures

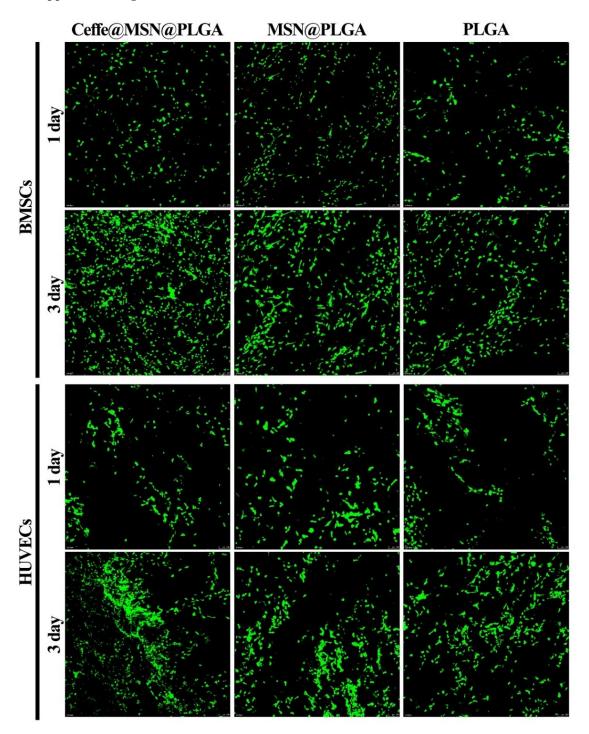


Figure S1. Confocal images of Living/Dead cell staining of HUVECs and BMSCs after cocultured with different scaffold for 1day and 3 day.

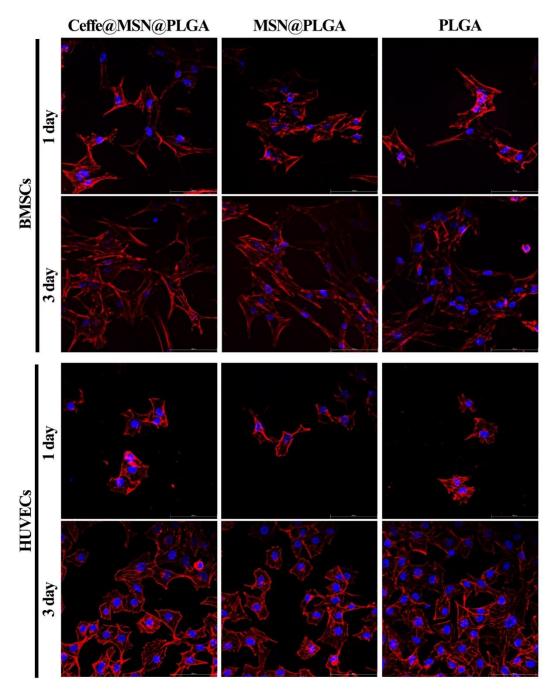


Figure S2. The images of cytoskeleton staining of HUVECs and BMSCs co-cultured with different scaffolds for 1 day and 3 day were taken by laser confocal microscopy.

hBMSCs PLGA PLGA@MSN PLGA@MSN@CEFFE 1 day 3 days 5 days 7 days

Figure S3. The Cck-8 assay kit was used to evaluate the cell proliferation of hBMSCs co-cultured with different scaffolds for 1, 3, 5, and 7 days, respectively.

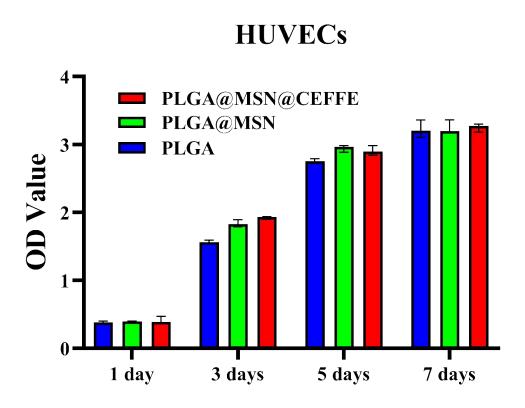


Figure S4. The Cck-8 assay kit was used to evaluate the cell proliferation of HUVECs co-cultured with different scaffolds for 1, 3, 5, and 7 days, respectively.