Supporting Information

Tailoring Chemical and Physical Properties of Fibrous Scaffolds from Block Copolyesters Containing Ether and Thio-ether Linkages for Skeletal Differentiation of Human Mesenchymal Stromal Cells

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Table S1. Electrospinning operating conditions.

Polymer	solvent mixture (v:v)	conc. (w/v%)	voltage (kV)	flow rate (ml/h)	D[a] (cm)
PBS	DCM:2-CE (80:20)	23	14	0.6	15
PBS/PBDG	HFIP	25	20	0.3	15
$P(BS_{11}BDG_{11})$-m[b]	DCM:2-CE (90:10)	35	17	0.6	20
$P(BS_{11}BDG_{11})$-n[c]	HFIP	25	22	0.5	15
PBS/PBTDG	HFIP	25	19	0.5	15
$P(BS_{10}BTDG_{10})$	HFIP	25	23	0.5	15

[a] D = needle-to-collector distance; [b] "m" indicates micrometric fibers; [c] "n" indicates nanometric fibers.

Table S2. Peak molecular weight as a function of incubation time for PBS/PBDG and PBS/PBTDG.

	PBS/PBDG		PBS/PBTDG	
Incubation time (days)	M_p, 1	M_p, 2	M_p, 1	M_p, 2
0	40600	/	51400	/
27	24700	58800	37900	/
47	18500	58600	32000	59300
77	14200	58600	26100	59400
92	12000	58100	18800	59000
109	10700	56600	12500	57500
145	8200	51100	9700	52100
162	5400	50900	8700	51000

Table S3. Sequences of primers used in real time RT-PCR.

Gene	Forward primer 5' to 3'	Reverse primer 5' to 3'
B2M	ACAAAGTCACATGGTTCACA	GACTTGTCTTTCAGCAAGGA
ALP	ACAAGCACTCCCACTTCATC	TTCAGCTCGTACTGCATGTC
RUNX2	TGGTTACTGTCATGGCGGGTA	TCTCAGATCGTTGAACCTTGCTA
COL1A1	GAGGGCCAAGACGAAGACATC	CAGATCACGTCATCGCACAAC
BSP	CCCCACCTTTTGGGAAAACCA	TCCCCGTTCTCACTTTCATAGAT
COL2A1	CGTCCAGATGACCTTCCTACG	TGAGCAGGGCCTTCTTGAG
SOX9	TGGGCAAGCTCTGGAGACTTC	ATCCGGGTGGTCCTTCTTGTG
ACAN	AGGCAGCGTGATCCTTACC	GGCCTCTCCAGTCTCATTCTC
ALCAM	ACGATGAGGCAGACGAGATAAGT	CAGCAAGGAGGAGACCAACAAC

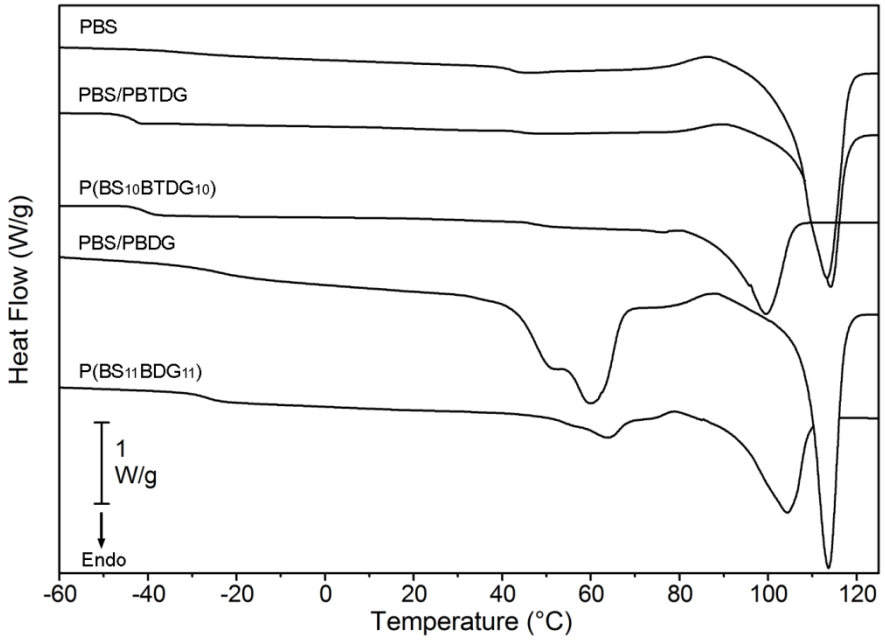

Fig. S1. Calorimetric curves of the polymeric scaffolds under investigation.

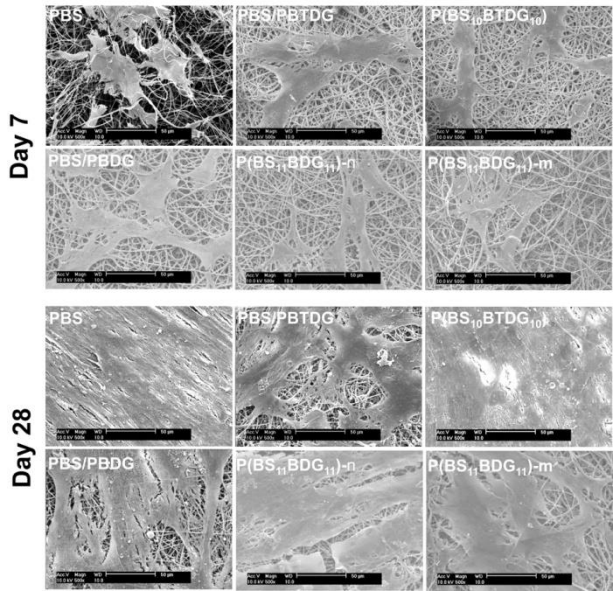

Fig. S2. SEM images of hMSCs cultured on scaffolds in BM at day 7 and day 28.

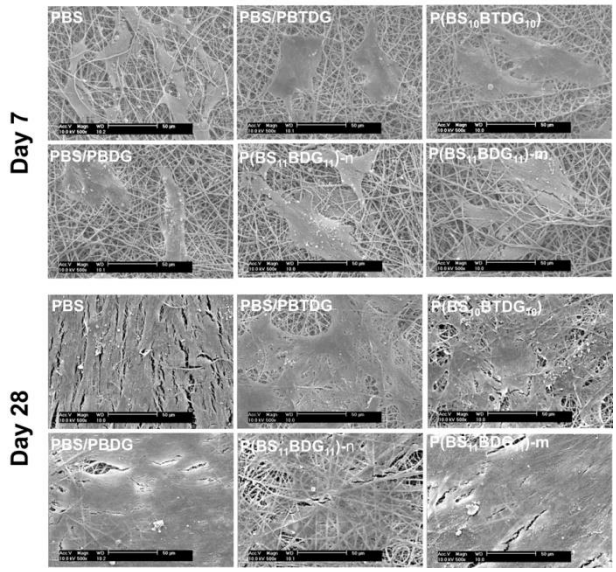

Fig. S3. SEM images of hMSCs cultured on scaffolds in OM at day 7 and day 28.

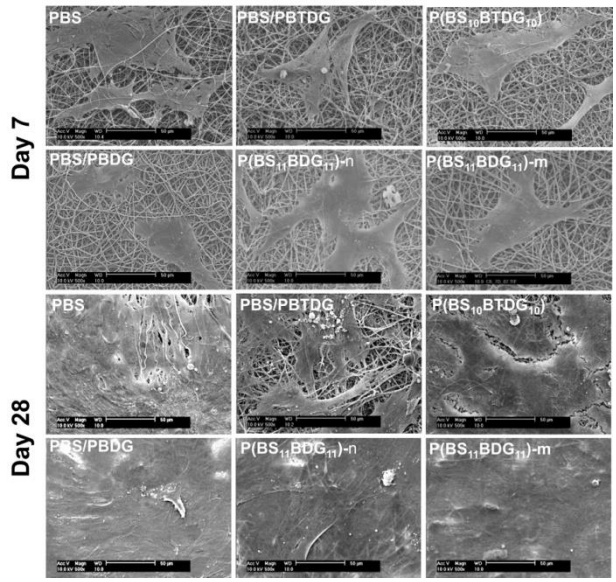

Fig. S4. SEM images of hMSCs cultured on scaffolds in CM at day 7 and day 28.

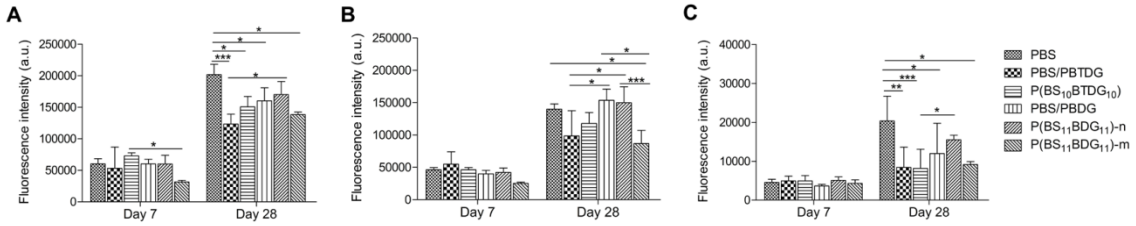

Fig. S5. Metabolic activity of hMSCs cultured on scaffolds in BM(A), OM(B) and CM (C) at day 7 and day 28. *p<0.05, **p < 0.01 , ***p < 0.001.

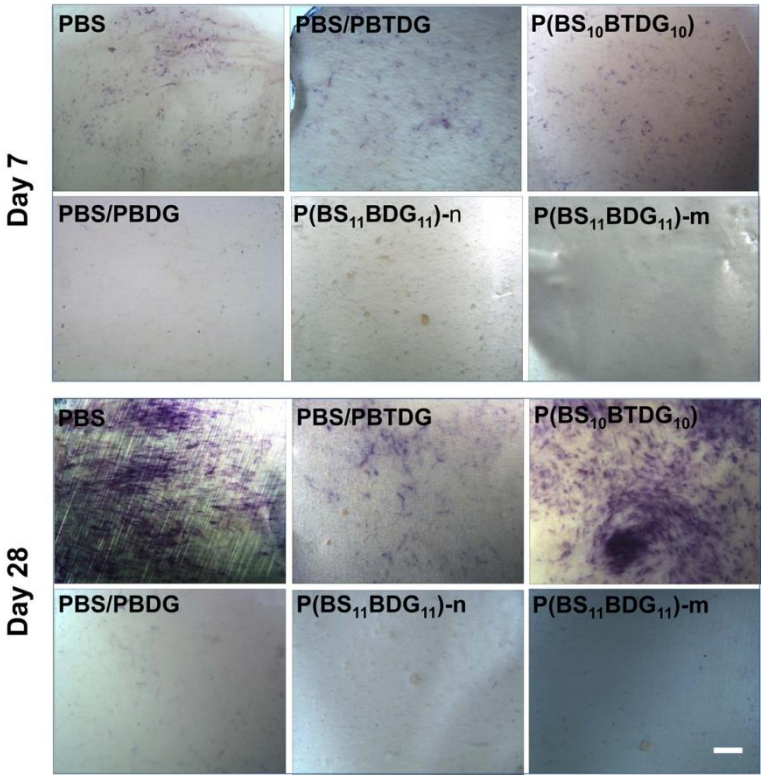

Fig. S6. The staining of alkaline phosphatase enzyme activity for hMSCs on scaffolds in BM at day 7 and day 28. Scale bar =1mm.

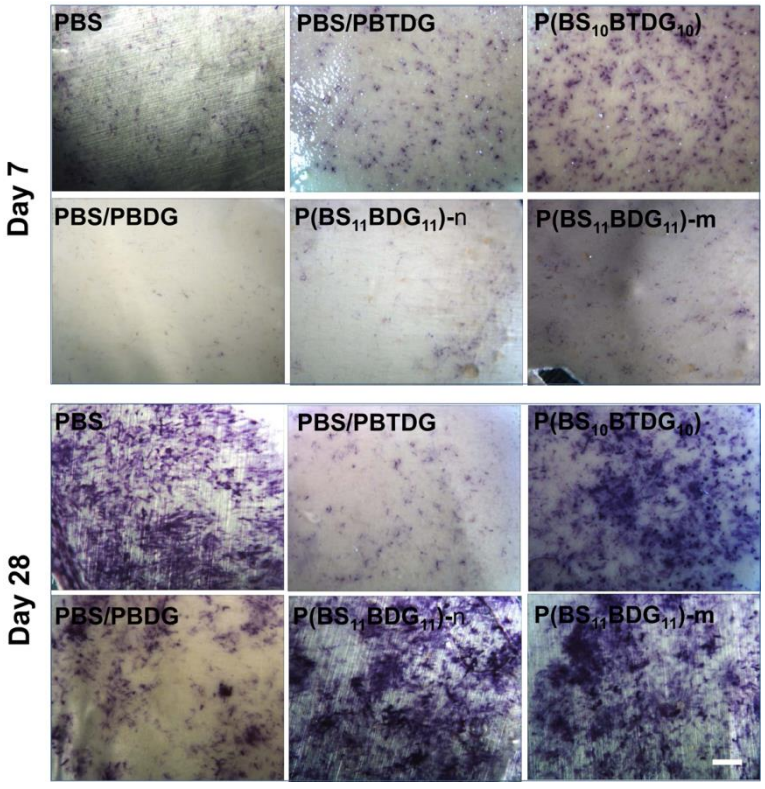

Fig. S7. The staining of alkaline phosphatase enzyme activity for hMSCs on scaffolds in OM at day 7 and day 28. Scale bar =1mm.