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RESEARCH ARTICLE

Pore size-mediated macrophage M1 to M2 transition affects osseointegration of 3D-printed PEEK scaffolds

Supplementary File

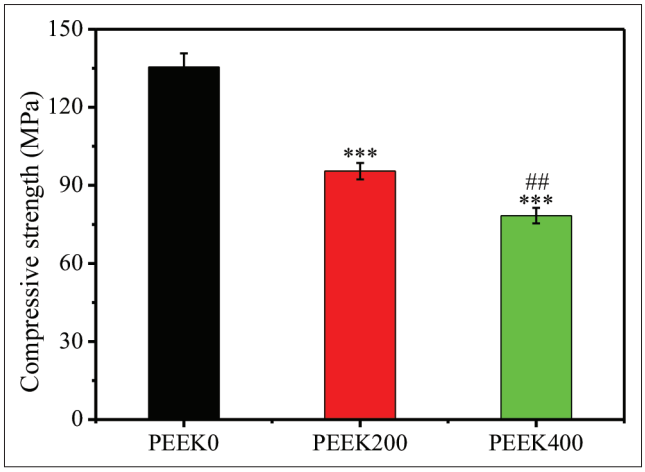

Figure S1. Compressive strength of 3D-printed PEEK scaffolds with different pore sizes. Data are shown as the mean ± SD for $n \geq 3$; $^{*}p < 0.05$, $^{**}p < 0.01$, and $^{***}p < 0.001$ indicate significant differences when compared to the PEEK0; $^{\#\#}p < 0.01$ indicates significant differences when compared to the PEEK200.

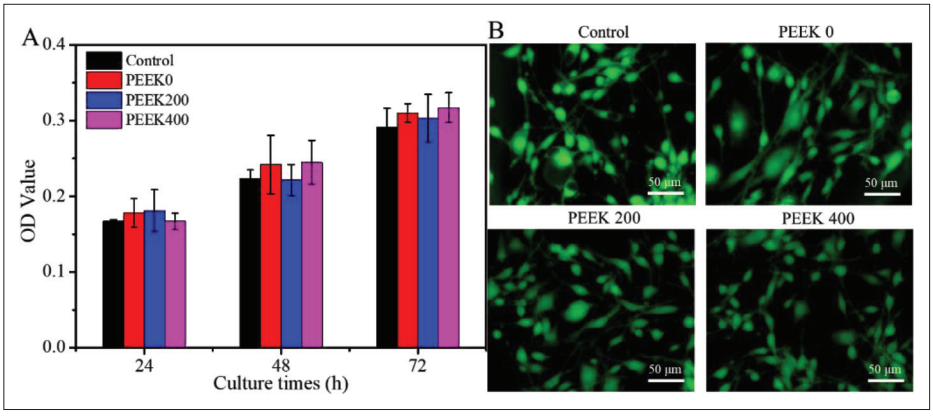

Figure S2. (A) Proliferation of L-929 fibroblasts cultured with the PEEK scaffold extract for 24, 48, and 72 h. (B) Fluorescence staining of L-929 fibroblasts cultured with the PEEK scaffold extract for 72 h (scale bar = 50 μm).

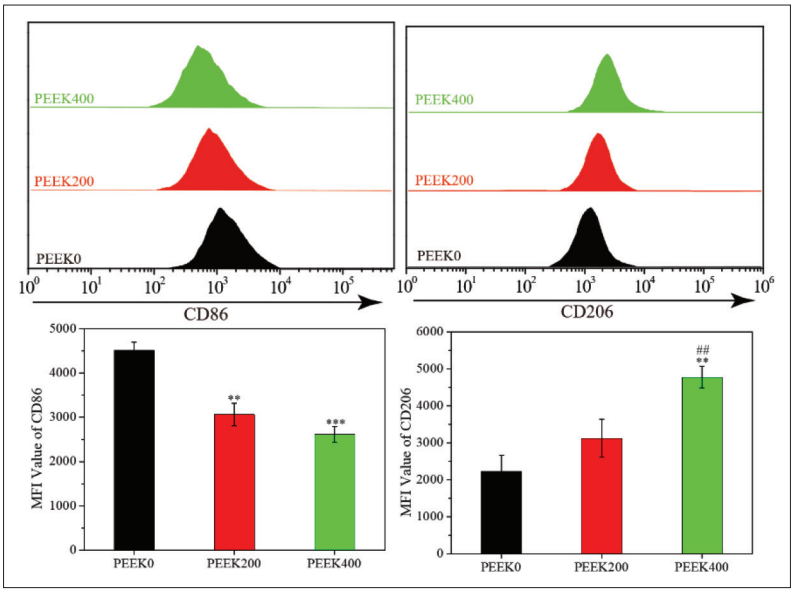

Figure S3. (A) Expression of CD86 detected by flow cytometry. (B) Mean fluorescence intensity of CD86. (C) Expression of CD206 detected by flow cytometry (D) Mean fluorescence intensity of CD206. Data are shown as the mean ± SD for $n \geq 3$; $^{*}p < 0.05$, $^{**}p < 0.01$, and $^{***}p < 0.001$ indicate significant differences when compared to the PEEK0; $^{\#\#}p < 0.01$ indicates significant differences when compared to the PEEK200.

Table S1. Macrophage polarization-related gene primer pairs used in RT-qPCR.

Gene	Primer	Sequence (5′–3′)
GAPDH	Forward	CCAATGTGTCCGTCGTGGATCT
	Reverse	GTTGAAGTCGCAGGAGACAACC
CCR7	Forward	GGTGGCTCTCCTTGTCATTTTC
	Reverse	AGGTTGAGCAGGTAGGTATCCG
TNF-α	Forward	TATGGCCCAGACCCTCACA
	Reverse	GGAGTAGACAAGGTACAACCCATC
iNOS	Forward	CAAGCTGAACTTGAGCGAGGA
	Reverse	TTTACTCAGTGCCAGAAGCTGGA
VEGF	Forward	GGAGTACCCCGACGAGATAGAGTA
	Reverse	AGCCTGCACAGCGCATC
CD206	Forward	TACTTGGACGGATAGATGGAGG
	Reverse	CATAGAAAGGAATCCACGCAGT
TGF-β	Forward	CAAGCTGAACTTGAGCGAGGA
	Reverse	TTTACTCAGTGCCAGAAGCTGGA
BMP-2	Forward	AACGAGAAAAGCGTCAAGCC
	Reverse	AGGTGCCACGATCCAGTCAT
PDGF-bb	Forward	ATCCGCTCCTTTGATGATCT
	Reverse	GAGCTTTCCAACTCGACTCC

Table S2. Osteogenesis-related gene primer pairs used in RT-qPCR.

Gene	Primer	Sequence (5′–3′)
GAPDH	Forward	ACAGTTGCCATGTAGACC
	Reverse	TTTTTGGTTGAGCACAGG
ALP	Forward	TCTTCACATTTGGTGGATAC
	Reverse	ATGGAGACATTCTCTCGTTC
OCN	Forward	TTCTTTCCTCTTCCCCTTG
	Reverse	CCTCTTCTGGAGTTTATTTGG
OPN	Forward	GACCAAGGAAAACTCACTAC
	Reverse	CTGTTTAACTGGTATGGCAC
RUNX2	Forward	AAGCTTGATGACTCTAAACC
	Reverse	TCTGTAATCTGACTCTGTCC

Table S3. Angiogenesis-related gene primer pairs used in RT-qPCR.

Gene	Primer	Sequence (5′–3′)
GAPDH	Forward	GGAGTCCACTGGCGTCTTC
	Reverse	GCTGATGATCTTGAGGCTGTTG
Angiogenin	Forward	GTGCTGGGTCTGGGTCTGAC
	Reverse	GGCCTTGATGCTGCGCTTG
FGF	Forward	CTGTACTGCAAAAACGGG
	Reverse	AAAGTATAGCTTTCTGCC
SDF	Forward	TGAGAGCTCGCTTTGAGTGA
	Reverse	CACCAGGACCTTCTGTGGAT