Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

for

In vivo angiogenesis in tissues penetrating into porous β-tricalcium phosphate scaffolds

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Figure S1.

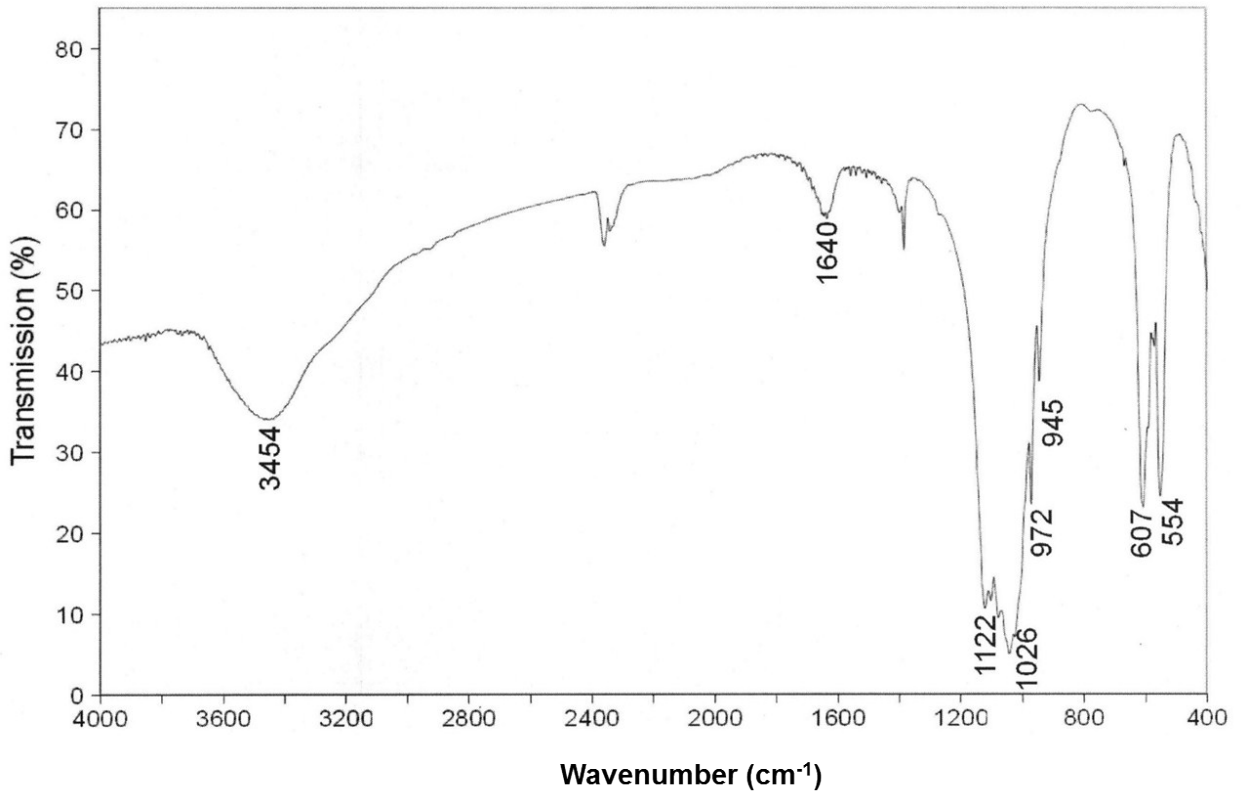


Figure S1. FT-IR spectrum of β-tricalcium phosphate scaffolding materials. Samples were mixed with KBr and spectra were taken in a range of 400-4000 cm^{-1} in VERTEX 70 FT-IR spectrophotometer. Strong peaks at 554, 607, 1026 and 1122 cm^{-1} correspond to the existence of PO_4^{3-}, whereas weak peaks at 1640 and 3454 cm^{-1} corroborate the existence of residual OH^-.

Figure S2.

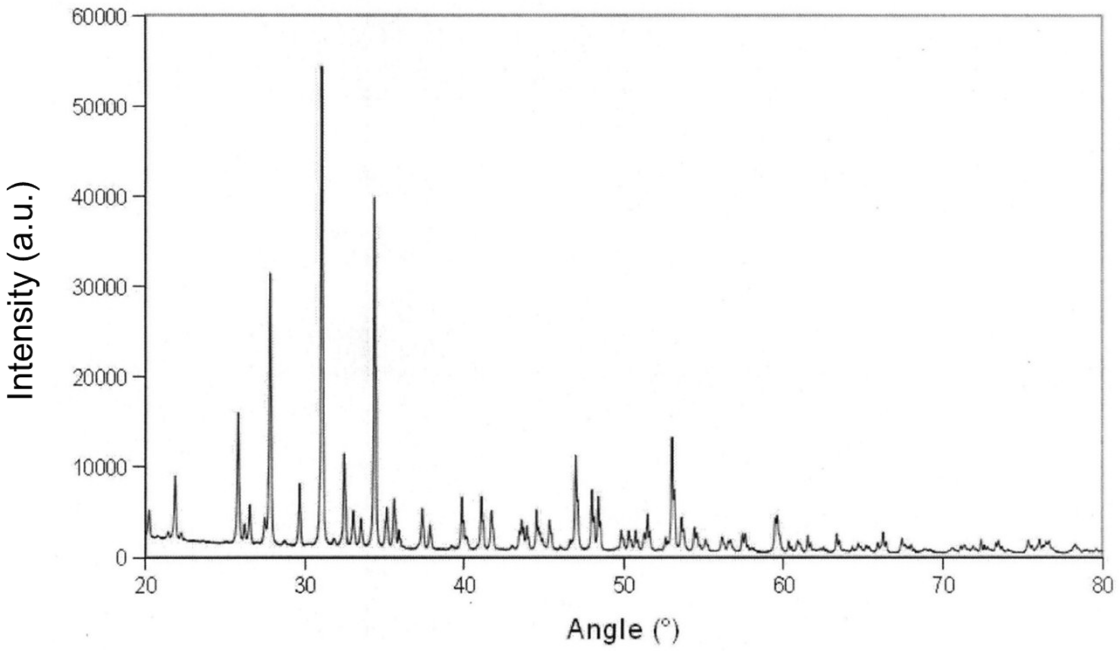


Figure S2. XRD spectra of β-tricalcium phosphate scaffolding materials. High and narrow diffraction peaks in the spectrum verified the crystalline phase of β-tricalcium phosphate.

Figure S3.

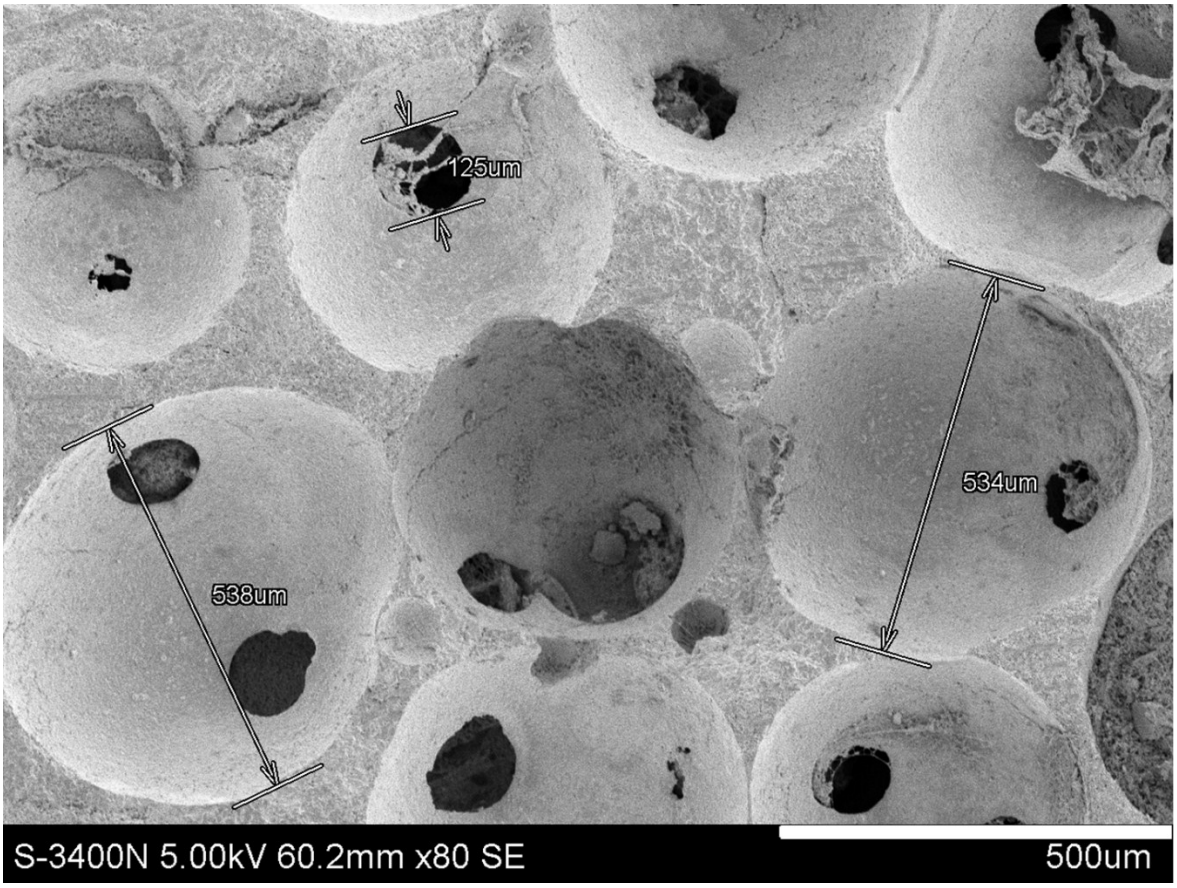
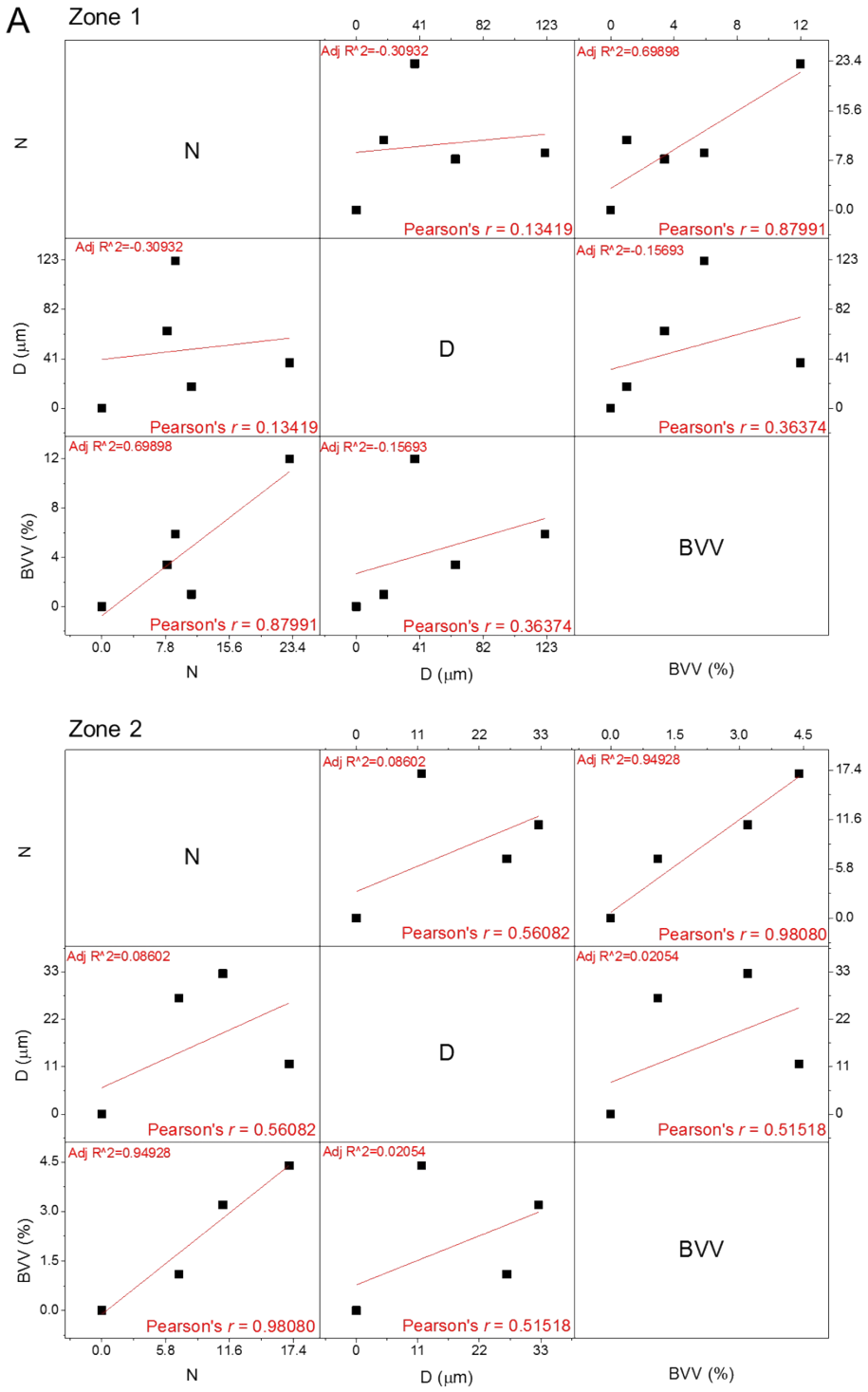


Figure S3. SEM (Shimadzu EPMA-8705QHII) image of β-tricalcium phosphate scaffolding materials, visualizing the macropore size of 500-600 μm and the interconnection size of 100-150 μm.

Figure S4.


A
Zone 1
N
D
BVV
Adj R^2=-0.30932
Pearson's r = 0.13419
Adj R^2=0.69898
Pearson's r = 0.87991
Adj R^2=-0.15693
Pearson's r = 0.36374
N
D (μm)
BVV (%)
Zone 2
Adj R^2=0.08602
Pearson's r = 0.56082
Adj R^2=0.94928
Pearson's r = 0.98080
Adj R^2=0.02054
Pearson's r = 0.51518

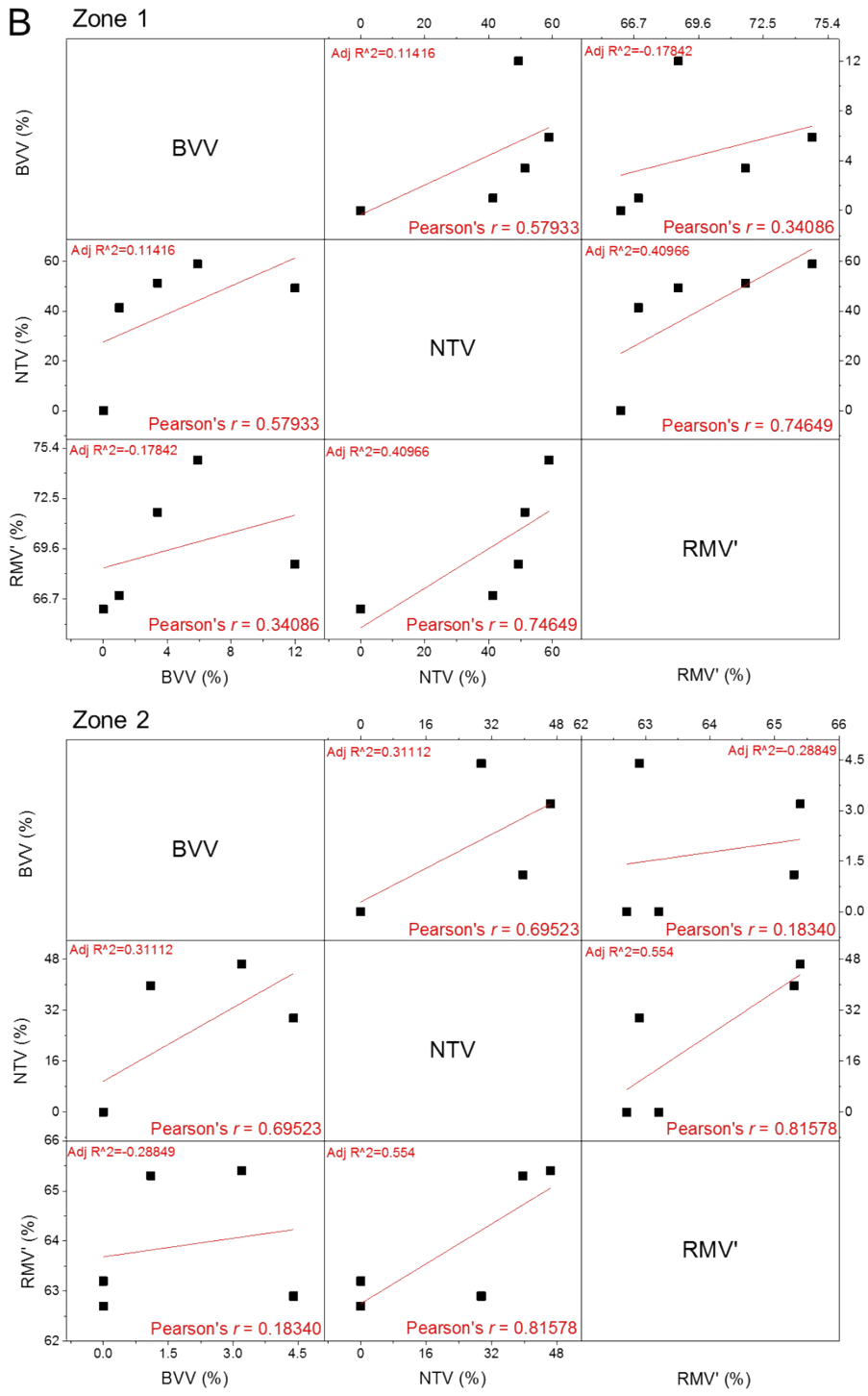


Figure S4. Correlation analysis on angiogenesis, tissue penetration and material degradation. Diagraph showing the correlation (A) between N, D, and BVV or the correlation (B) between BVV, NTV, and RMV' (complementary RMV) in both Zones 1

(top) and 2 (bottom), where the diagonal graphs showed the parameters compared in this diagraph and the off-diagonal graphs displayed the correction between any two parameters in X and Y axis crossed. Pearson's coefficient (r) was calculated and shown in each correlation graph, where adjusted R2 values indicated the linearity between two groups of data applied.