Supporting Information

Cellulose-based bioactive material and turmeric impregnated flexible and biocompatible scaffold for bone tissue engineering application

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Supporting Information

Supporting Information (5 pages) is available from the RSC Online Library or the author.

Fig. S1. a) Synthesis of Tm powder (cleaning, chopping, boiling (for B-Tm), drying, and grinding process) b) UV-visible spectra of the UB-Tm, B-Tm, and commercial Tm. Antibacterial activity of UB-Tm and B-Tm against c) *E. coli* and d) *S. aureus* bacteria.

Fig. S2. TGA thermograms of CF, BM-CF, and BM-Tm-CF.

Fig. S3. a) Tensile strength study of CF, Tm-CF, BM-CF, and BM-Tm-CF. Images taken during tensile testing b) CF c) Tm-CF d) BM-CF e) BM-Tm-CF. n = 3, $p < 0.05$ at *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$ by one-way analysis of variance (ANOVA) with Dunnet comparison test.

Fig. S4. Corresponding angiogenesis images for control, 70S30C BM, CF, Tm-CF, BM-CF, and BM-Tm-CF as a function of time obtained after processing the images using ImageJ software (Mexican Hat Filter).

Fig. S5. SEM images of BM-Tm-CF a) and a') before and b) and b') after 14 days of immersion in SBF solution.

Table S1. EDS elemental composition of CF, BM-Tm-CF, and BM-Tm-CF after 14 days of bioactivity study in SBF solution.

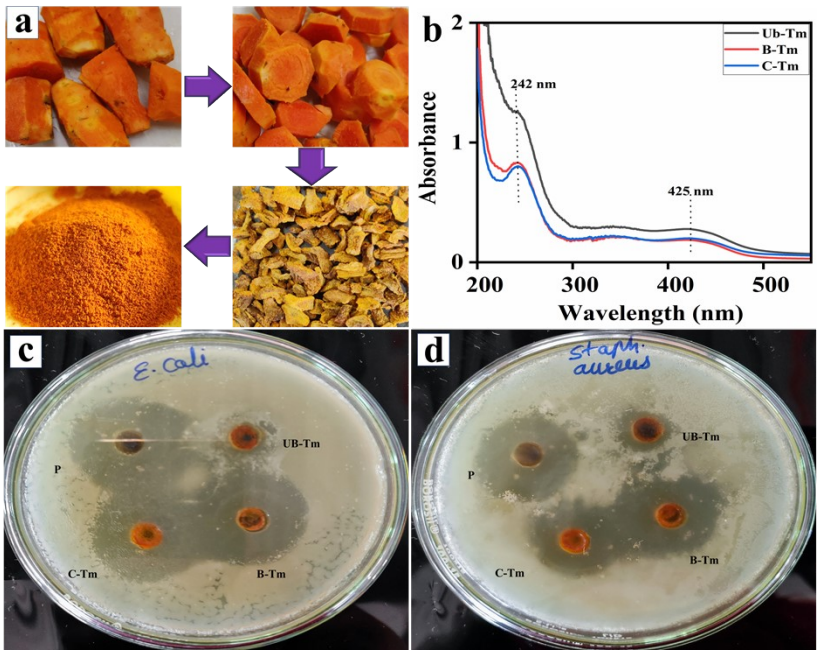

Fig. S1. a) Synthesis of Tm powder (cleaning, chopping, boiling (for B-Tm), drying, and grinding process) b) UV-visible spectra of the UB-Tm, B-Tm, and C-Tm. Antibacterial activity of UB-Tm, B-Tm, and C-Tm against c) *E. coli* and d) *S. aureus* bacteria.

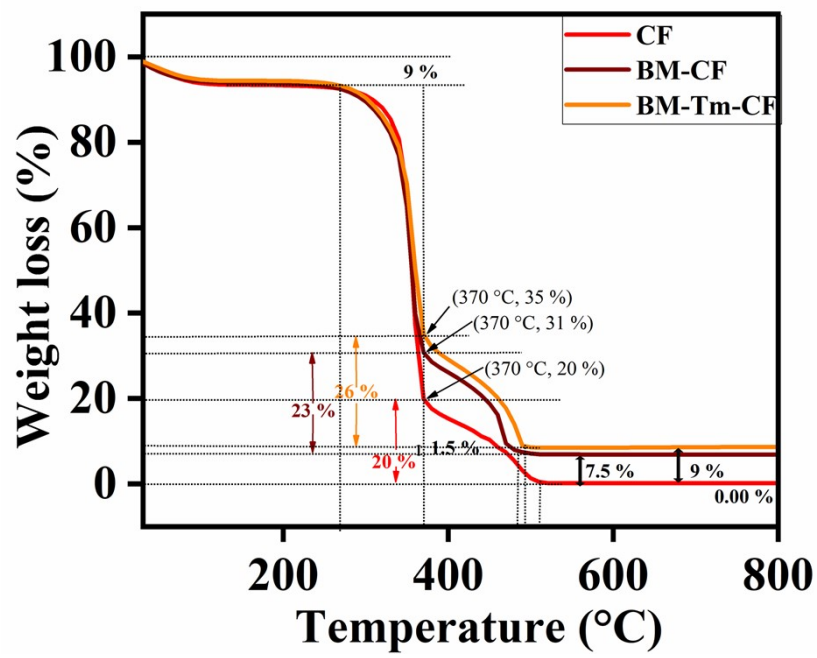

Fig. S2. TGA thermograms of CF, BM-CF, and BM-Tm-CF.

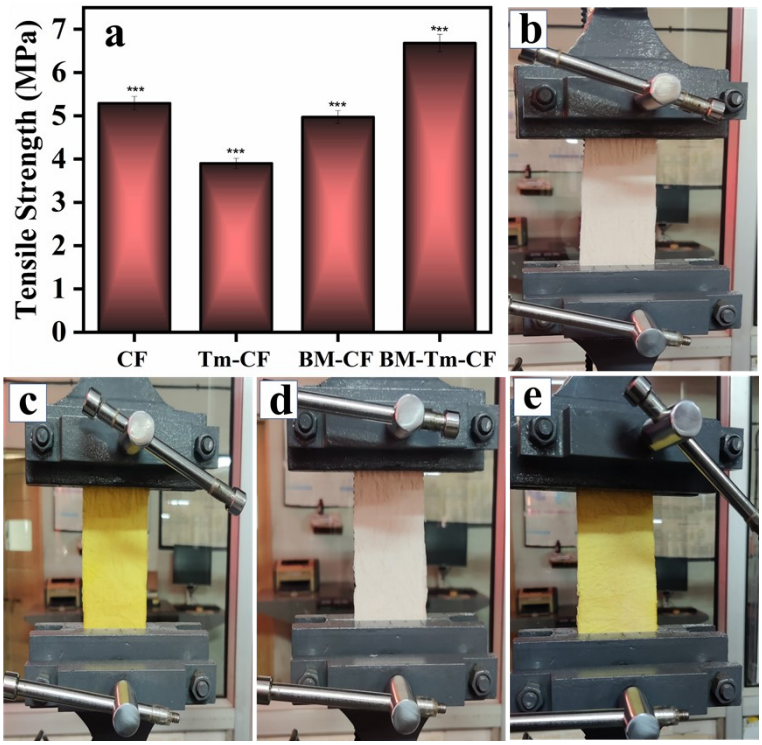

Fig. S3. a) Tensile strength study of CF, Tm-CF, BM-CF, and BM-Tm-CF. Images taken during tensile testing b) CF c) Tm-CF d) BM-CF e) BM-Tm-CF. n = 3, $p < 0.05$ at *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$ by one-way analysis of variance (ANOVA) with Dunnet comparison test.

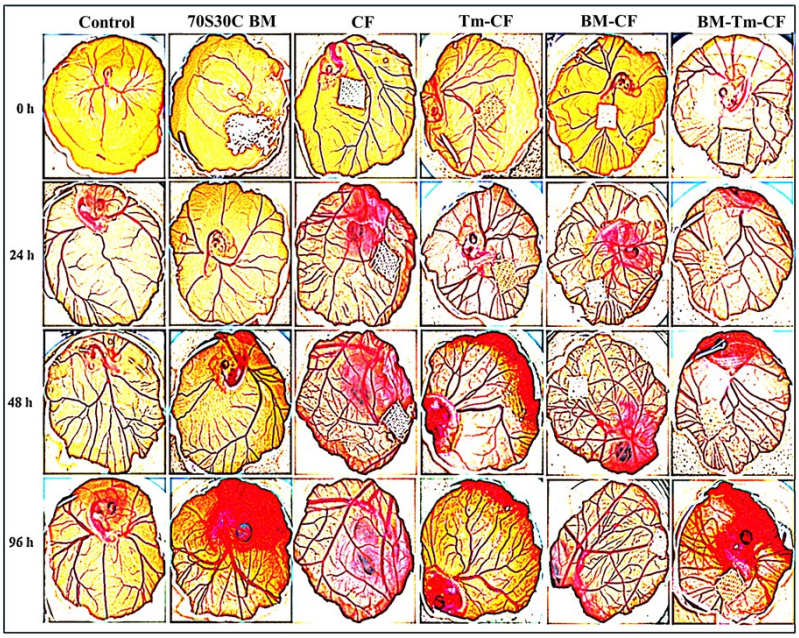

Fig. S4. Corresponding angiogenesis images for control, 70S30C BM, CF, Tm-CF, BM-CF, and BM-Tm-CF as a function of time obtained after processing the images using ImageJ software (Mexican Hat Filter).

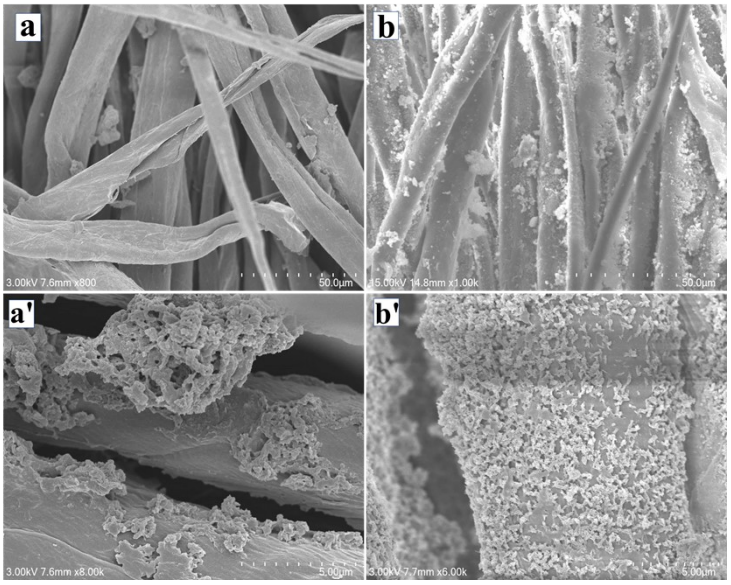

Fig. S5. SEM images of BM-Tm-CF a) and a') before and b) and b') after 14 days of immersion in SBF solution.

Table S1. EDS elemental composition of CF, BM-Tm-CF, and BM-Tm-CF after 14 days of bioactivity study in SBF solution.

	CF		**BM-Tm-CF**		**BM-Tm-CF (14 days)**	
Element	Wt %	Atomic %	Wt %	Atomic %	Wt %	Atomic %
C	51.08	58.17	64.33	71.10	42.59	53.82
O	48.92	41.83	34.18	28.31	41.70	39.56
Na	--	--	0.21	0.12	0.20	0.13
Si	--	--	0.29	0.14	0.20	0.11
Ca	--	--	0.99	0.33	10.08	3.82
P	--	--	--	--	5.24	2.57
Total:	100.00	100.00	100.00	100.00	100.00	100.00