

Supplementary Information

Fabrication and functionalisation of 3D printed soft and hard scaffolds with growth factors for enhanced bioactivity

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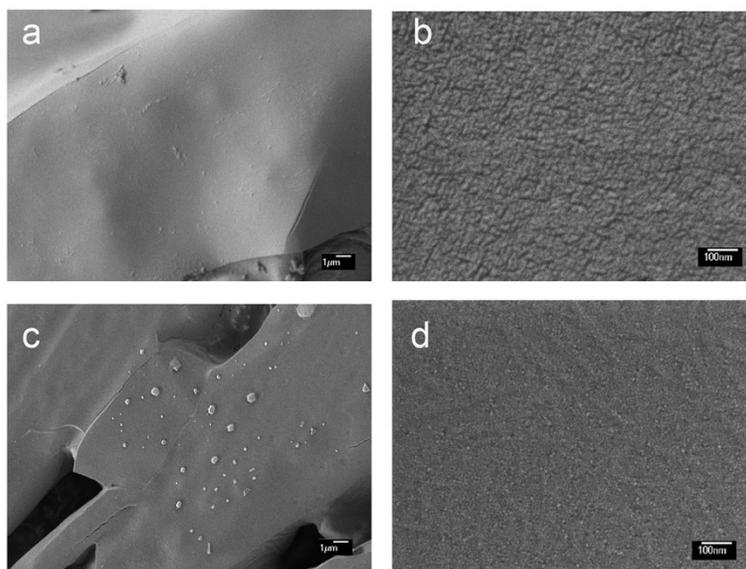


Figure S1. SEM images for a) Dop-CNC and b) Dop- CNC-FGF-18 hydrogel scaffolds and c) Dop-PLA and d) Dop-PLA- RGD scaffolds

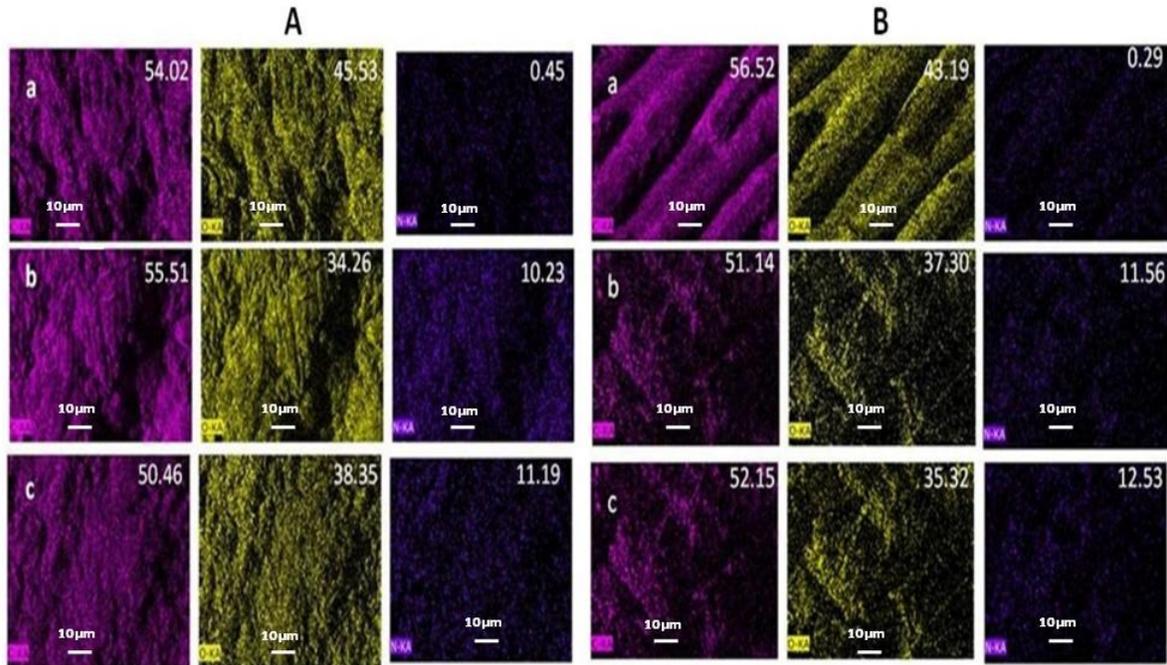


Figure S2: **A.** EDS patterns showing C, O N distribution on (a) CNC(b) Dop-CNC(c) Dop-CNC-FGF-18 and **B.** (a) PLA (b) Dop-PLA (c) Dop -PLA -RGD scaffolds. The % concentrations of C, O and N are given in each case.

Swelling and pH change in aqueous environment was evaluated for the 3D printed PLA scaffolds. Scaffolds were weighed (W_{dry}) and immersed in distilled water at 37°C with gentle shaking. The scaffolds were taken out at different time intervals (12, 24, 48 and 72 hrs) and excess water was removed with the help of a filter paper and weighed (W_{wet}). Further the percentage swelling was calculated using equation (1).

$$\text{Swelling (\%)} = \frac{W_{wet} - W_{dry}}{W_{dry}} \times 100 \quad (1)$$

The pH value of the scaffolds at different time points (0, 5, 10, 15 and 20 days) were also measured using a pH meter.

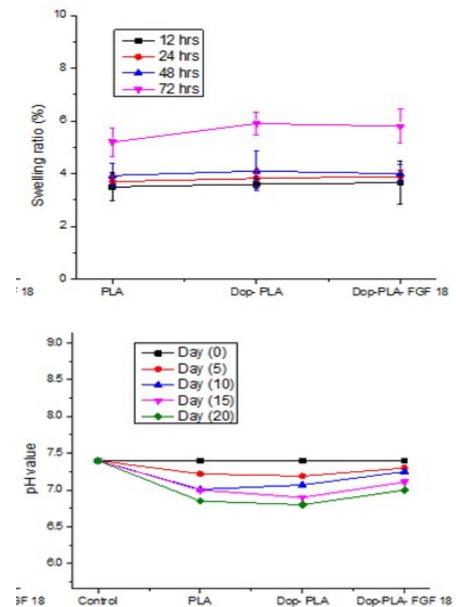


Figure S3: Swelling and pH change in aqueous medium

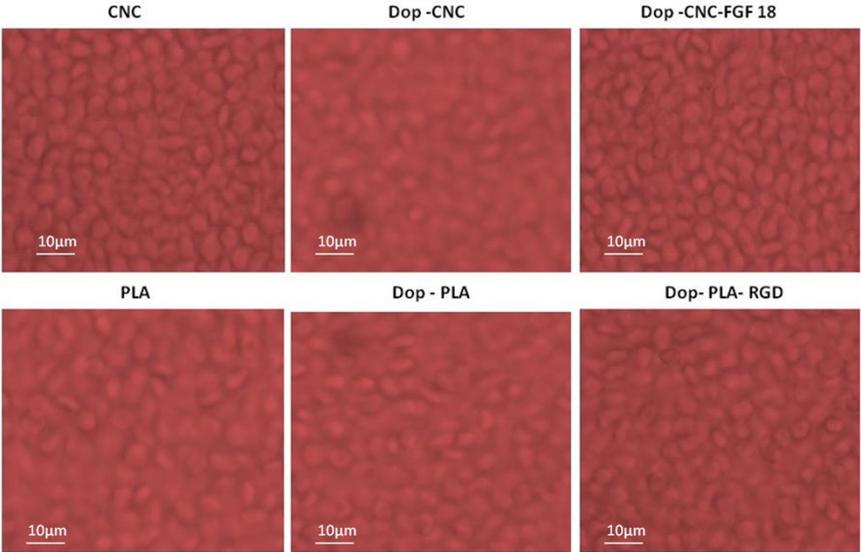


Figure S4: Microscopic images of RBC aggregation study after the incubation of CNC, Dop-CNC, Dop-CNC-FGF18, PLA, Dop-PLA and Dop-PLA-RGD.