Supplementary Information

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

Jiya Jose†#, Sahar Sultan†, Nandakumar Kalarikkal#, Sabu Thomas# and Aji P. Mathew†*

†Department of Materials and Environmental Chemistry, Stockholm University, SE-10691, Stockholm, Sweden

#International and inter University, Center for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam-686 560, Kerala, India

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
Swelling and pH change in aqueous environment was evaluated for the 3D printed PLA scaffolds. Scaffolds were weighed ($W_{\text{dry}}$) 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 ($W_{\text{wet}}$). Further the percentage swelling was calculated using equation (1).

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

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