

**Electronic Supplementary Material (ESI) for Biomaterials Science.**

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## **Supporting Information**

### **3D printing nacre powder/sodium alginate scaffold loaded with PRF promotes bone tissue repair and regeneration**

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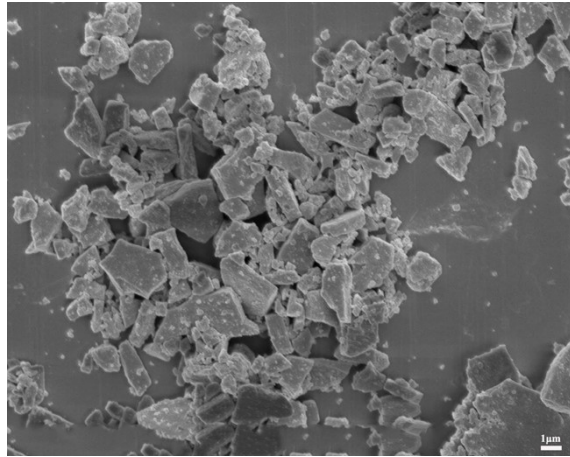
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**Fig. S1: TEM image of NP (magnification: 8000×, scale bar= 1 μm)**

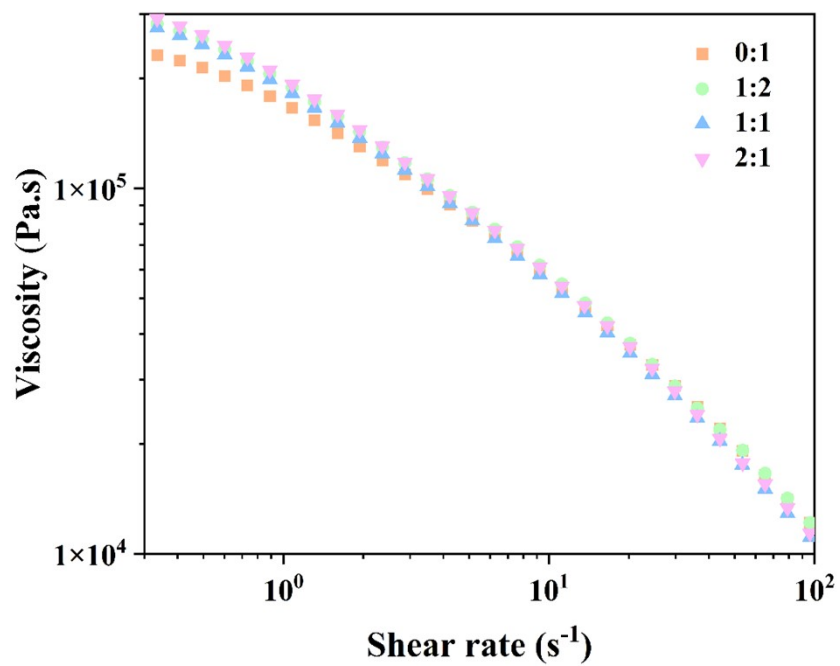
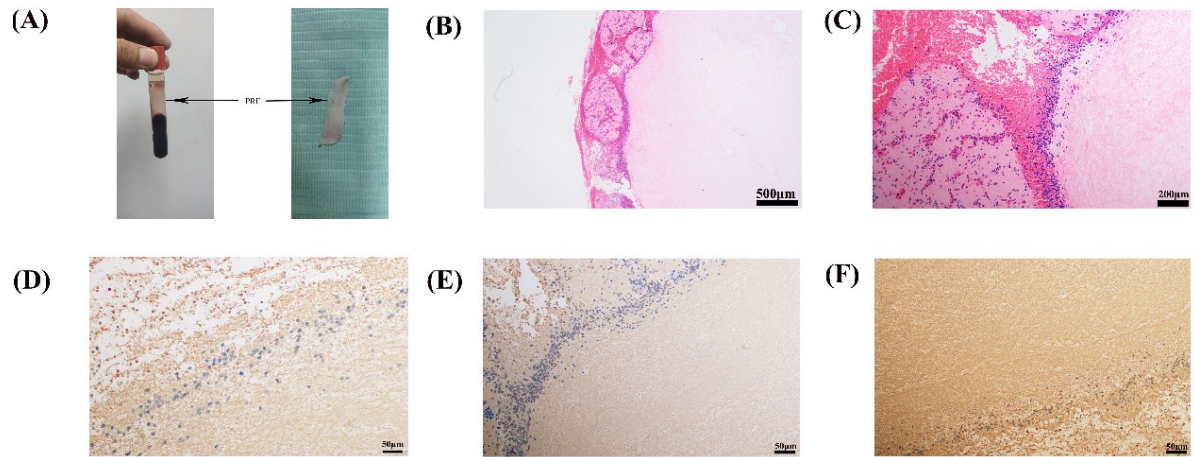
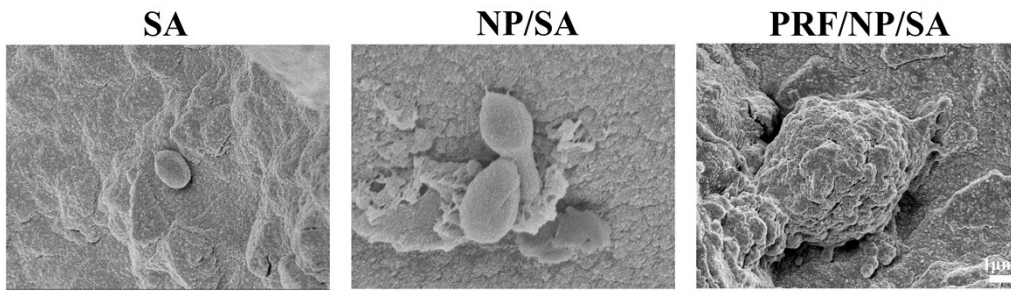


Fig. S2: Viscosity of NP/SA (0:1), NP/SA (1:2), NP/SA (1:1) and NP/SA (2:1) printable bio-inks.

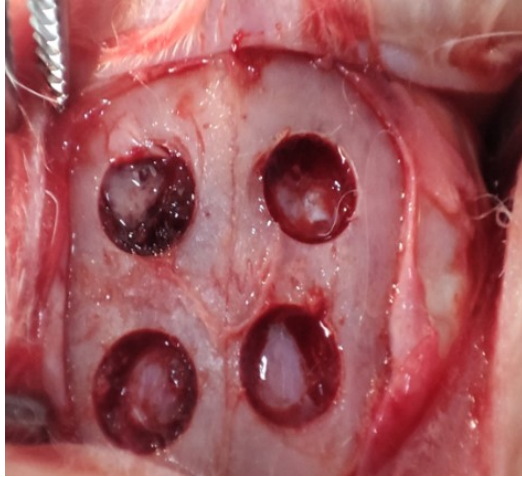


**Fig. S3: The organizational structure of PRF**

- A) PRF obtained from the middle layer after whole blood centrifugation. B, C) H&E staining of PRF. D-F) Immunohistochemistry staining (PDGF, TGF- $\beta_1$ , VEGF) of PRF.



**Fig. S4: Representative SEM images of rBMSCs adhesion and spreading**



**Fig. S5: Skull defect model of New Zealand rabbits (diameter = 6 mm)**