

Supplementary Information

Plasmonic nanodendrites stabilized with autologous serum proteins for sustainable host specific photothermal tumor ablation

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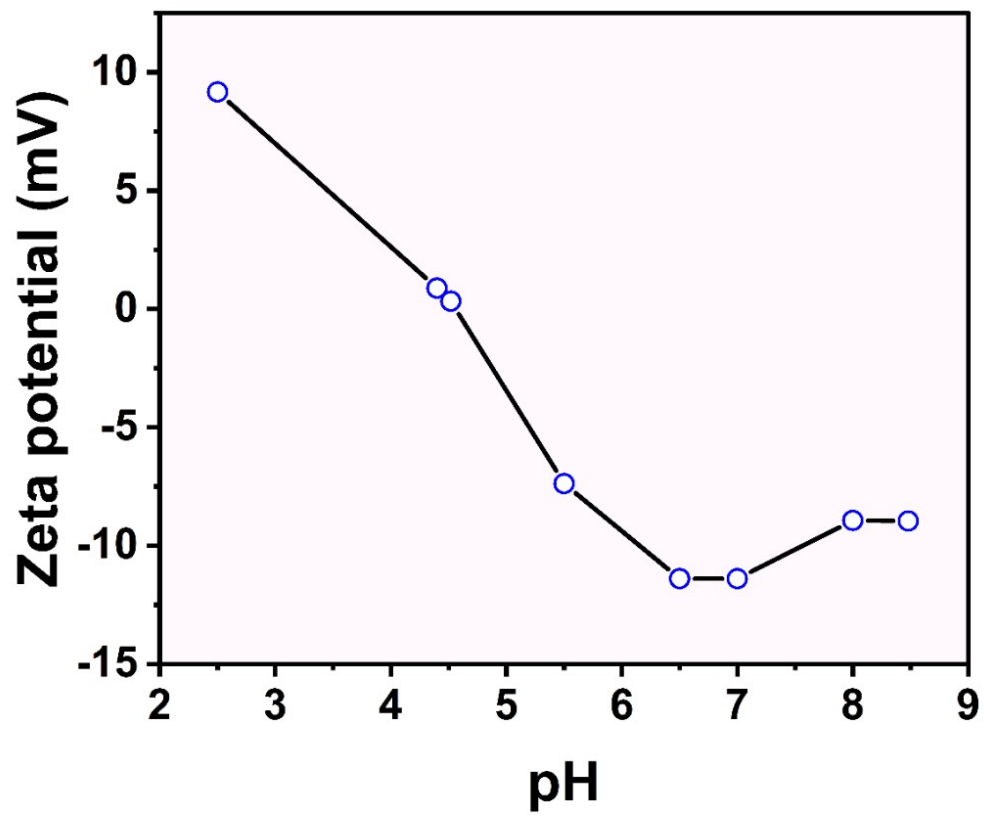


Figure 1 | pH-dependent cumulative zeta potential of fetal bovine serum proteins.

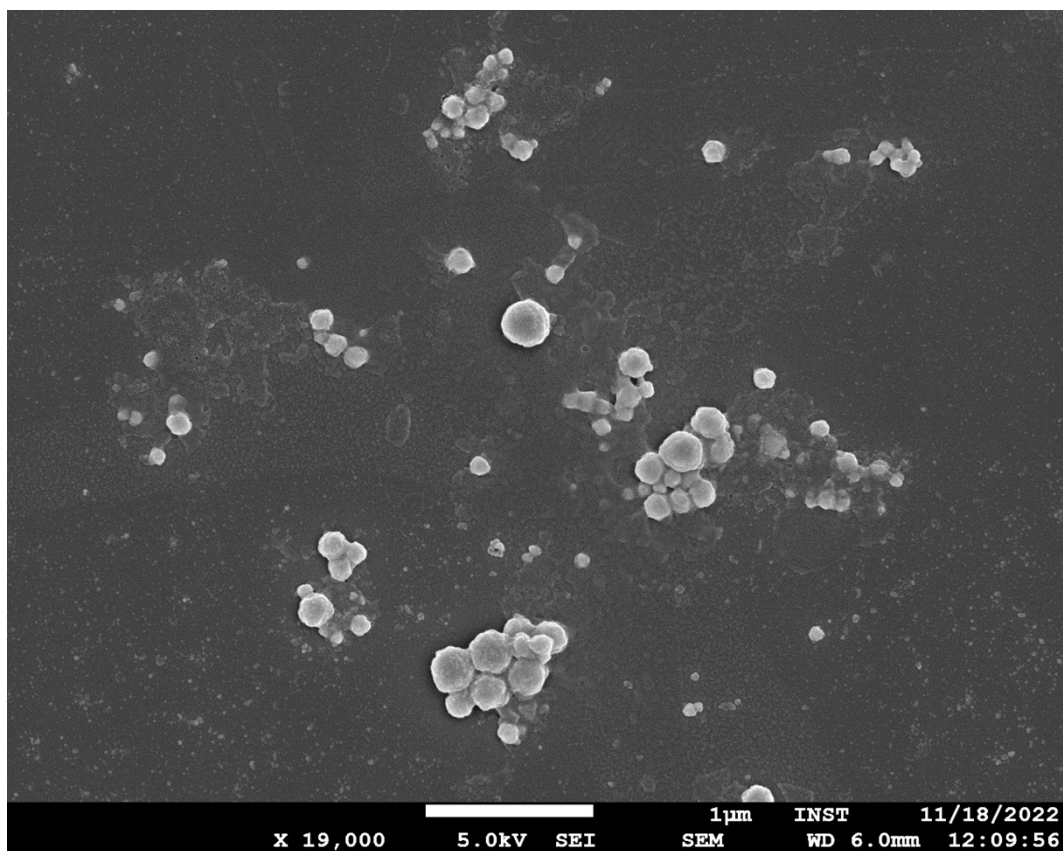


Figure 2 | FESEM of Plasmonic-NanoSera in the absence of NaOH addition.

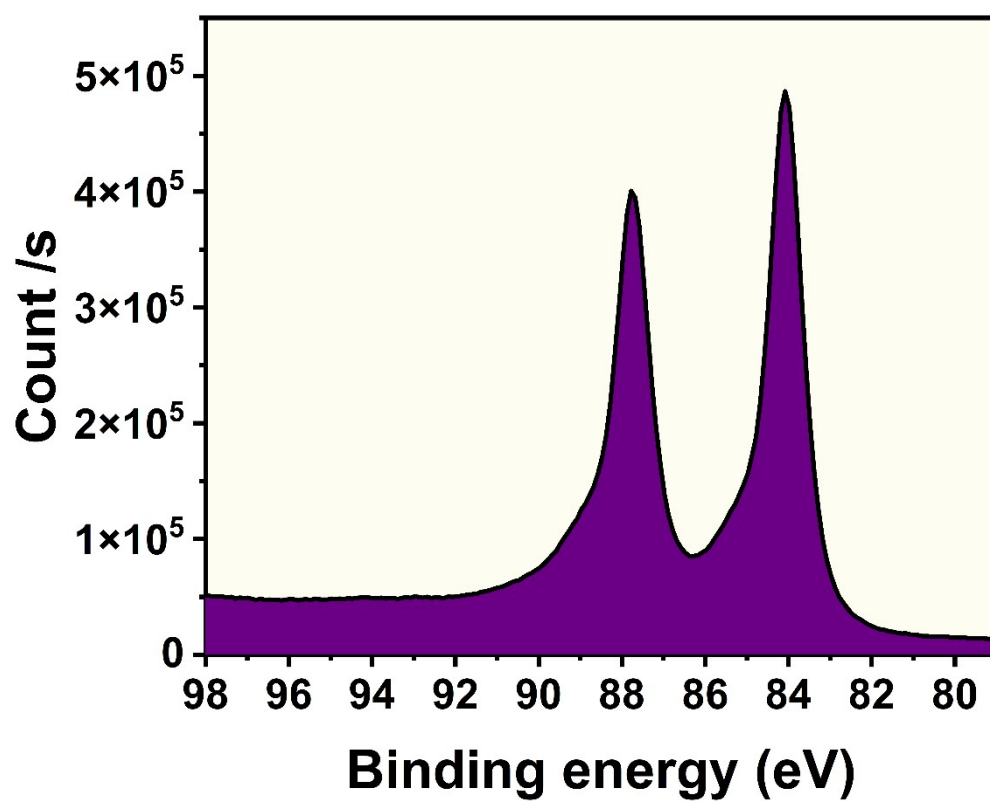


Figure 3 | XPS spectra of Plasmonic-NanoSera (FBS).

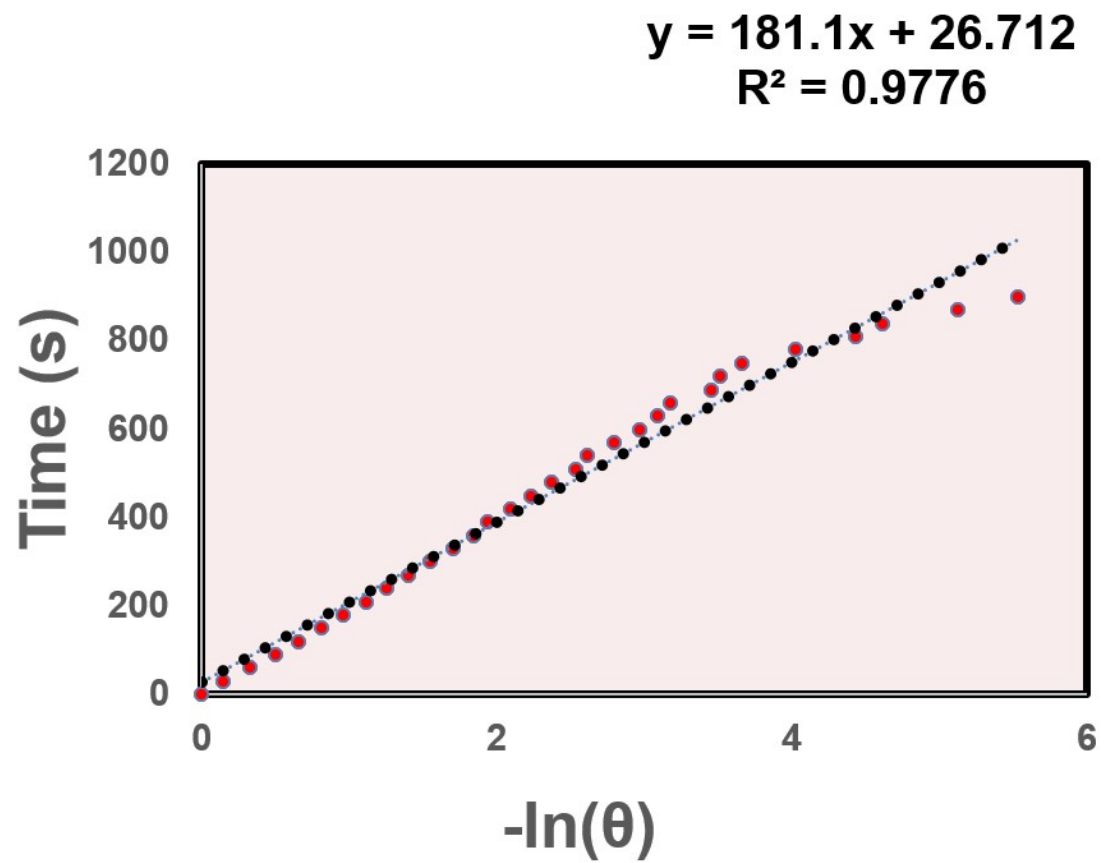


Figure 4 | Linear time versus $-\ln(\theta)$ plotted from the cooling period (930 s) of PNS irradiated with 808 nm Laser.

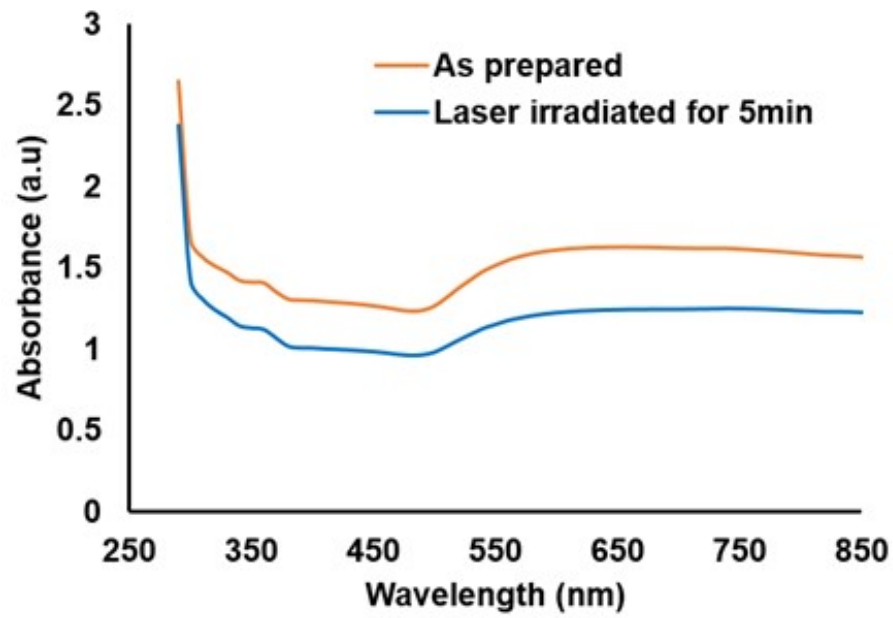
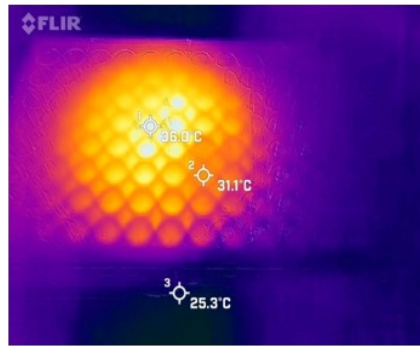
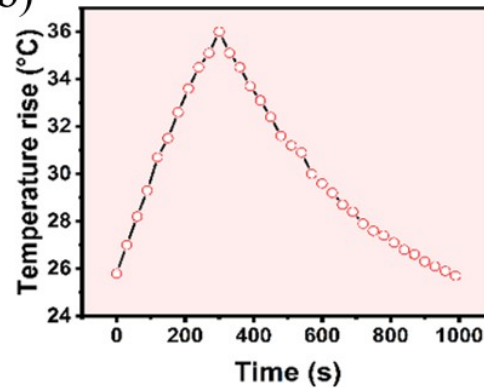


Figure 5 | UV-Vis-NIR extinction spectra of PNS as prepared and 5 minutes after Laser irradiation.

a)



b)



c)

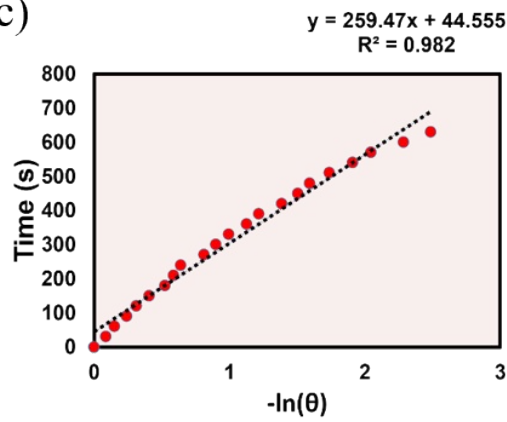


Figure 6 | a) Photothermal rise of PNS-FBS on Xenon lamp exposure (450 W) after 5 min b) Heating (300 s) and cooling cycle (700 s) c) Linear time versus $-\ln(\theta)$ plotted from the cooling period (700 s) of PNS irradiated with Xenon lamp.

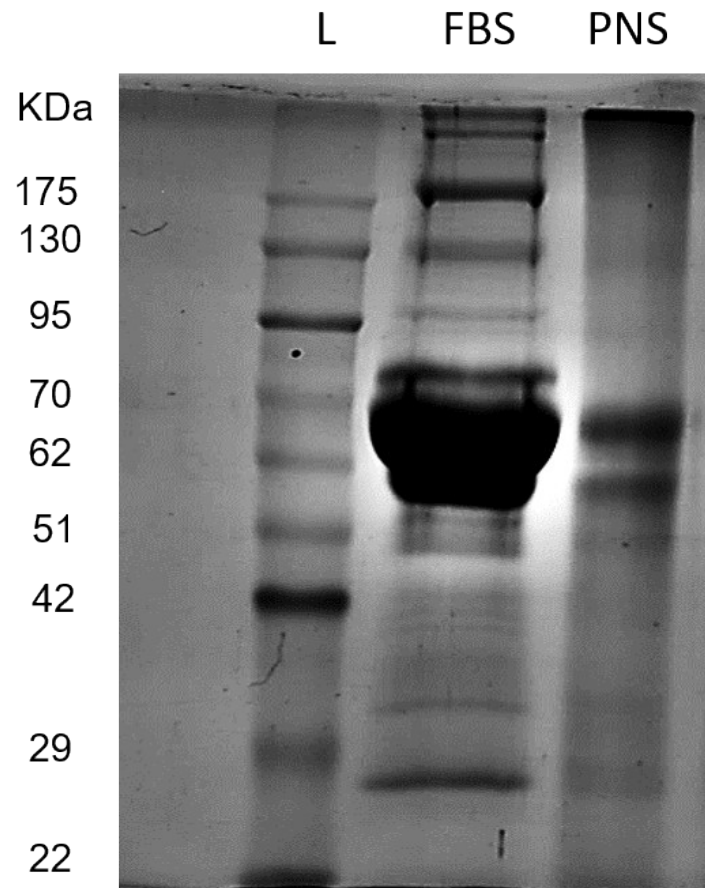


Figure 7 | SDS-PAGE analysis of proteins extracted from Plasmonic-NanoSera (L-Ladder, FBS-Fetal Bovine Serum, PNS-Plasmonic NanoSera synthesized from FBS).

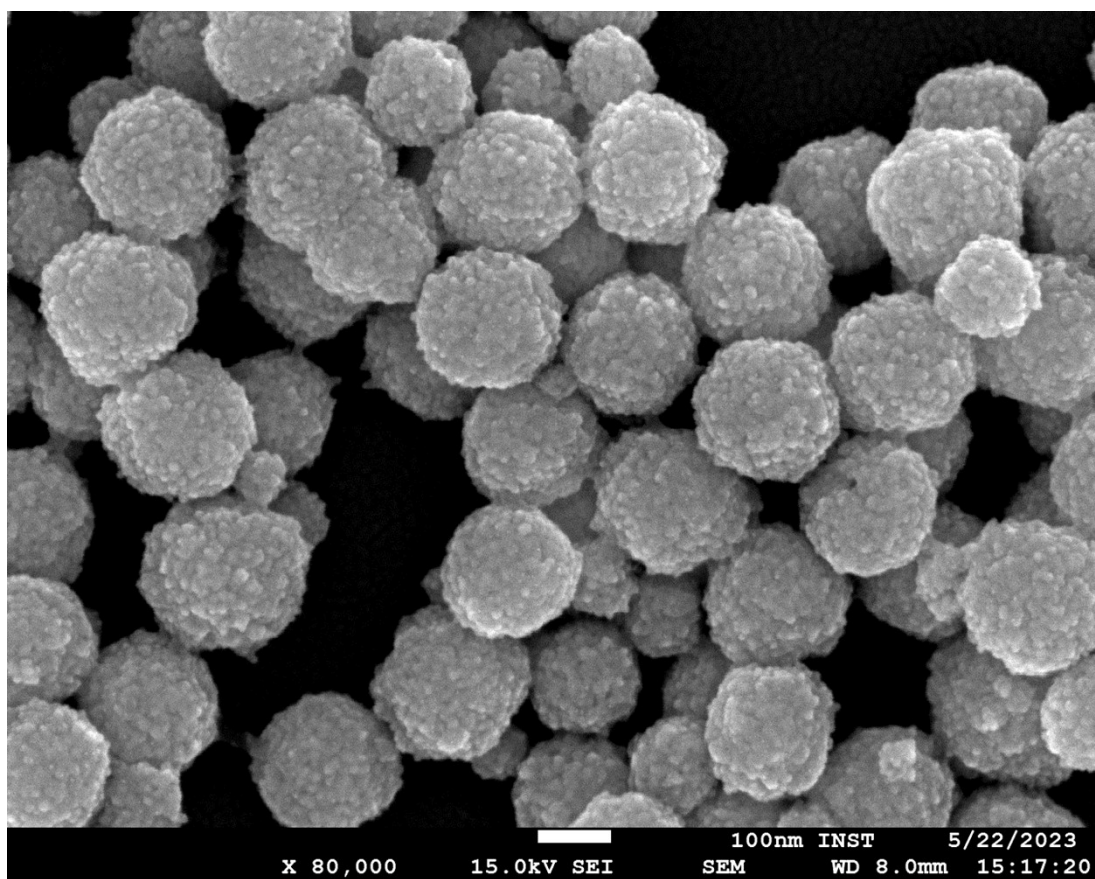


Figure 8 | FE-SEM image of albumin derived nanodendrites

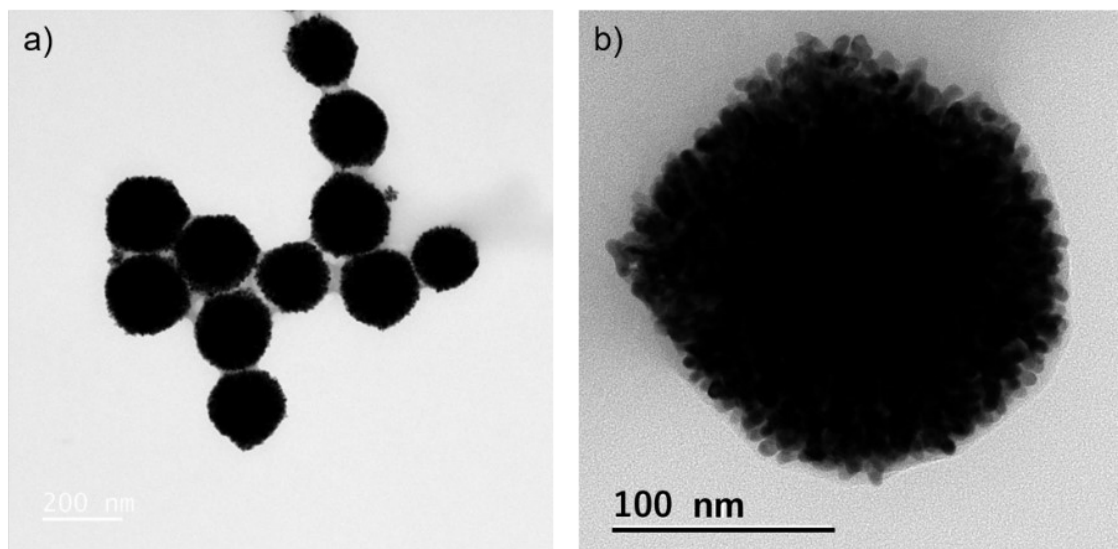


Figure 9 | TEM images of albumin derived nanodendrites

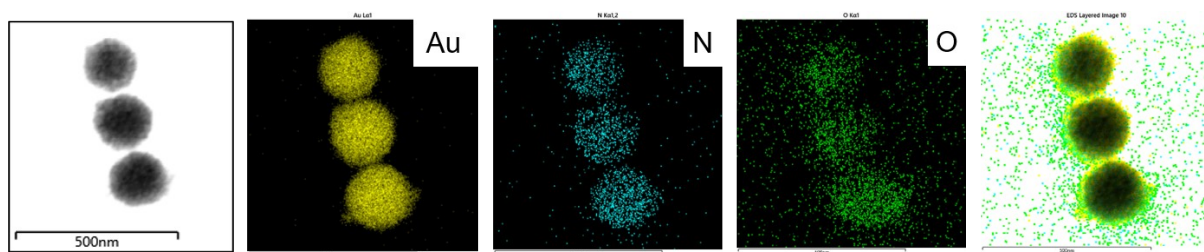


Figure 10 | Elemental mapping of albumin derived nanodendrites

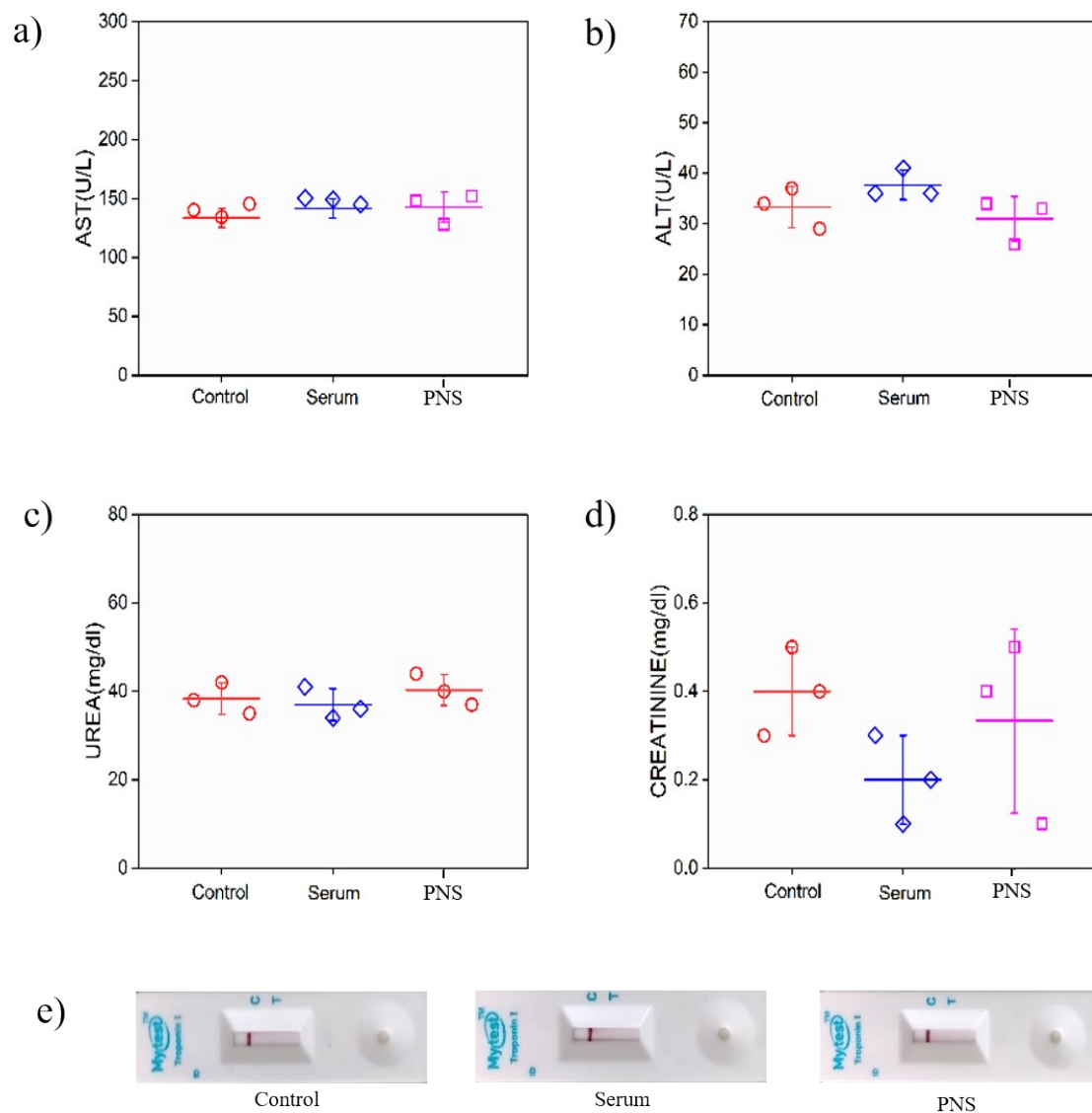


Figure 11 | Toxicity analysis 24hour post injection of saline or untreated autologous serum or PNS-MS. a) AST; Aspartate aminotransferase b) ALT; Alanine aminotransferase c) Urea d) Creatinine and e) Troponin I (<0.5ngmL - 1 band; >0.5ngmL - 2 bands)

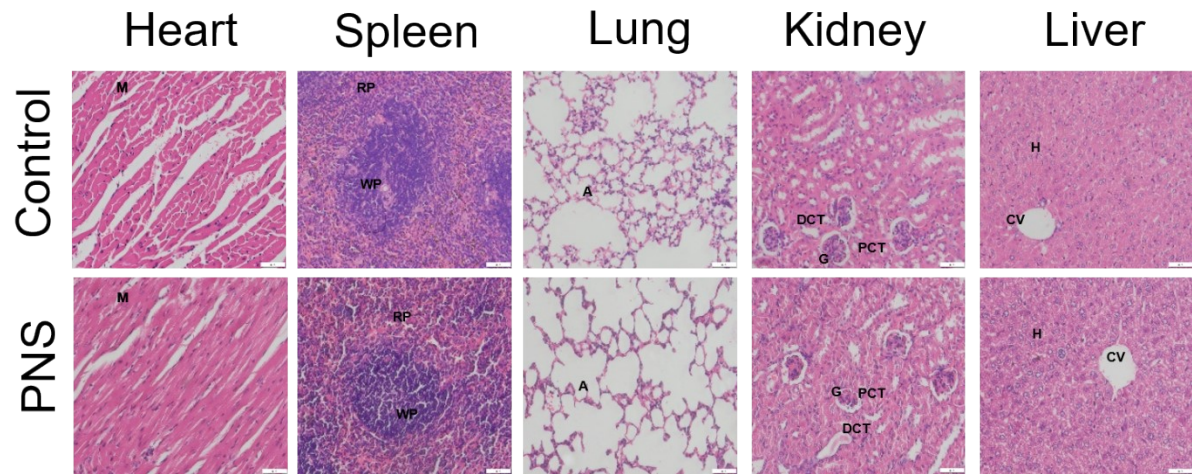


Figure 12 | Histopathological analysis post day 1 of injection of five major organs in control and PNS-MS groups (M-Myocardium, RP-Right pulp, WP-White pulp, A-Alveoli, G-Glomerulus, DCT-Distal convoluted tubule, PCT-Proximal convoluted tubule, CV-Central vein and H-Hepatocytes)

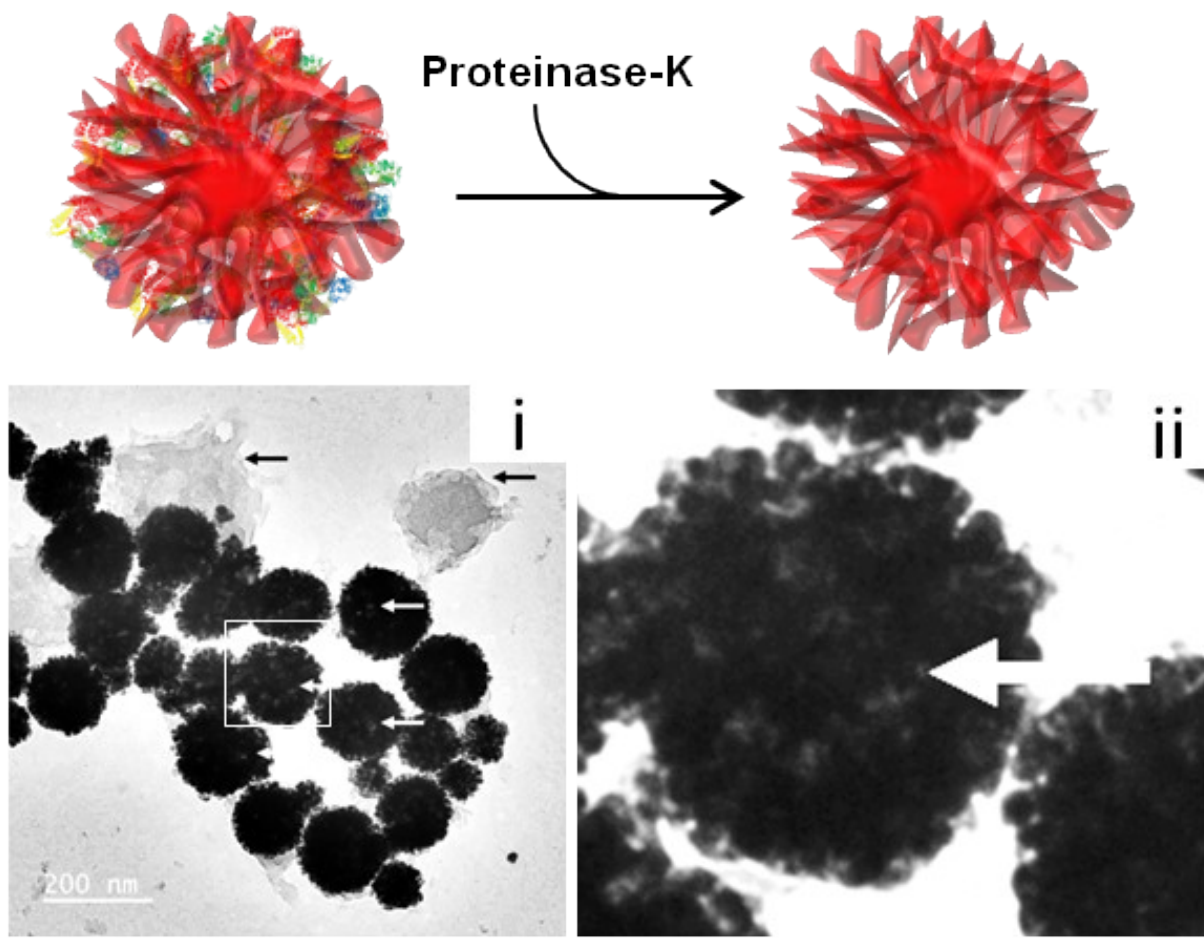


Figure 13 | Plasmonic-NanoSera treated with Proteinase K (White arrow indicated porosity, Black arrow indicates protein structures)