International Journal of Bioprinting

RESEARCH ARTICLE

3D printing biocompatible materials with Multi Jet Fusion for bioreactor applications

Supplementary File

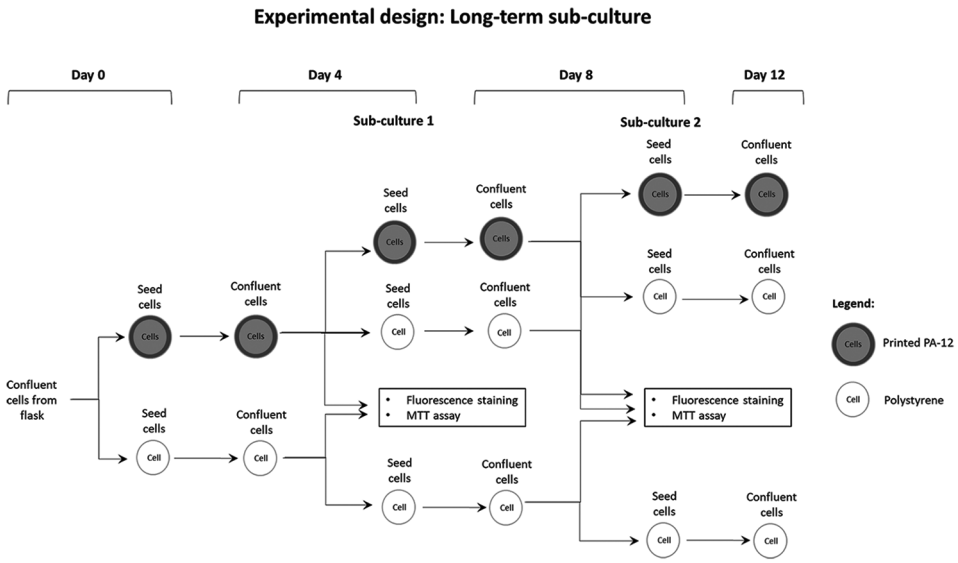

Figure S1. Schematic illustration showing the experimental design for long-term sub-culture of L929 fibroblasts and MC3T3e1 osteoblasts cultured on PA-12 cell culture chambers and positive control (plate) sub-cultured from uncoated, PDL and CLG-coated PA-12 cell culture chambers.

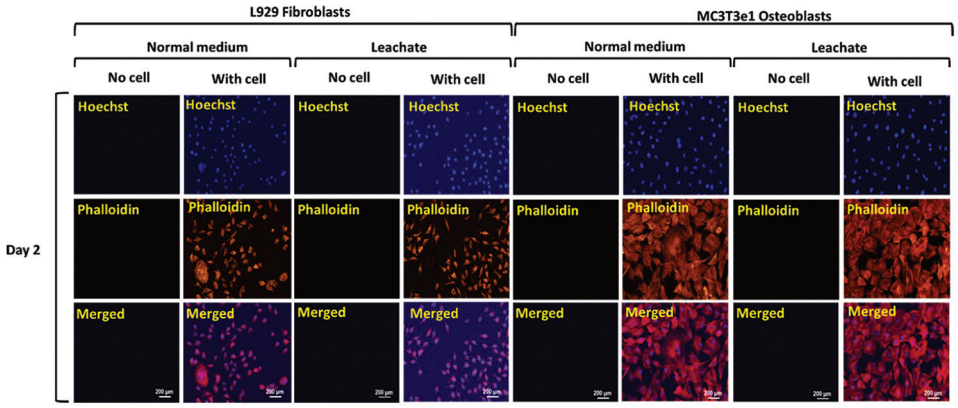

Figure S2. Representative fluorescence microscopy images of L929 Fibroblasts and MC3T3e1 osteoblasts cultured using normal and respective leachate medium showing cell attachment and increase in cell density following culture on polystyrene plates after 2 days.

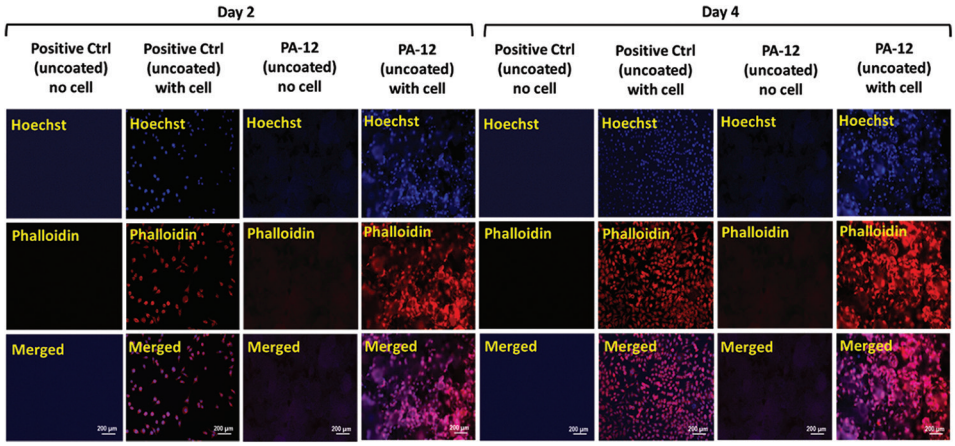

Figure S3. Representative fluorescence microscopy images of L929 fibroblasts cultured on uncoated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and 4, respectively.

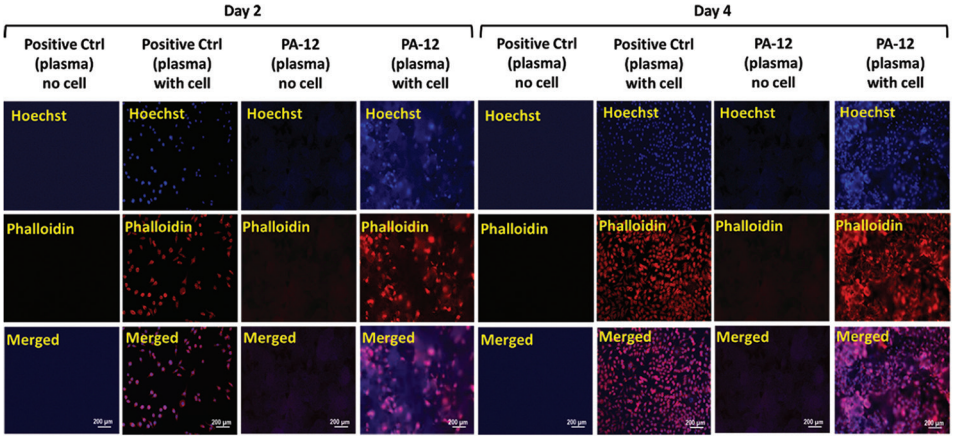

Figure S4. Representative fluorescence microscopy images of L929 fibroblasts cultured on O_2 plasma-treated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and 4, respectively.

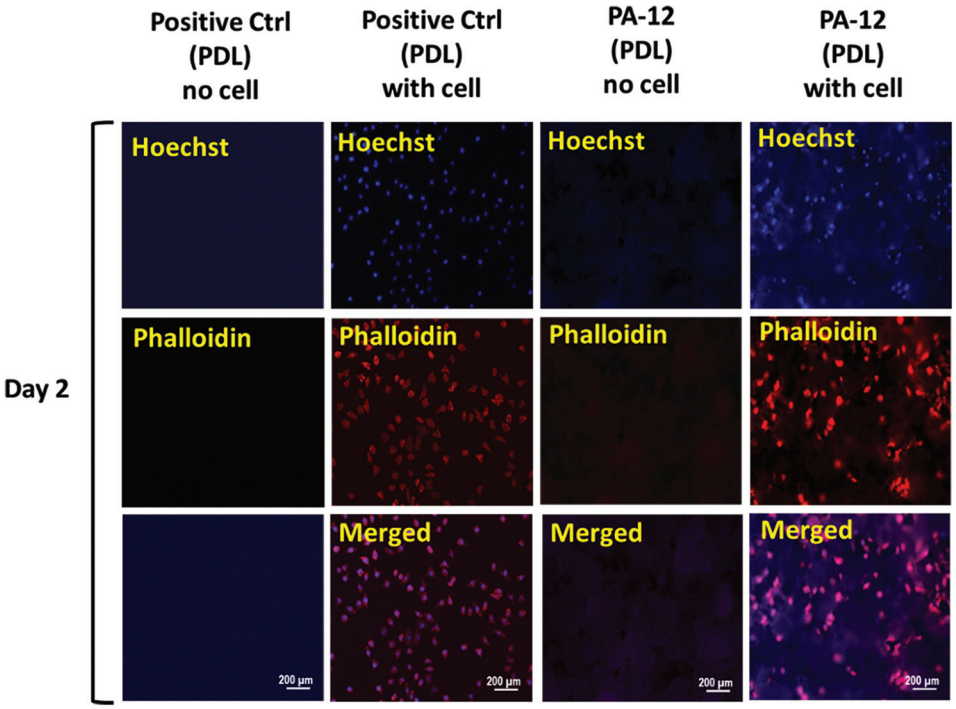

Figure S5. Representative fluorescence microscopy images of L929 fibroblasts cultured on PDL-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after 2 days.

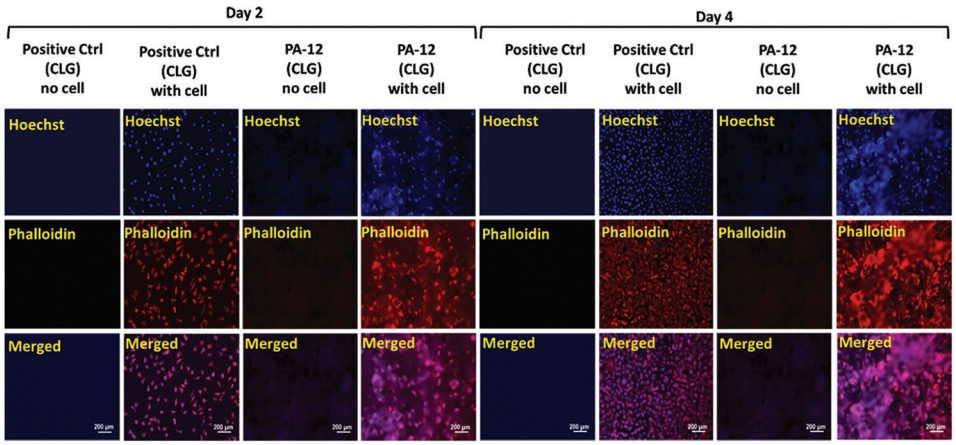

Figure S6. Representative fluorescence microscopy images of L929 fibroblasts cultured on CLG-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and 4, respectively.

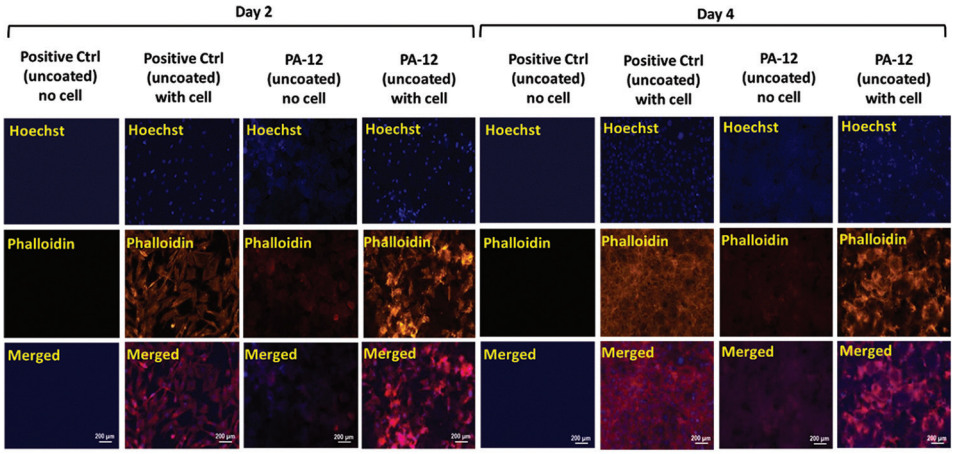

Figure S7. Representative fluorescence microscopy images of MC3T3e1 osteoblasts cultured on uncoated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and 4, respectively.

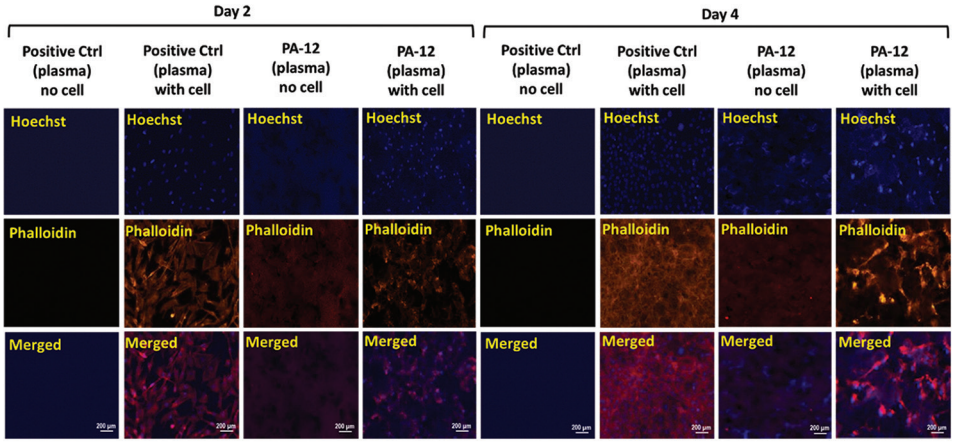

Figure S8. Representative fluorescence microscopy images of MC3T3e1 osteoblasts cultured on O_2 plasma-treated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and 4, respectively.

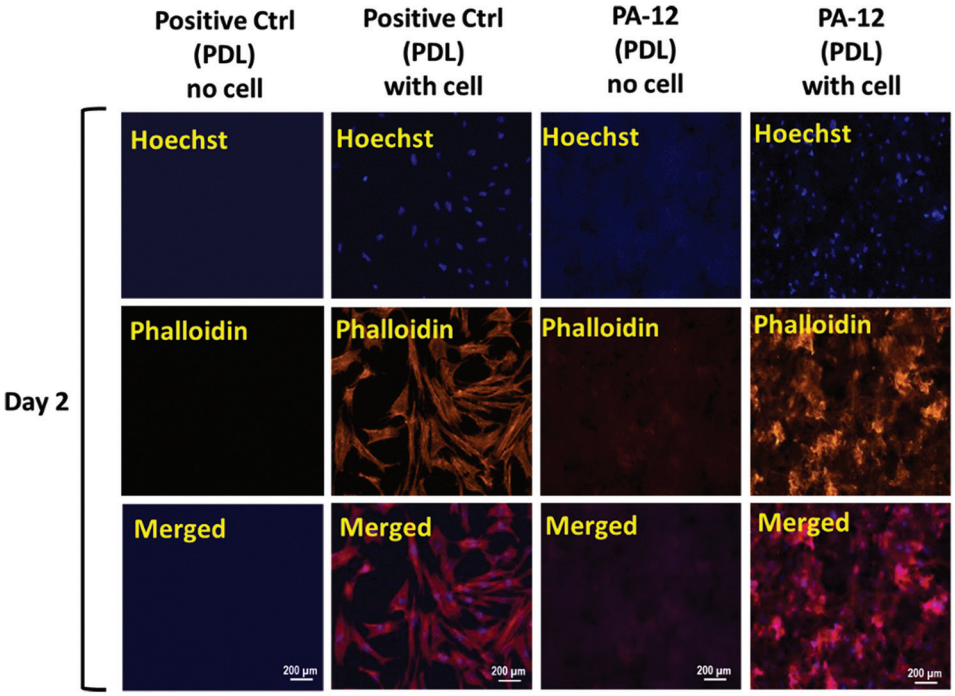

Figure S9. Representative fluorescence microscopy images of MC3T3e1 osteoblasts cultured on PDL-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after 2 days.

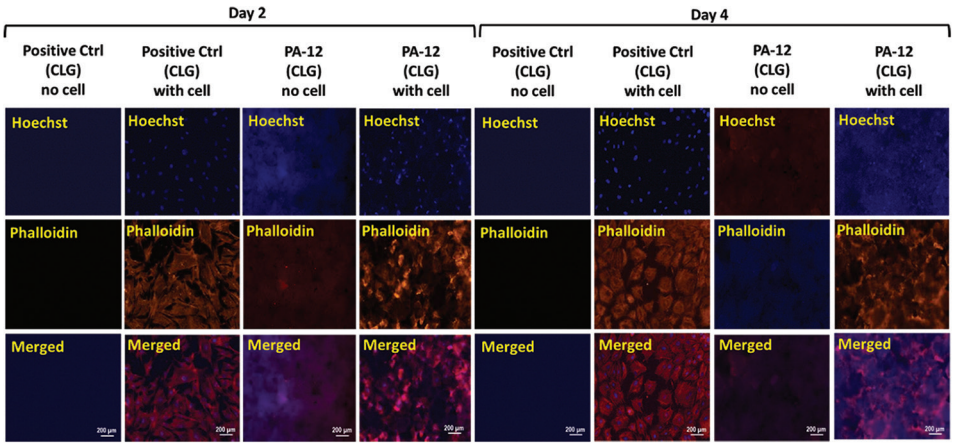

Figure S10. Representative fluorescence microscopy images of MC3T3e1 osteoblasts cultured on CLG-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and 4, respectively.

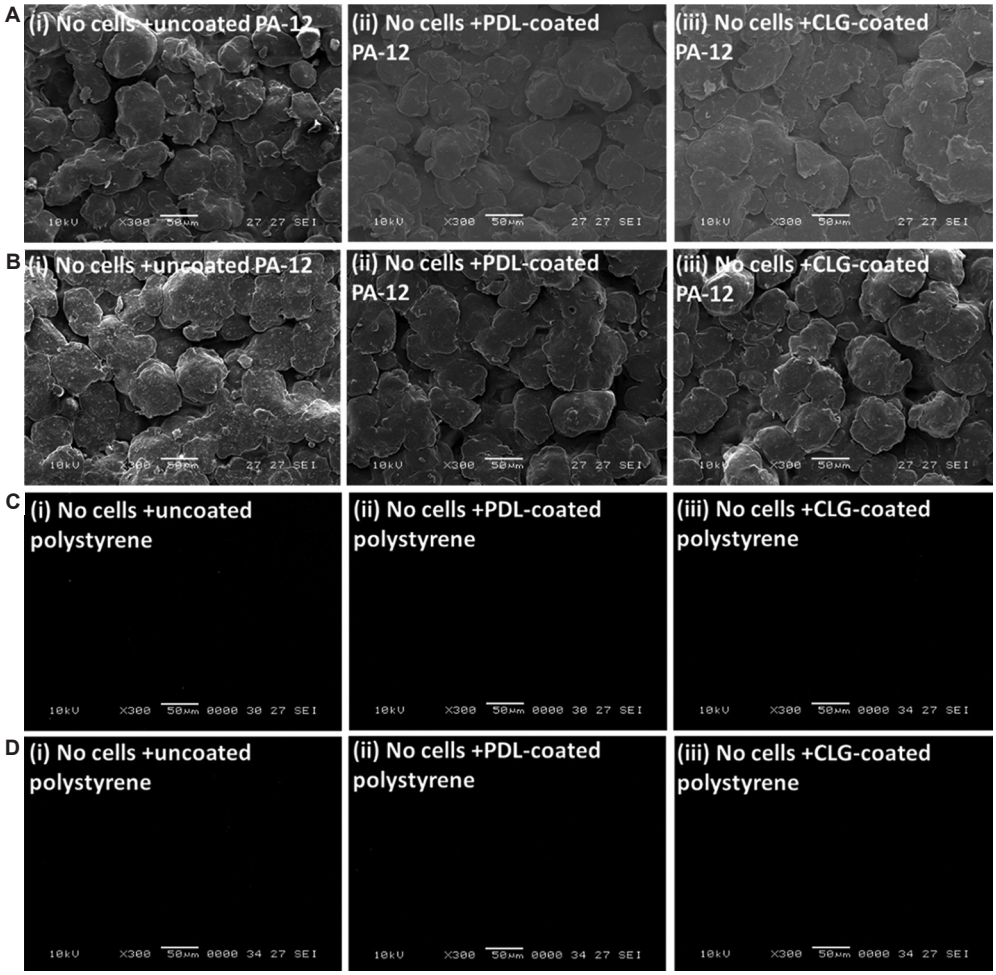

Figure S11. Representative scanning electron microscopy images showing the (i) uncoated, (ii) PDL-coated and (iii) CLG-coated surface morphology of PA-12 cell culture chambers in (A) DMEM medium without cells and (B) αMEM medium without cells are shown for reference. Representative scanning electron microscopy images showing the surface morphology of (i) uncoated, (ii) PDL-coated and (iii) CLG-coated polystyrene cell culture chambers in (C) DMEM medium without cells and (D) αMEM medium without cells are shown for reference.

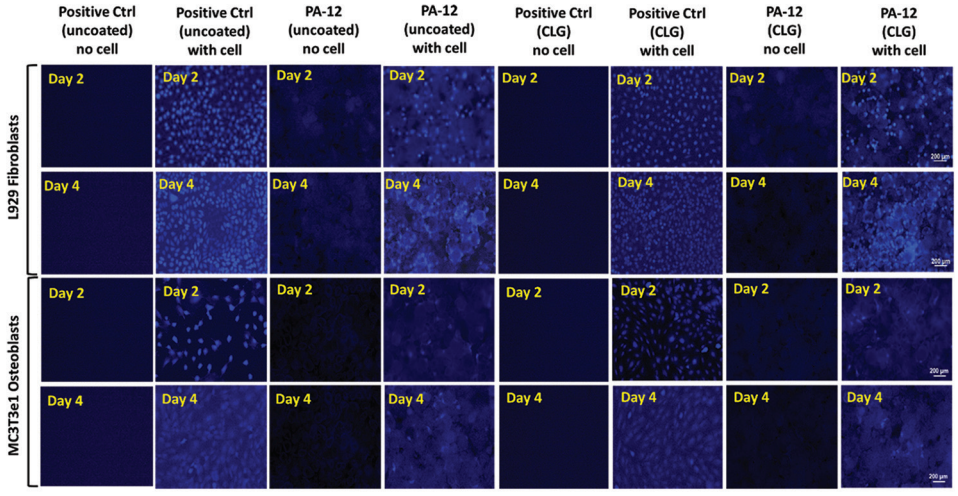

Figure S12. Representative fluorescence microscopy images of L929 fibroblasts and MC3T3e1 osteoblasts stained for glutathione evaluation following culture on uncoated and CLG-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and day 4, respectively.

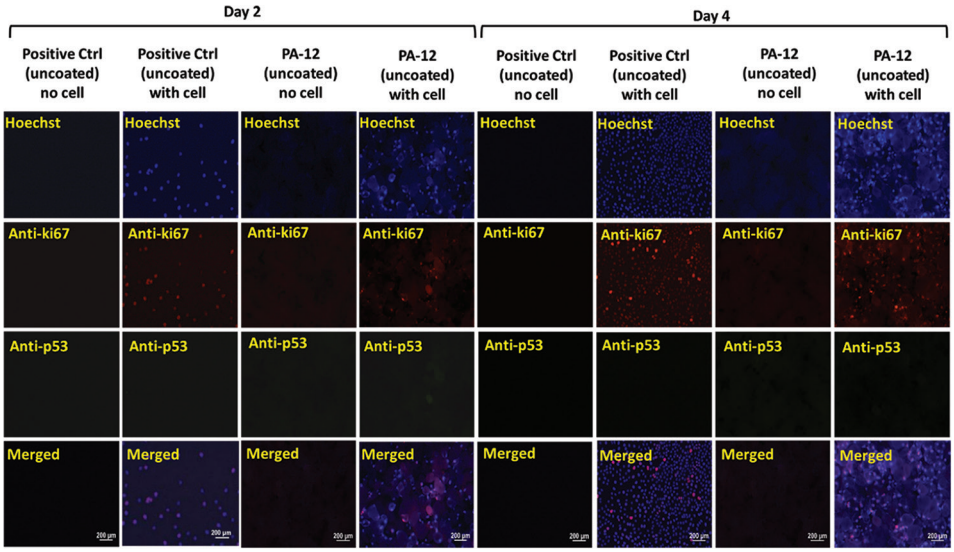

Figure S13. Representative fluorescence microscopy images of L929 Fibroblasts immunostained to determine the expression of ki67 and p53 following culture on uncoated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and day 4, respectively.

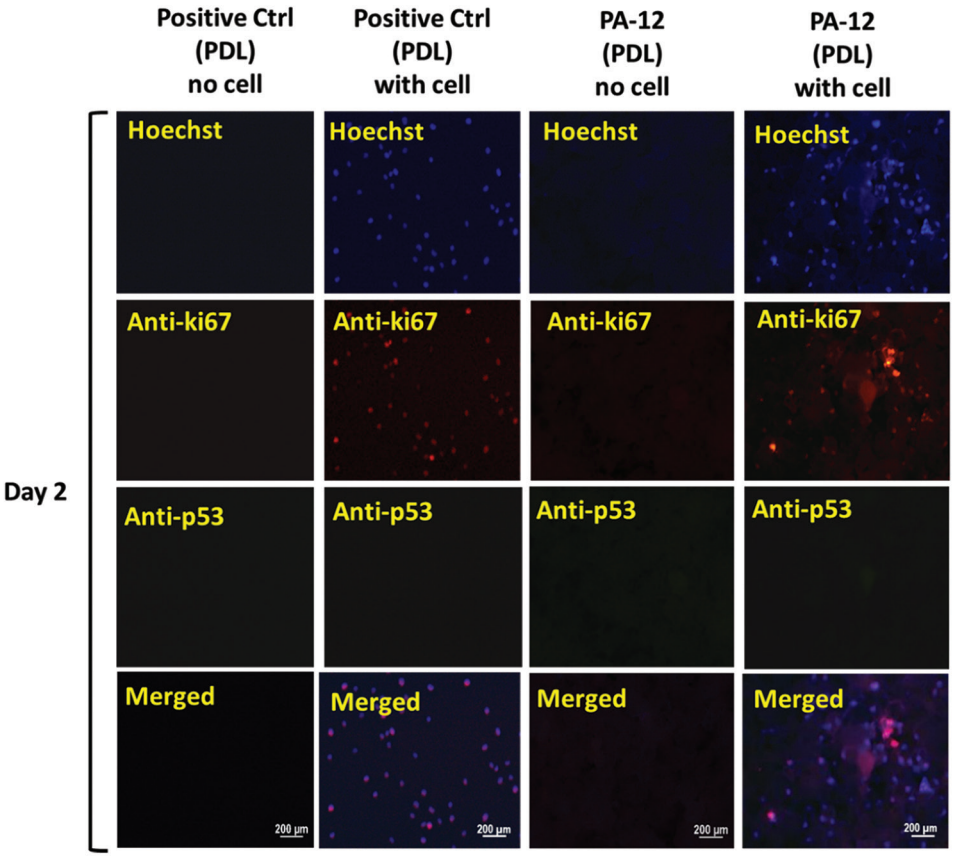

Figure S14. Representative fluorescence microscopy images of L929 Fibroblasts immunostained to determine the expression of ki67 and p53 following culture on PDL-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after 2 days.

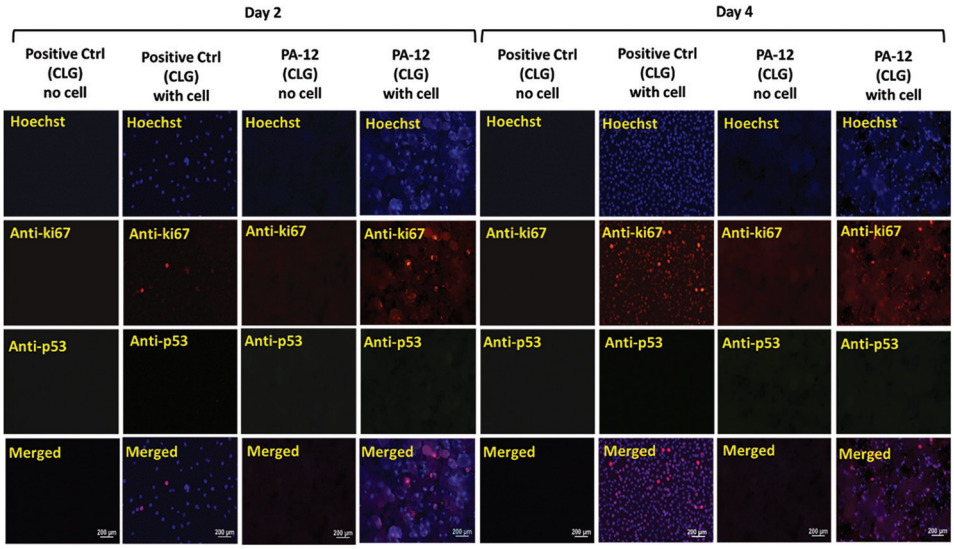

Figure S15. Representative fluorescence microscopy images of L929 Fibroblasts immunostained to determine the expression of ki67 and p53 following culture on CLG-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and day 4, respectively.

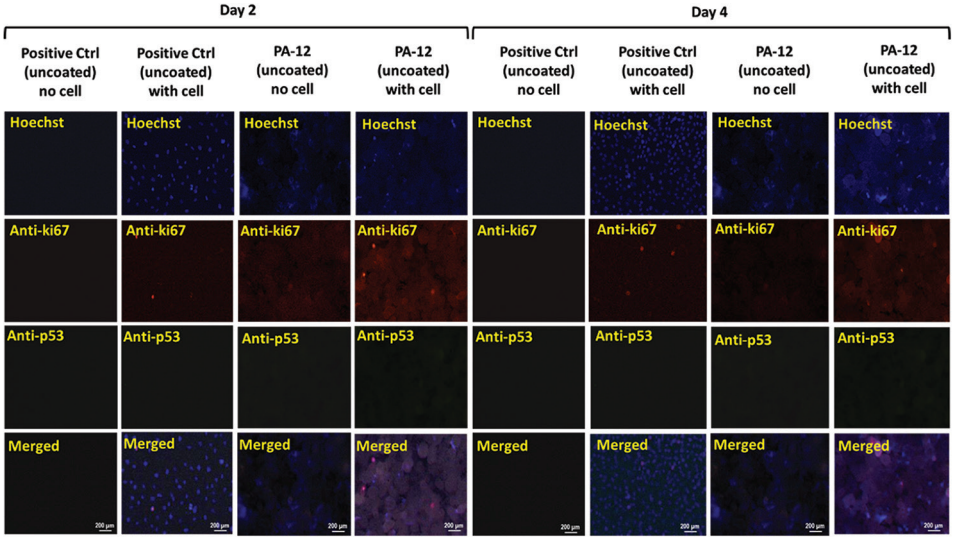

Figure S16. Representative fluorescence microscopy images of MC3T3e1 osteoblasts immunostained to determine the expression of ki67 and p53 following culture on uncoated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and day 4, respectively.

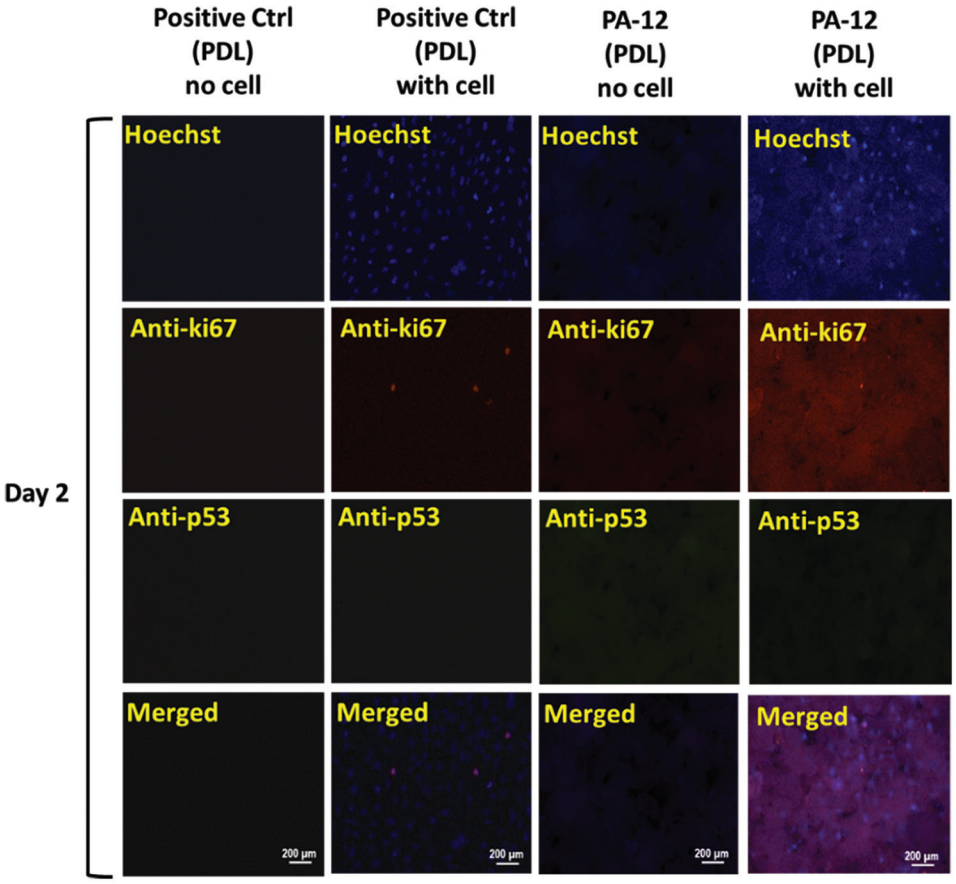

Figure S17. Representative fluorescence microscopy images of MC3T3e1 osteoblasts immunostained to determine the expression of ki67 and p53 following culture on PDL-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after 2 days.

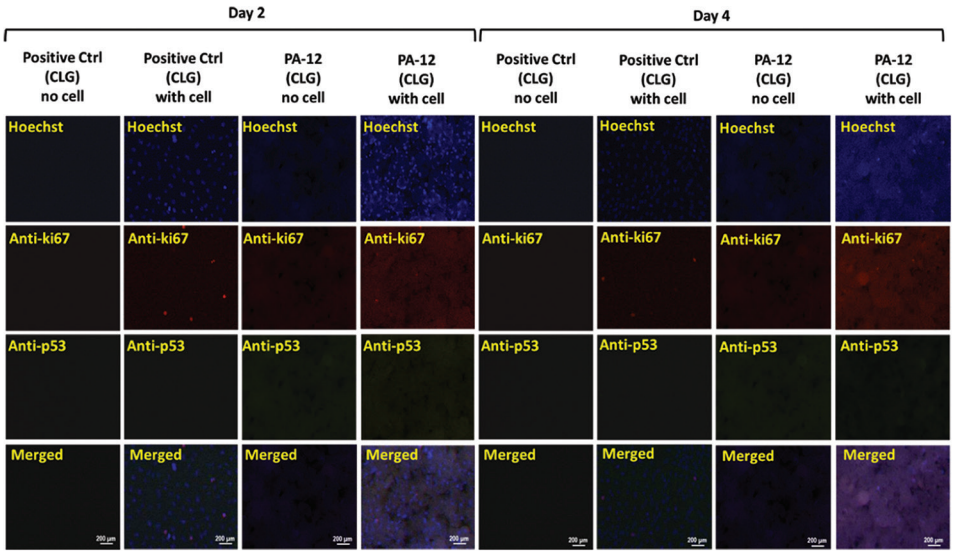

Figure S18. Representative fluorescence microscopy images of MC3T3e1 osteoblasts immunostained to determine the expression of ki67 and p53 following culture on CLG-coated 3D-printed PA-12 and positive control (plate) cell culture chambers after day 2 and day 4, respectively.

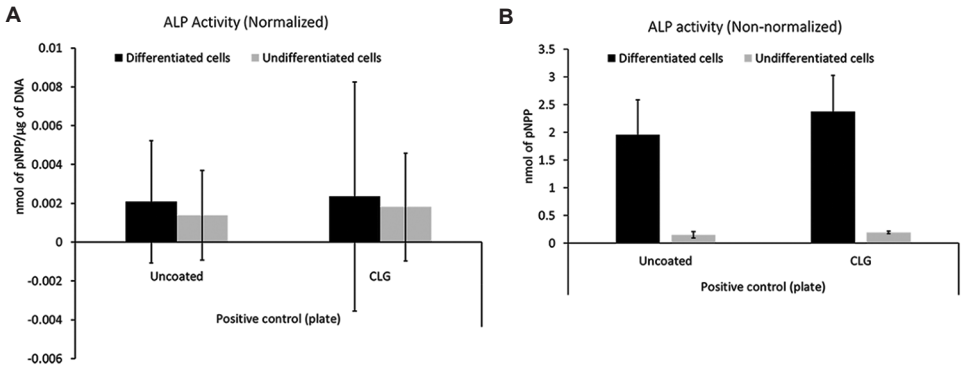

Figure S19. (A) Normalized and (B) non-normalized alkaline phosphatase activity of MC3T3e1 osteoblasts cultured on uncoated and CLG-coated positive control (plate) cell culture chambers at day 28.

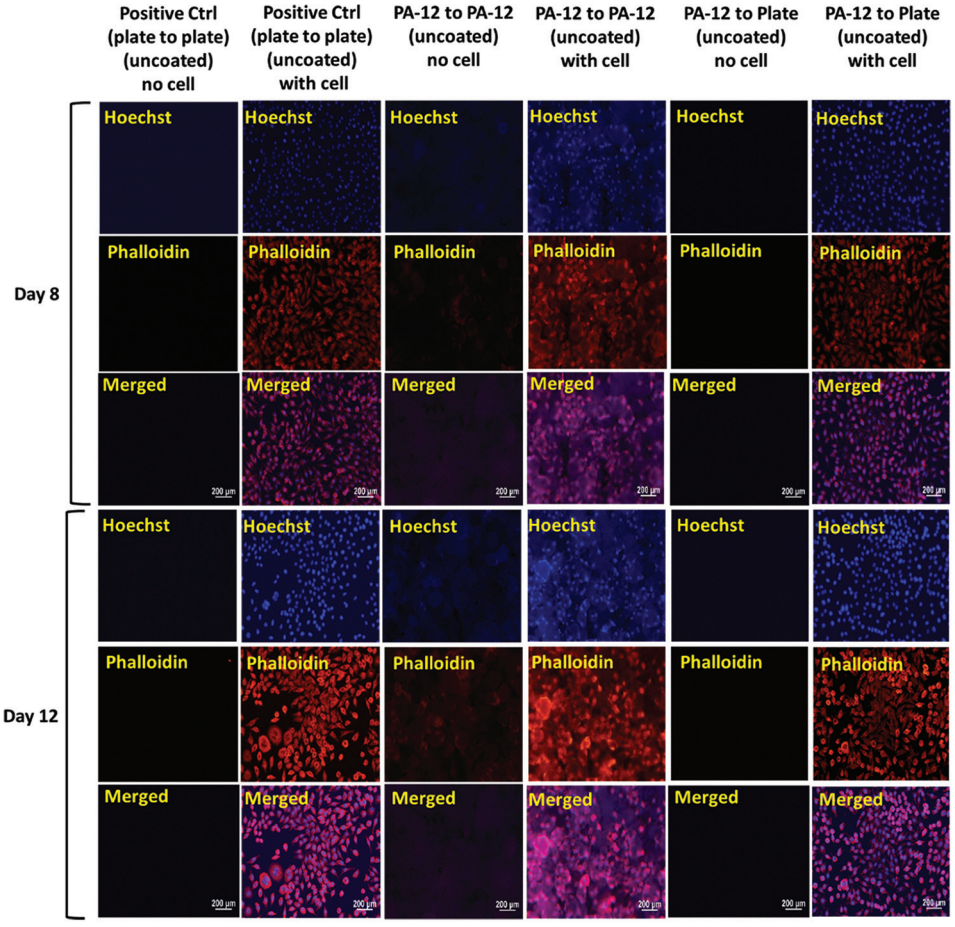

Figure S20. Representative fluorescence images showing the long-term viability of L929 fibroblasts sub-cultured on uncoated 3D-printed PA-12 and positive control (plate) cell culture chambers following long-term culture after day 8 and day 12, respectively.

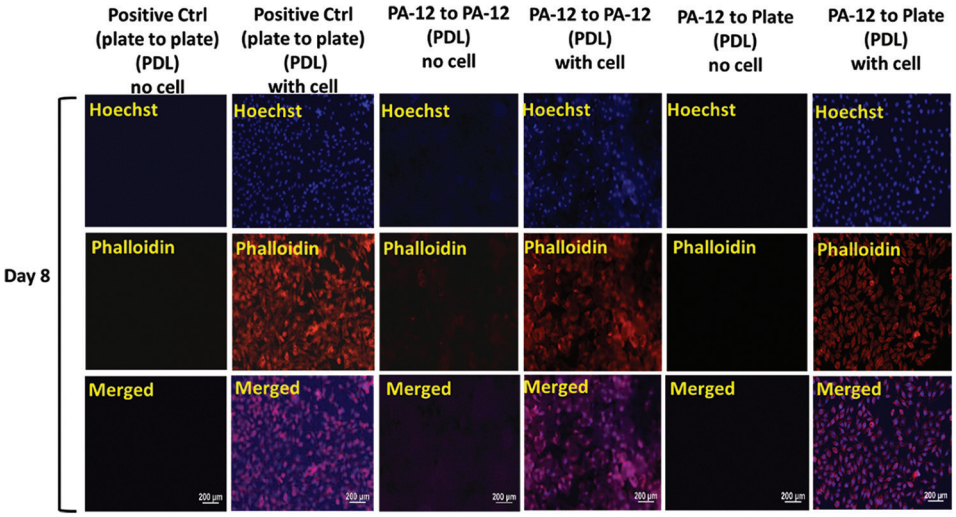

Figure S21. Representative fluorescence images showing the long-term viability of L929 fibroblasts sub-cultured on PDL-coated 3D-printed PA-12 and positive control (plate) cell culture chambers following long-term culture after day 8, respectively.

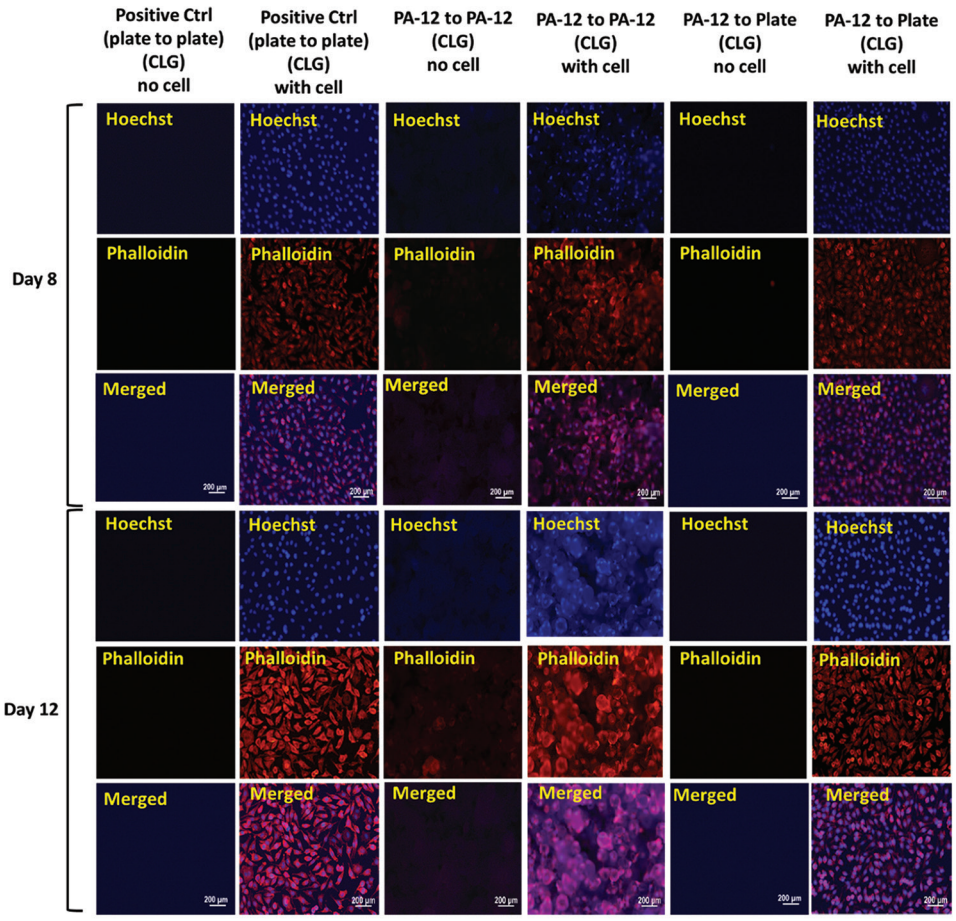

Figure S22. Representative fluorescence images showing the long-term viability of L929 fibroblasts sub-cultured on CLG-coated 3D-printed PA-12 and positive control (plate) cell culture chambers following long-term culture after day 8 and day 12, respectively.

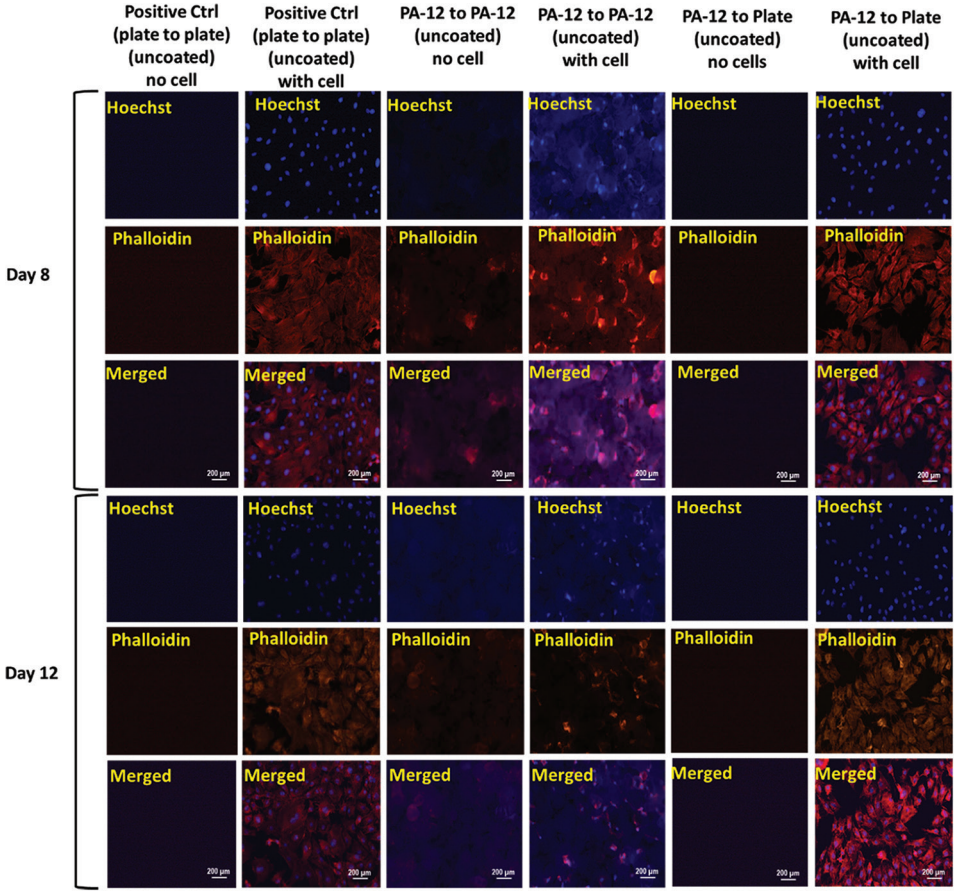

Figure S23. Representative fluorescence images showing the long-term viability of MC3T3e1 osteoblasts sub-cultured on uncoated 3D-printed PA-12 and positive control (plate) cell culture chambers following long-term culture after day 8 and day 12, respectively.

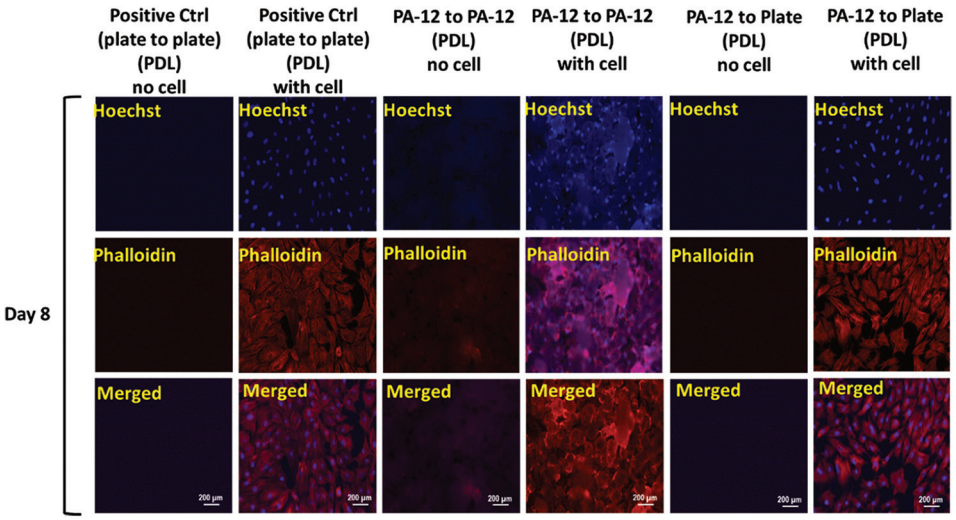

Figure S24. Representative fluorescence images showing the long-term viability of MC3T3e1 osteoblasts sub-cultured on PDL-coated 3D-printed PA-12 and positive control (plate) cell culture chambers following long-term culture after day 8, respectively.

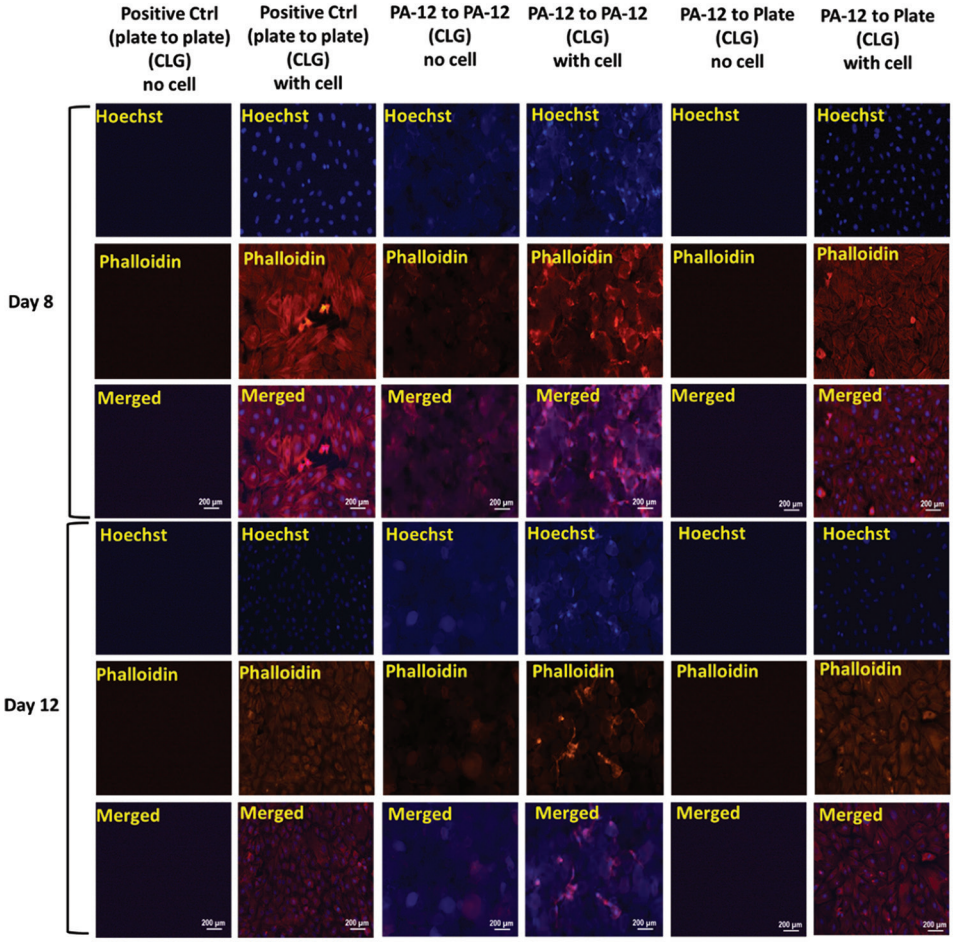

Figure S25. Representative fluorescence images showing the long-term viability of MC3T3e1 osteoblasts sub-cultured on CLG-coated 3D-printed PA-12 and positive control (plate) cell culture chambers following long-term culture after day 8 and day 12, respectively.