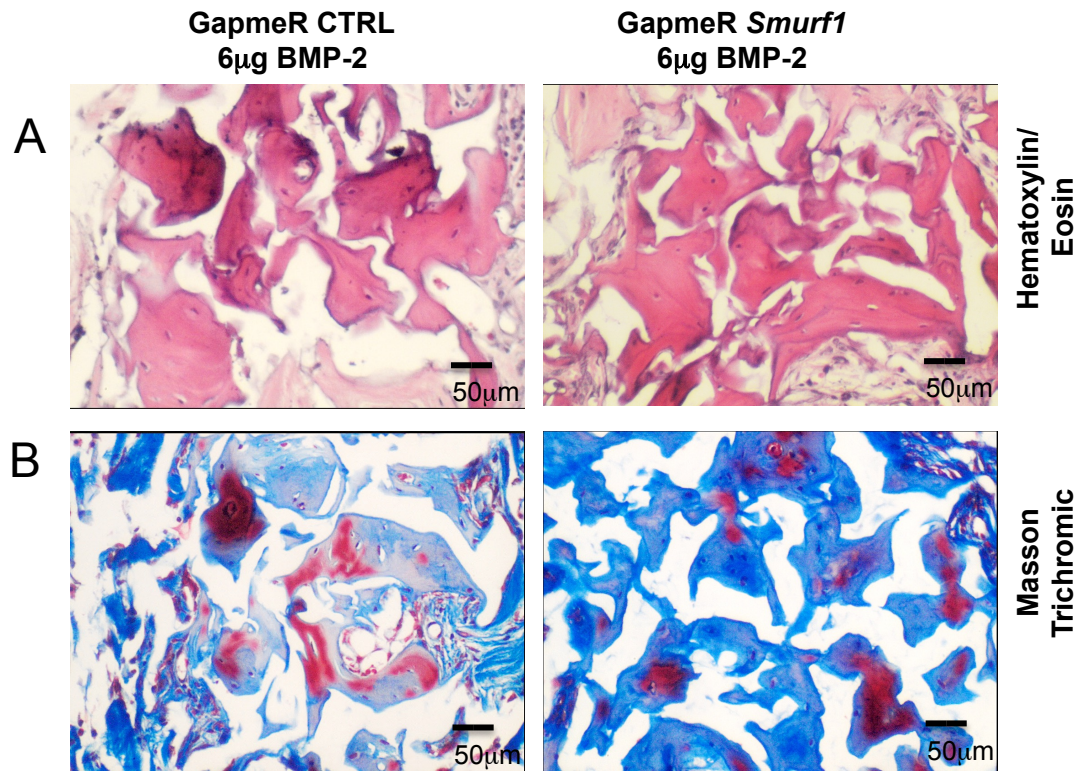
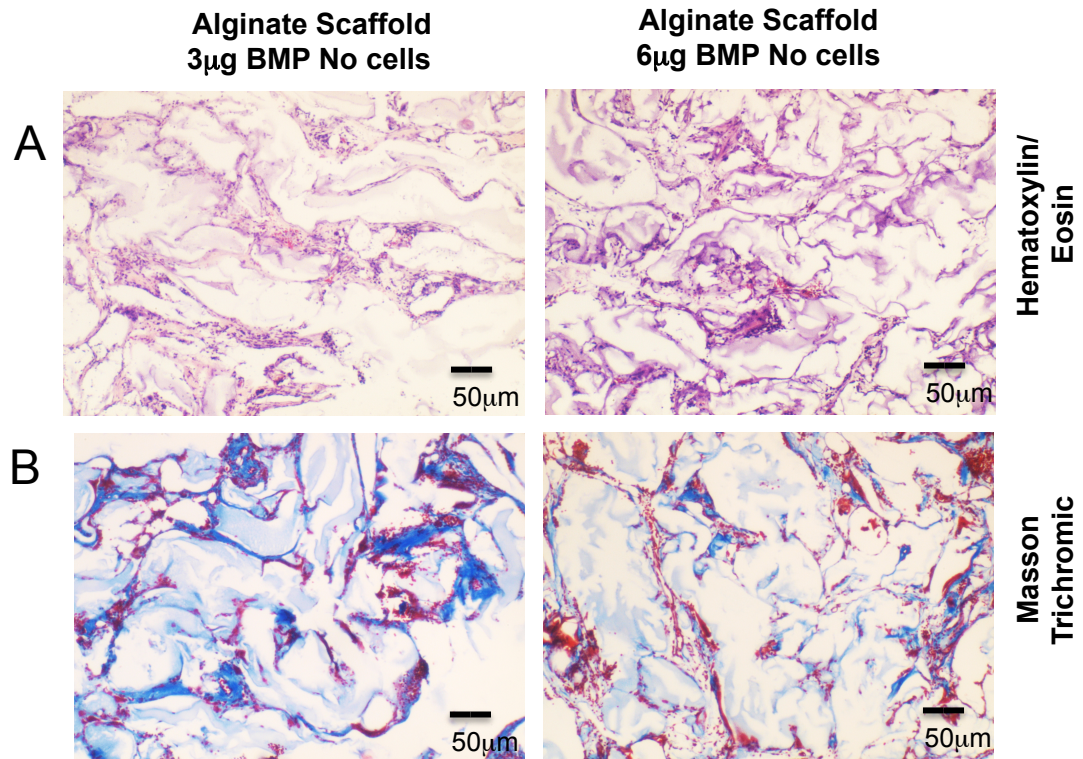


Supplementary Figure 1. Scaffold structure. Scanning Electron Microscope (SEM) image of the microspheres (A) Cross-section view of the scaffold, arrows indicate the microspheres dispersed in the alginate matrix, visualized by stereo microscope (B) and by SEM (C).



Supplementary Figure 2. Histological analysis of bone formation in subdermal implants in rats Pictures show histological analysis of sections obtained from decalcified implants. Hematoxylin/Eosin (**A**) and Masson–Goldner staining (**B**) showing mineralized matrix in light pink and light blue respectively.



Supplementary Figure 3. Histological analysis of bone formation in subdermal implants in rats Pictures show histological analysis of sections obtained from decalcified implants. Hematoxylin/Eosin **(A)** and Masson–Goldner staining **(B)**.