ADVANCED HEALTHCARE MATERIALS

Supporting Information

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Micropatterned Scaffolds with Immobilized Growth Factor Genes Regenerate Bone and Periodontal Ligament-Like Tissues

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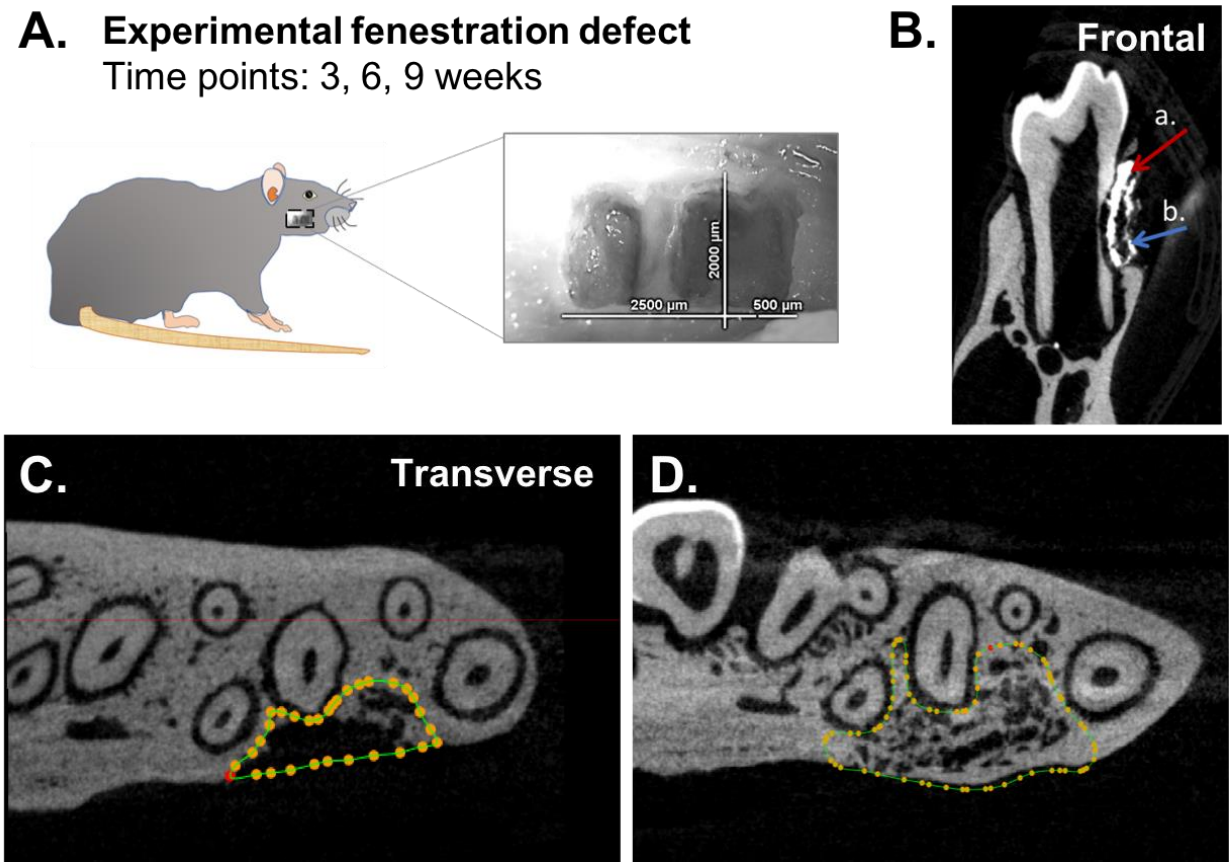
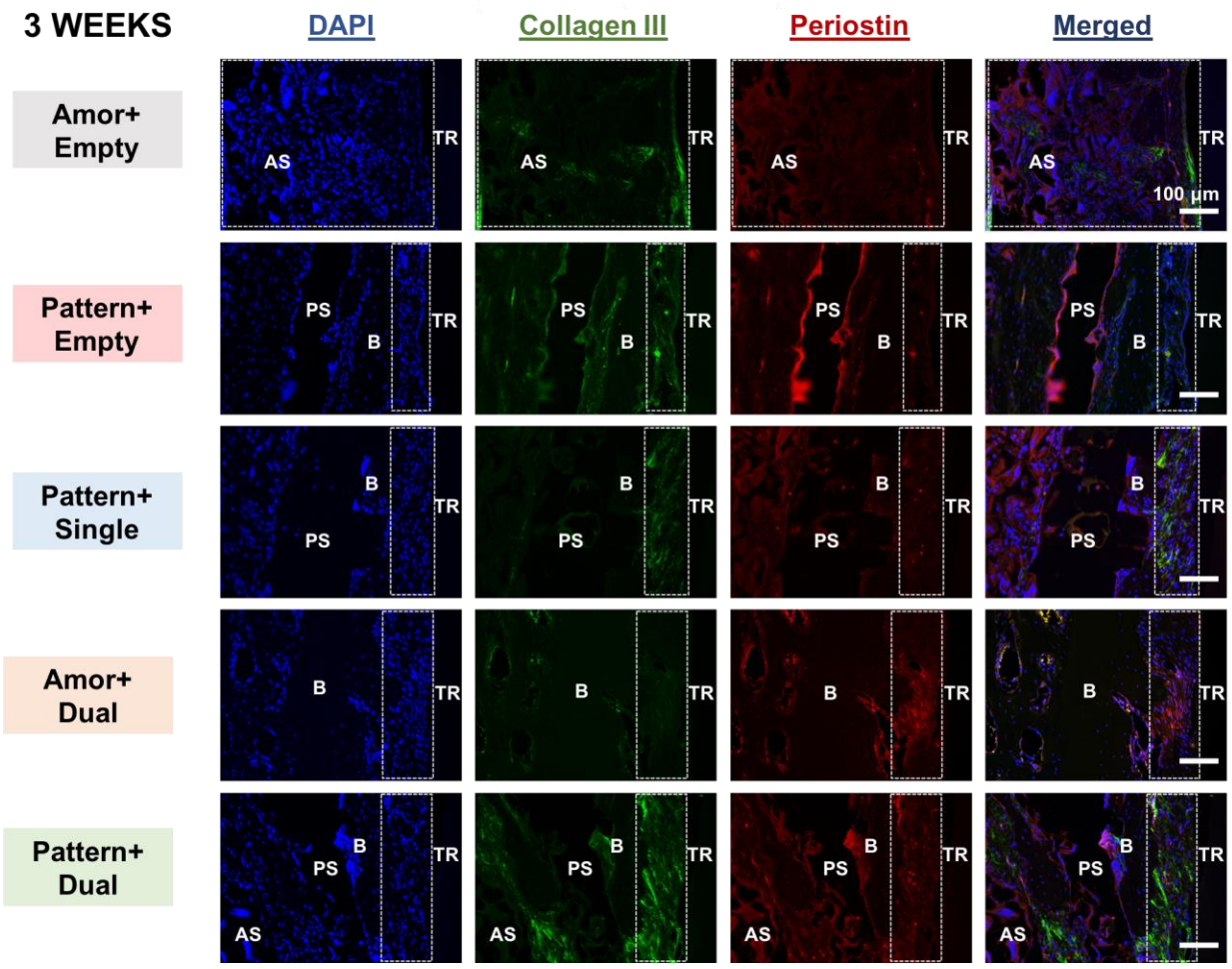
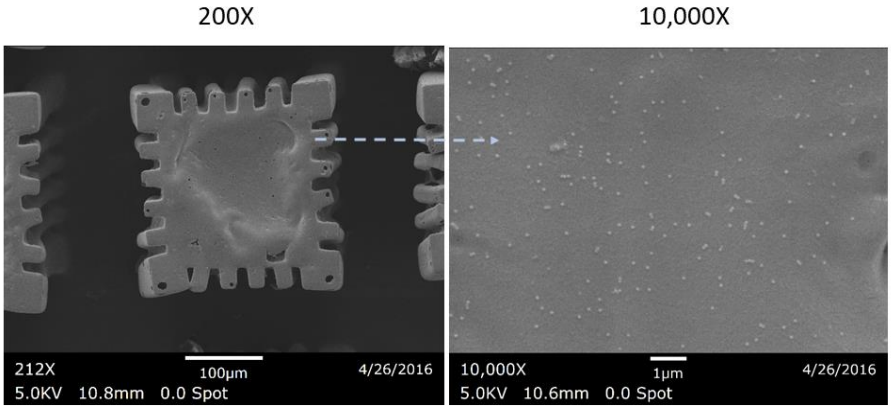


Supplementary Figure 1. (A.) Experimental surgical model of fenestration defect using athymic rats. **(B.)** Micro-CT frontal view of barium sulfate-coated scaffolds inside defect at baseline. The red arrow (a.) indicates the PDL region, and the blue arrow (b.) indicates the bone region. Micro-CT transverse view of defects with **(C.)** minimal and **(D.)** maximal bone regeneration.



Supplementary Figure 2. Immunofluorescence analysis of fibrous connective tissue formation at defect site at 3 weeks *in vivo*. Scale bar is 100 µm for all images. Dashed white lines represent regions of PDL-like soft tissue formation where PDL and cementum were removed along the tooth root during defect formation. TR = tooth root, AS = amorphous scaffold, PS = patterned scaffold, B = bone.



Supplementary Figure 3. Adenovirus Particle Attachment on Patterned Films. SEM images of CVD-coated, PCL/PLGA patterned film (200X) with immobilized adenoviral particles (10^{12} PN/mL) which are visible at 10,000X.