



FIGURE E1. Masson’s trichrome staining of the co-culture samples at the junction of (A) killed engineered tissue construct (*K-ETC*)/EHS and (B) nonpreconditioned engineered tissue construct (*NP-ETC*)/EHS shows poor grafting, whereas (C) preconditioned engineered tissue construct (*P-ETC*)/EHS shows close contact of adjacent tissues. D-F, Staining of ETCs shows a majority of dead (propidium iodide positive) cells for *K-ETC* (D), whereas *NP-ETC* (E) and *P-ETC* (F) show mainly vital (calcein AM positive) cells. G, Macroscopic fluorescence picture of Vybrant Dil (*red*) labeled EHS co-culture with calcein AM (*green*) labeled EHS to show poor attachment of adjacent tissues. H, Spontaneous AP of EHS. I, APs of *P-ETC*/EHS co-culture during 2-heptanol treatment and after washout. Scale bars = 50 μ m.

ET/BS