Figure S1. DPSC-EVs increase the mRNA level of ALP, BSP, RUNX2, TGF-β1, TGFR1, Smad2/3, MAPK and ERK. HERS cells were cocultured with DPSC-EVs, and the mRNA levels of (A) ALP, (B) RUNX2, (C) BSP, (D) TGF-β1, (E) TGFR1, (F) Smad3, (G) ERK and (H) MAPK in the HERS cells were detected by RT-qPCR. The data from three independent experiments are presented as the mean ± SD; ***P<.0.001 DPSC, dental pulp stem cell; EV, extracellular vesicle; HERS, Hertwig's epithelial root sheath; BSP, bone sialoprotein; RUNX2, runt-related transcription factor 2; ALP, alkaline phosphatase.

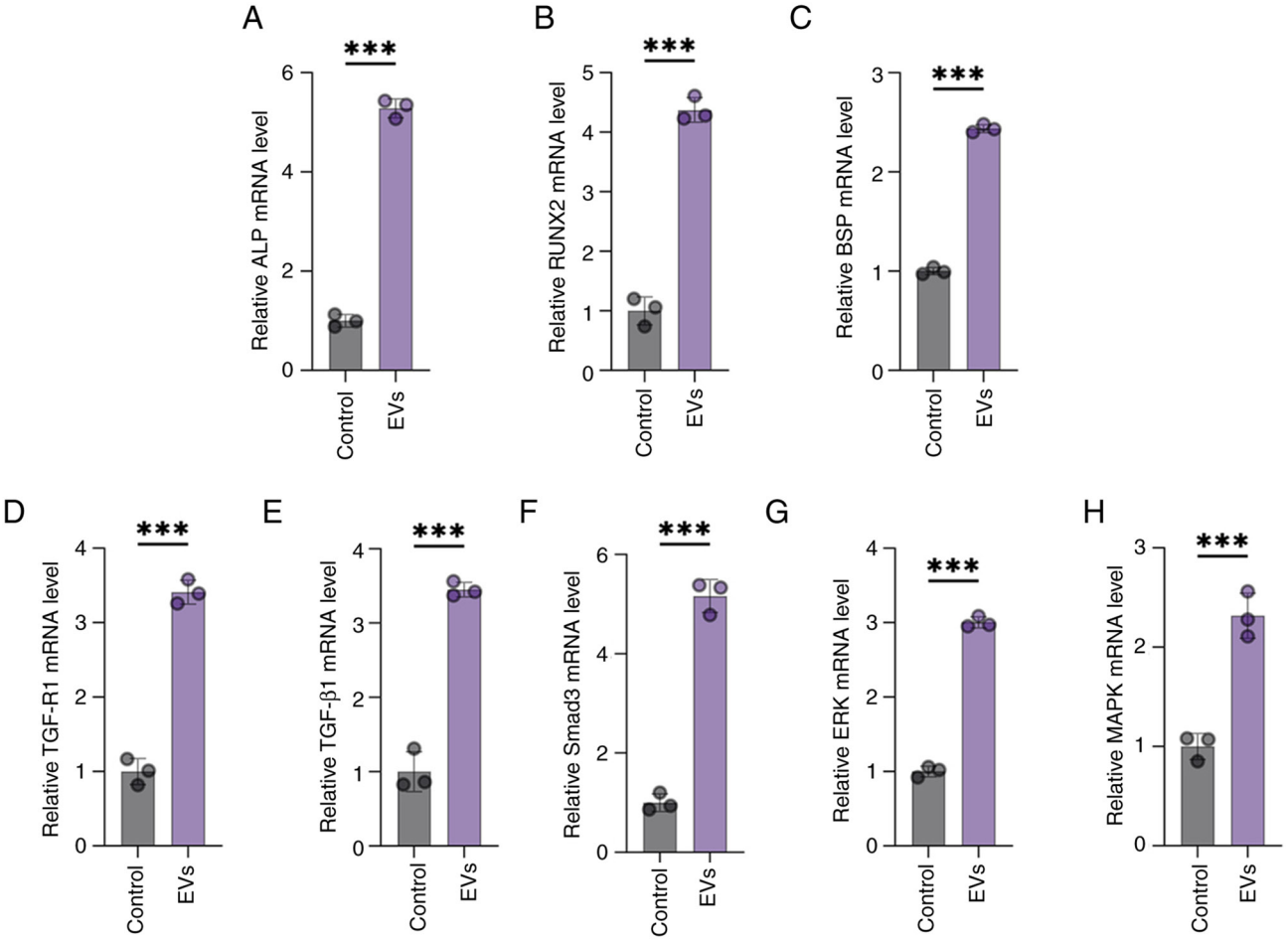

Figure S2. DPSC-EVs increase the mRNA level of TGF-β1, TGFR1, Smad, MAPK and ERK by TGF-β1 signaling. mRNA level of (A) TGF-β1, (B) TGFR1, (C) Smad, (D) MAPK and (E) ERK in the HERS cells were detected by RT-qPCR in the DPSC-EVs and in the DPSC-EVs + TGF-β1i group. The data from three independent experiments are presented as the mean ± SD; *P<0.05, **P<0.01, ***P<0.001. DPSC, dental pulp stem cell; EV, extracellular vesicle; HERS, Hertwig's epithelial root sheath.

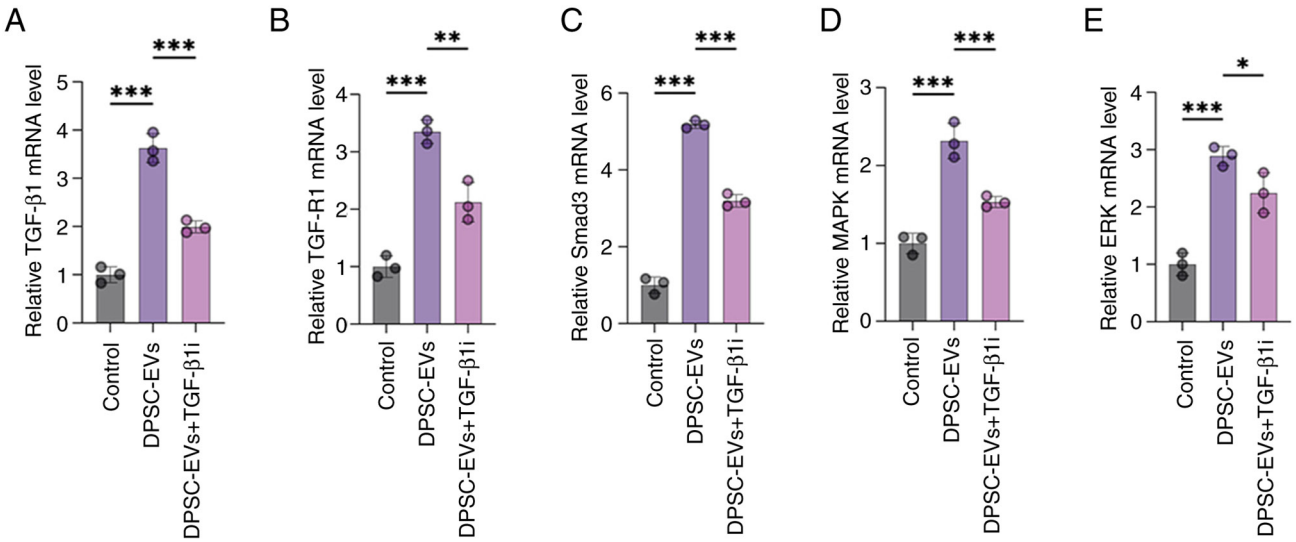

Figure S3. DPSC-EV-loaded hydrogels promote the mRNA levels of ALP, BSP, RUNX2, TGF-β1 and Smad in rats with alveolar bone defects. mRNA level of (A) ALP, (B) BSP, (C) RUNX2, (D) TGF-β1 and (E) Smad3 in the HERS cells were detected by RT-qPCR. The data from three independent experiments are presented as the mean ± SD; **P<0.01, ***P<0.001. DPSC, dental pulp stem cell; EV, extracellular vesicle; HERS, Hertwig's epithelial root sheath; BSP, bone sialoprotein; RUNX2, runt-related transcription factor 2; ALP, alkaline phosphatase.