

Figure S1. Detailed procedure for establishing bone defects in SD rat models. (A) General view of the external fixation brace used. (B) Anesthesia, skin preparation, disinfection and towel laying for SD rats. (C) An incision of about 2 cm on the left lateral thigh. (D) The skin and fascia were incised layer by layer. The femoral stem was bluntly separated, exposed, and propped open with a small spreader. (E) Using the retractor holes as anchor points, the electric rotor drilled four holes at low speed. The external fixation device was attached to the four screws. (F and G) The bone was cut with a wire saw 3 mm between the two screws in the middle. (H) The external fixation device was adjusted in groups B, C, and D to align the broken end of the femur with the composite brace. Group A left the bone defect area open. (I) The muscle, deep and superficial fascia, and skin were sutured layer by layer. The wound was disinfected with iodophor after suturing. SD, Sprague Dawley rats.

