

Supplementary Material

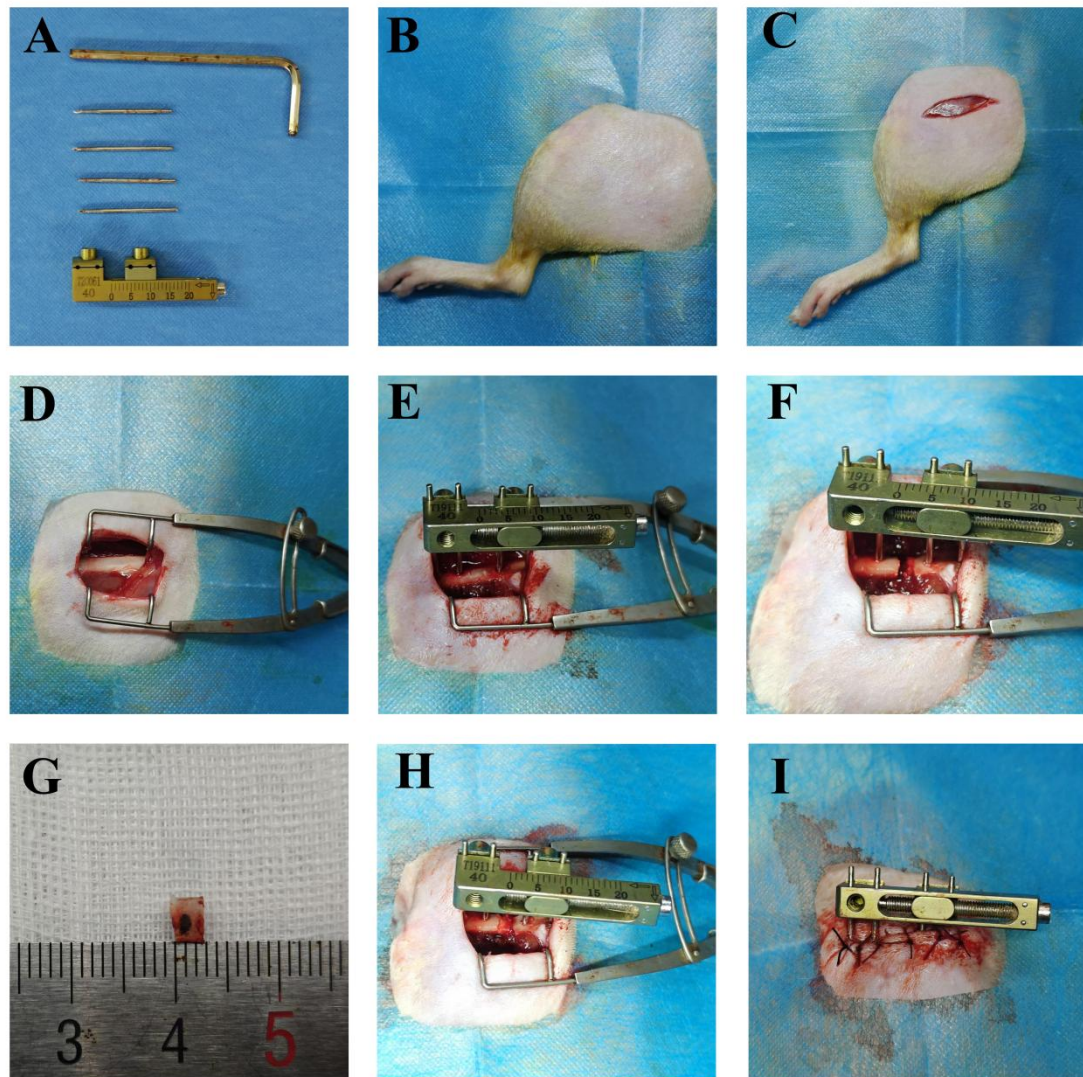


Fig. S1. Diagram illustrating the process of implanting composite scaffolds in a rat model with a femoral bone defect. (A) Overview of the external fixation apparatus. (B) Preparation steps including anesthesia, skin cleaning, disinfection, and towel placement for SD rats. (C) A 1.5-cm incision made on the left outer thigh. (D) Layered incision through the skin and fascia to reveal the femoral stem, which was held open using a small retractor. (E) The external fixation apparatus was secured with four screws. (F, G) A wire saw was utilized to cut the bone 3 mm between the two central screws. (H) In the PT, GPT, and CGPT groups, the external fixation device was adjusted to ensure the fractured femur ends aligned with the composite scaffold, while the Con group left the defect exposed. (I) Layered suturing of the muscle, deep and superficial fascia, and skin was performed.