

Rat tibia fracture model

The method of making the rat tibia fracture model was similar to the previous studies (1). Briefly, SD rats were received skin preparation of the right lower limb, disinfection by 75% ethyl alcohol and draped with a sterilized hole towel after successful anesthesia (40 mg/kg sodium pentobarbital, intraperitoneal injection). The tibial shaft was exposed by the tibial medial incision. Then, the bone saw was used to make the tibial shaft transverse fracture and the 5mm periosteum and medullary cavity above and below the fracture end were cauterized with an electric knife. 0.8mm Kirschner wire (Zimmer, USA) was used to fix the fracture as an intramedullary pin. The wound was irrigated by 20ml normal saline, in addition, the muscles and skin were sutured with a 5-0 absorbable band (Ethicon, USA). Then, 80,000 IU penicillin intramuscular injection was performed on days 1, 2 and 3 after modeling to prevent infection (Fig.1).

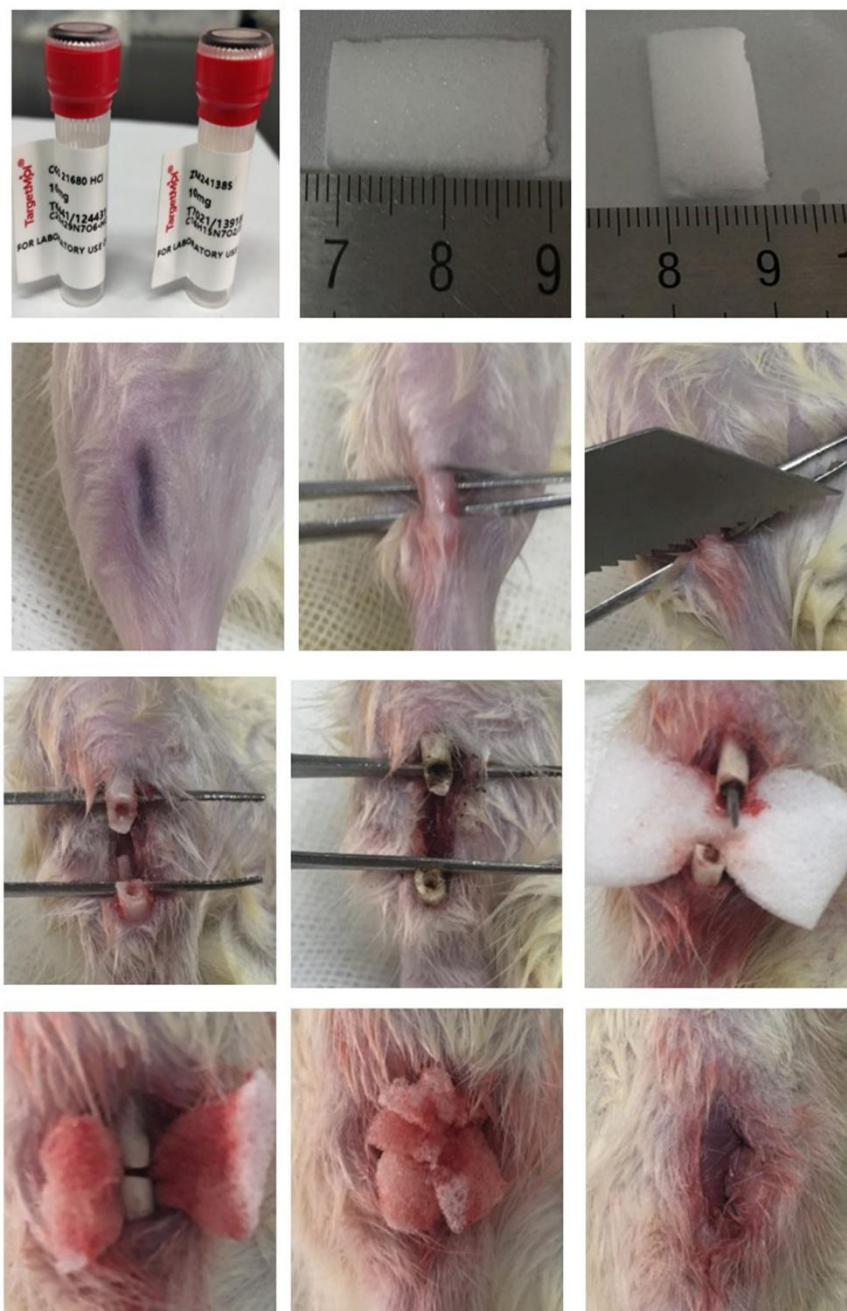


Fig.1 the bone fracture model making process. The images showed that CGS21680 and ZM241385 were used. The sterile collagen sponges were cut into $2 \times 1 \times 0.5$ cm and containing 200ug CGS21680 or ZM241385. The tibial medial incision was used to expose the tibial shaft. Then, the bone fracture was made by the bone saw, in addition, the periosteum and medullary cavity were cauterized. The fracture was fixed by Kirschner wire and the collagen sponges was used to wrap the fracture end.

Reference

1. Zheng X, Wang D (2020) The Adenosine A_{2A} Receptor Agonist Accelerates Bone Healing and Adjusts Treg/Th17 Cell Balance through Interleukin 6. *Biomed Res Int* 2020:2603873. doi:10.1155/2020/2603873