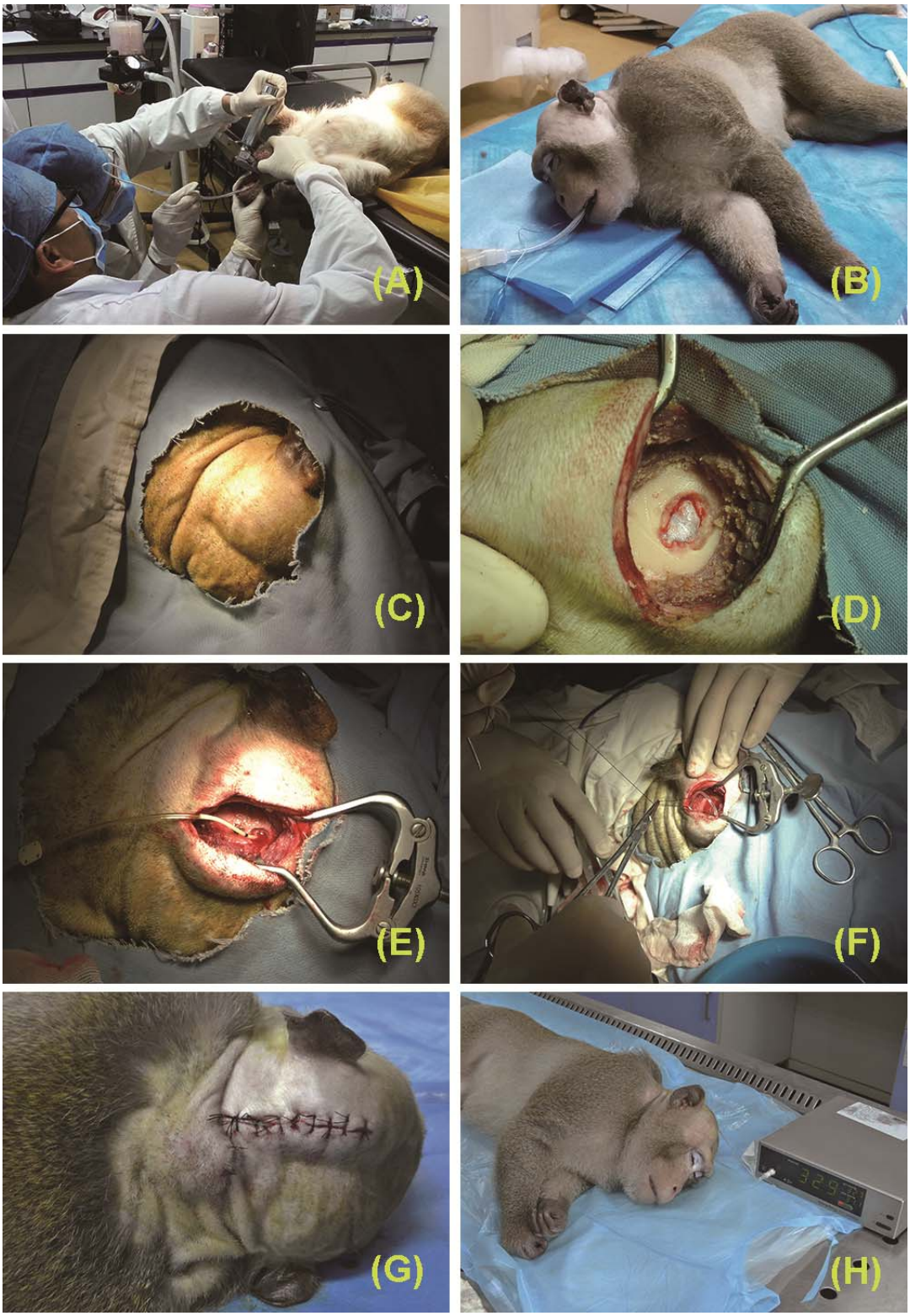
Supplementary Material

1 ICP sensor implantation

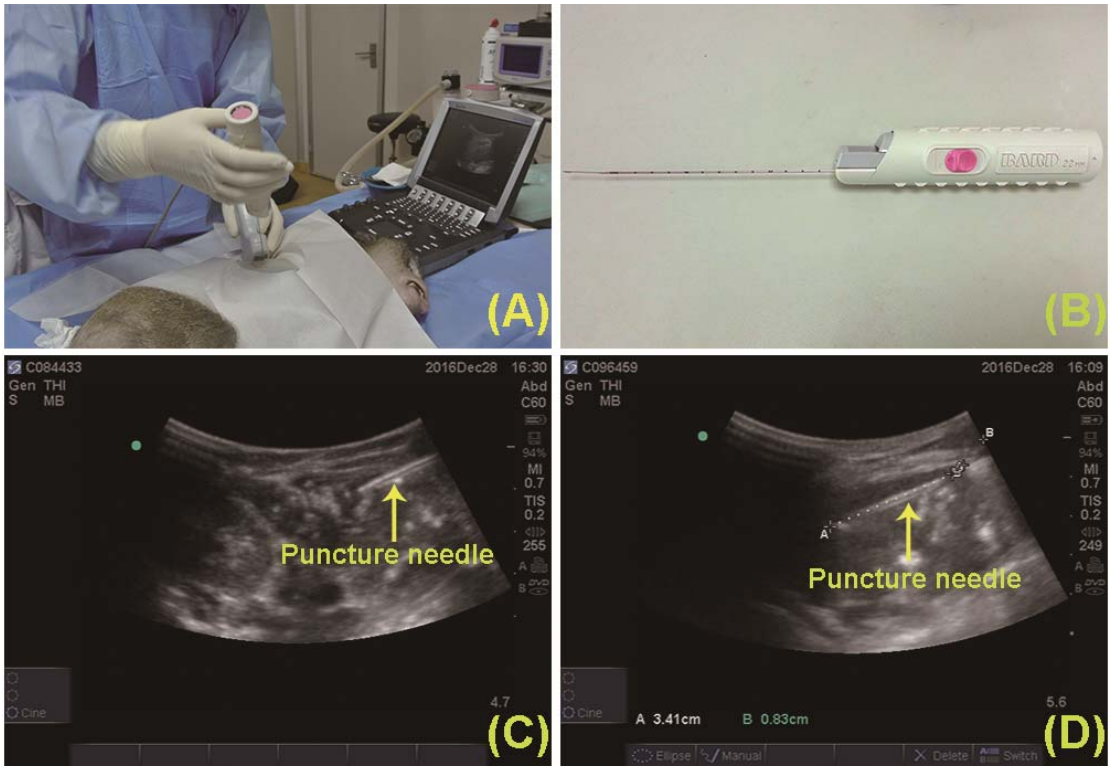
Animals were placed on the operating table in prone position following anesthesia administration, and 48h before experimental drug administration. First, the left side of the intersection of the cranial ear wires and sagittal line of the brain was identified as the operative area, routine disinfection was performed as described above, and sterile drapes were spread. Next, an incision of about 5 cm was made parallel to the midline, scalp skin layers were separated by using an electrotome, an automatic cranial drill was used to penetrate the exposed skull(diameter about 0.8 cm), broken bone pieces were washed with saline, and bleeding was stopped using a cotton ball. A surgical incision (about 0.5 cm) through the cerebral dura mater was made, and then the ICP sensor probe tip was inserted to a depth of about 4-5 cm toward the lateral fissure close to the cerebral dura mater. When a small amount of cerebrospinal fluid outflow was observed with normal cerebral pulsation and no obvious bleeding, a gelatin sponge was placed on the sensor catheter to prevent bleeding and cerebrospinal fluid leakage, after reconfirming that the brain pulsation was normal. Finally, the catheter was fixed to the muscle layer, the end of the sensor was closed and embedded into the subcutaneous together with the catheter in order to prevent the animal from scratching. The sensor was connected to the ICP monitor and the baseline ICP value was recorded before experimental drug administration. Subsequently, at each experimental time point, the sensor was clipped and released using sterile forceps and sterile surgical techniques to measure the ICP.



Supplementary Figure 1 Surgical procedure to implant ICP sensor in cynomolgus monkeys. A: Endotracheal intubation; B: Isoflurane inhalation to maintain anesthesia; C: Skin preparation, disinfection, and covering of the cranial surgical field; D: Scalp incision and revealing the dura mater; E:

Implanting the ICP sensor; F: Fixing of the ICP sensor; G: Suturing the incision and embedding the sensor tube under the ski; H: The determination of ICP.

Supplementary Figure 2 Establishment of cynomolgus monkey model of ALF induced by D-gal injection through the small saphenous vein. A: Experimental monkey anesthesia and division into groups; B: Administration of D-gal slowly through the small saphenous vein.



Supplementary Figure 3 Liver biopsy guided by ultrasound in cynomolgus monkeys before D-gal administration. A: Transcutaneous liver puncture guided by ultrasound; B: Liver puncture biopsy gun; C: Puncture needle under the guidance of ultrasound; D: Depth measurement of puncture needle.