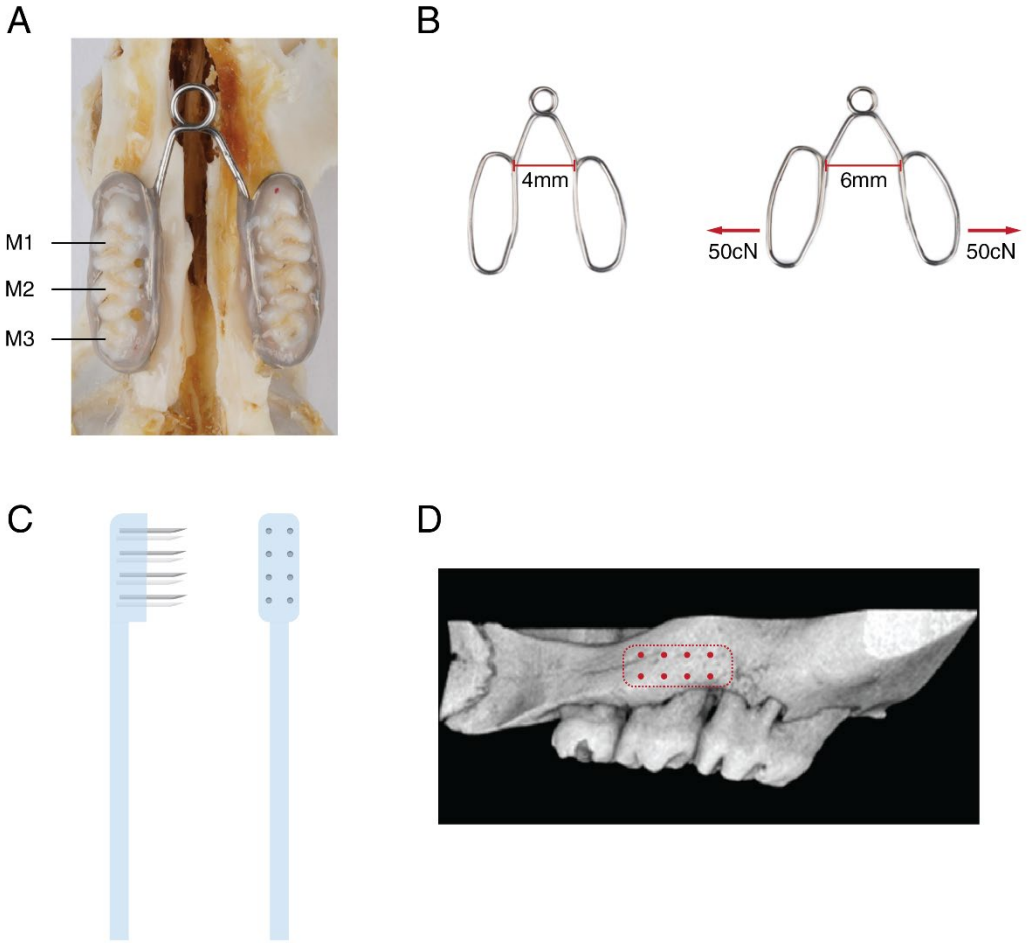

Figure 1: Schematic of model for application of static forces and periosteal stimulation. Calibrated springs used to produce static forces on the rat maxilla were fabricated from 0.016" stainless steel wires (3M Unitek, Monrovia, CA, USA) and secured to teeth by flowable resin. Photograph of spring installed in the rat maxilla (A). The springs were calibrated using a digital force gage to produce 100cN force when expanded from 4 to 6 mm (B). Periosteum stimulation was performed using 8 needles attached to a handle (C). The device was used to produce small perforations in the periosteum. Perforations were applied in the area of buccal cortical plate of second molars (D). (M1 = first molar, M2 = second molar, M3= third molar).