International Journal of Bioprinting

RESEARCH ARTICLE

Micron track chitosan conduit fabricated by 3D-printed model topography provides bionic microenvironment for peripheral nerve regeneration

Supplementary File

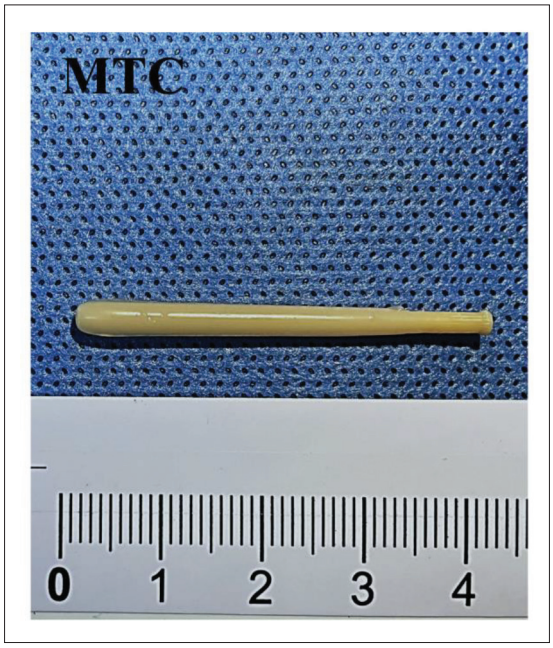

Figure S1. Topological fabrication of chitosan neural repair conduits using 3D-printed models.

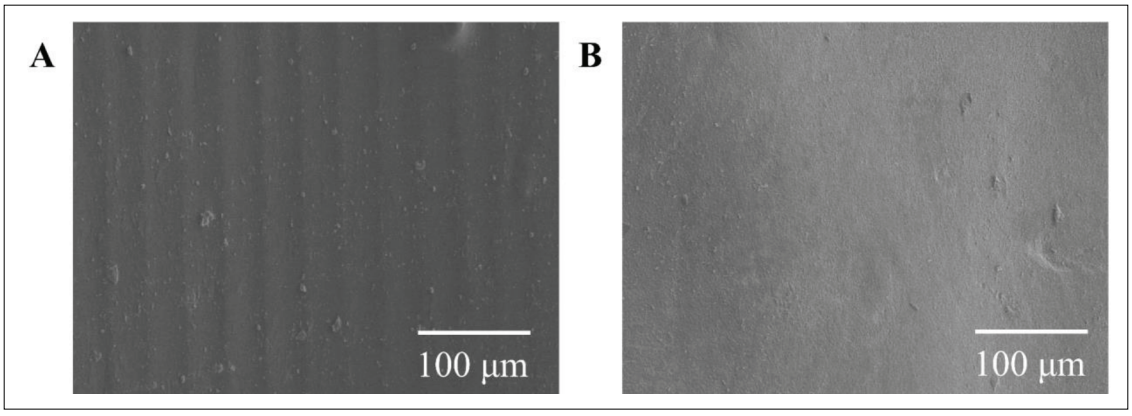

Figure S2. Comparison of electron micrographs of the inner surface of the micrometer track conduit and the commercial control conduit. (A) Scanning electron micrograph of the micrometer track conduit. (B) Scanning electron micrograph of the commercial control conduit.

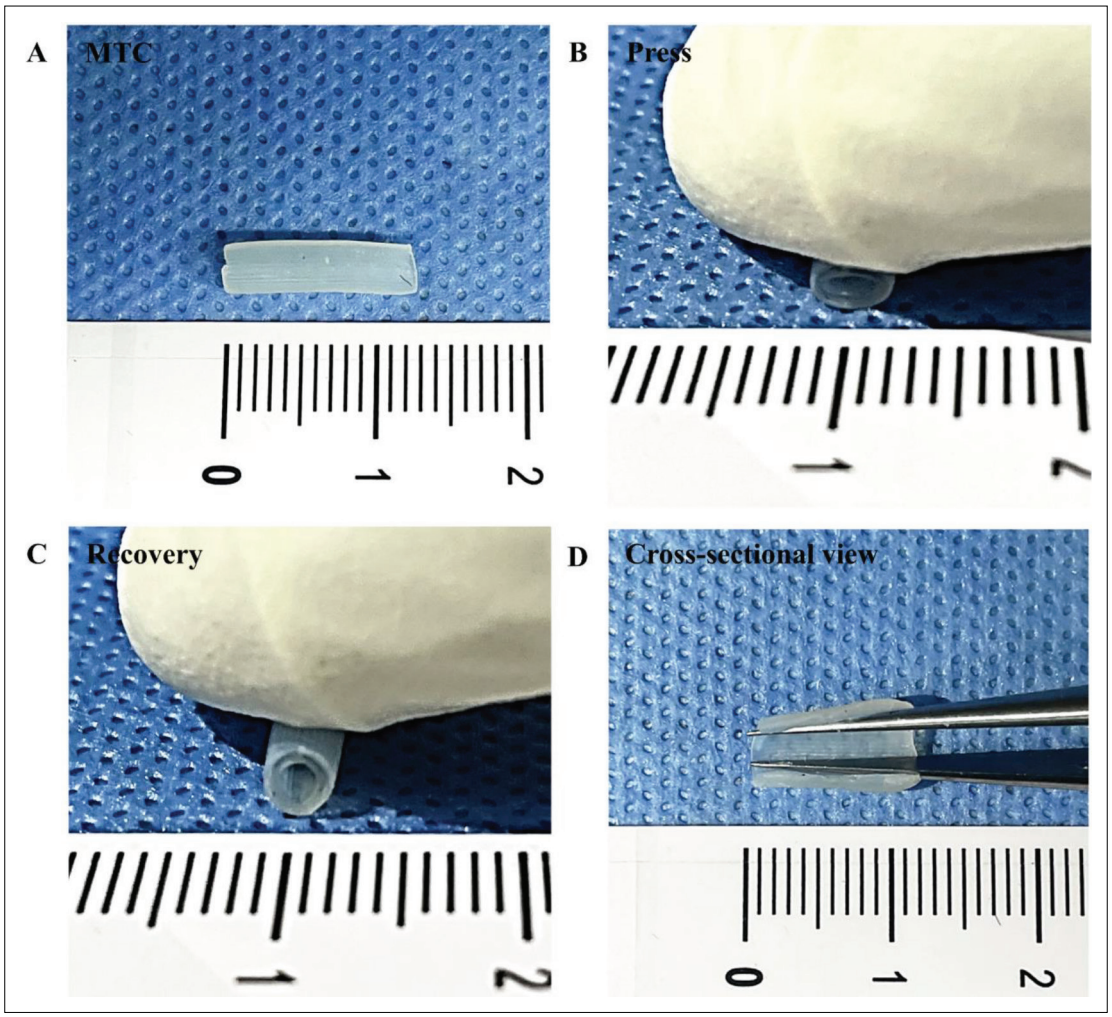

Figure S3. Micron track conduit curving, pressing test.

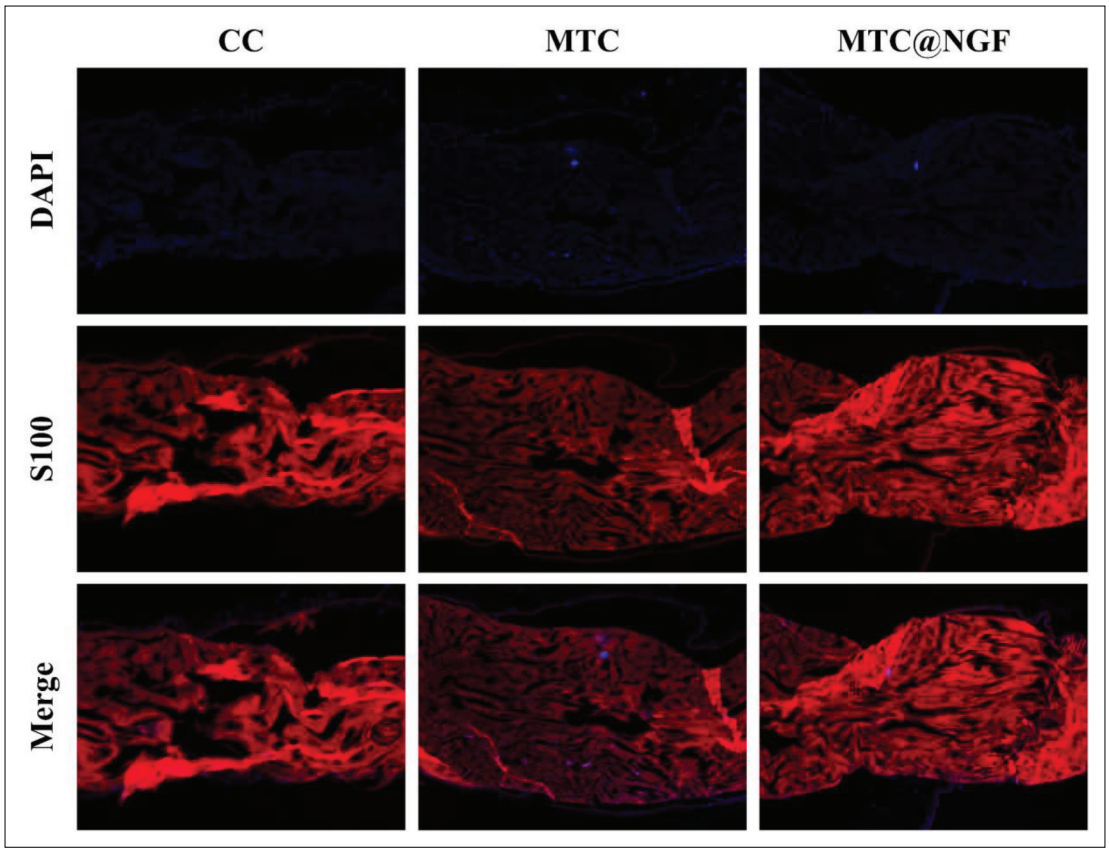

Figure S4. S100 myelin immunofluorescence assay of CC, MTC, and MTC@NT3.

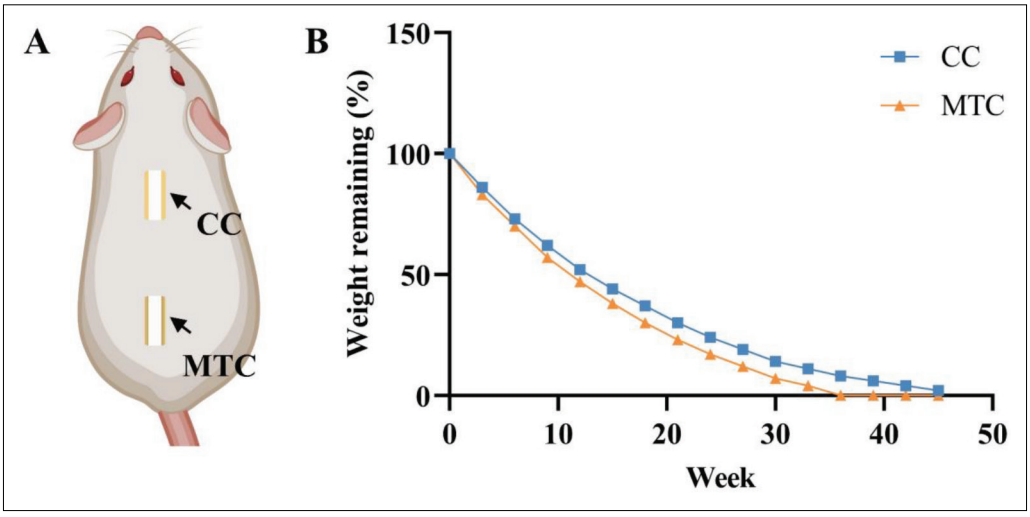

Figure S5. *In vivo* degradation experiments of CC, MTC. (A) Schematic diagram of *in vivo* declaration in rats. (B) The graph of the weight remaining (%) versus time (week).

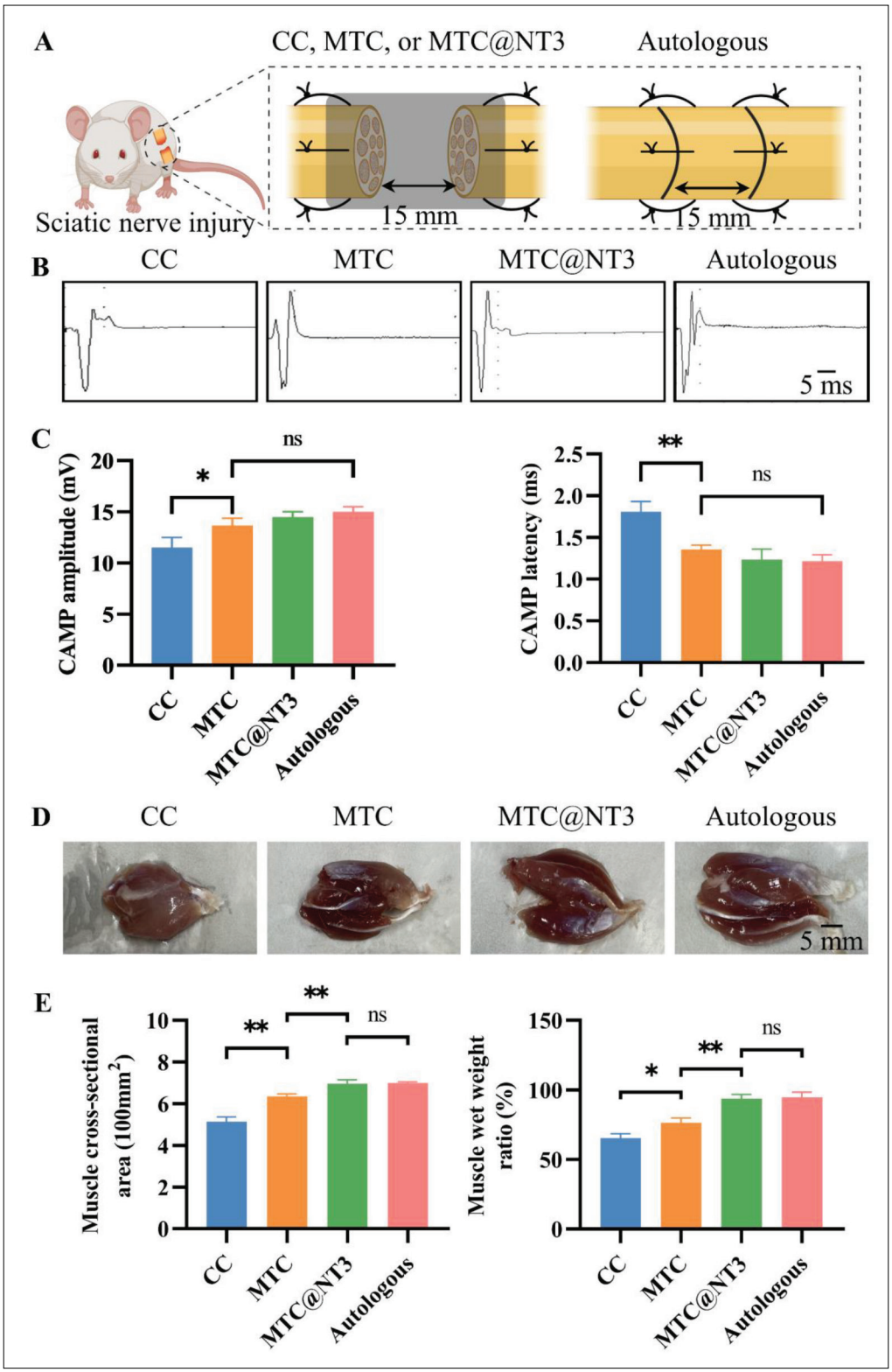

Figure S6. The effect of repairing 15-mm sciatic nerve injury with CC, MTC, MTC@NT3, and Autologous, respectively, for 12 weeks. (A) Repairing the sciatic nerve 15-mm injury pattern. (B) Neuroelectrophysiological recovery after 12 weeks of repair. (C) CAMP amplitude and CAMP latency. (D) Recovery of the gastrocnemius muscle. (E) Muscle cross-sectional area and wet weight ratio.

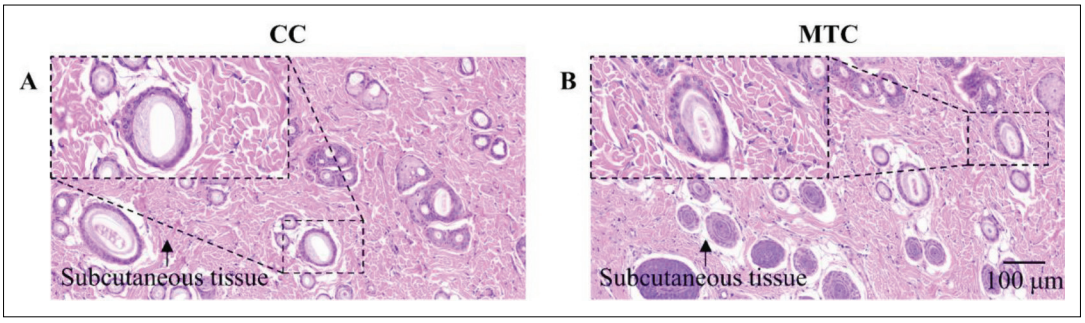

Figure S7. HE staining of skin tissue after CC, MTC implantation *in vivo*. (A) CC group. (B) MTC group.

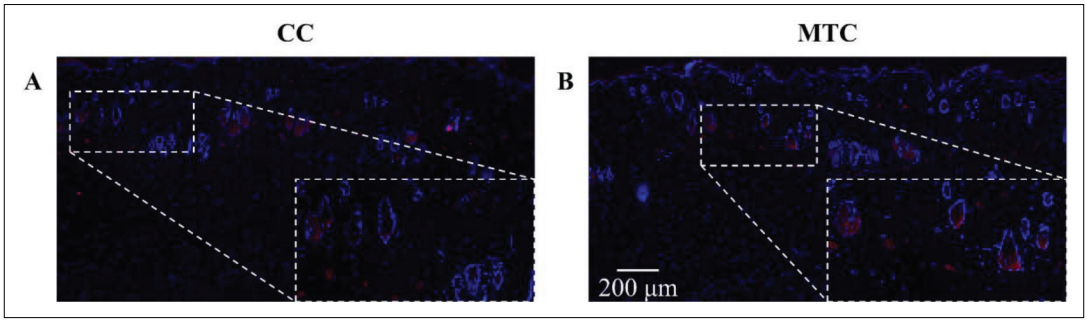

Figure S8. Immunofluorescence staining of skin for TNF-α in CC, MTC implants in SD rats dorsum. (A) CC group. (B) MTC group.