
SUPPLEMENTARY INFORMATION

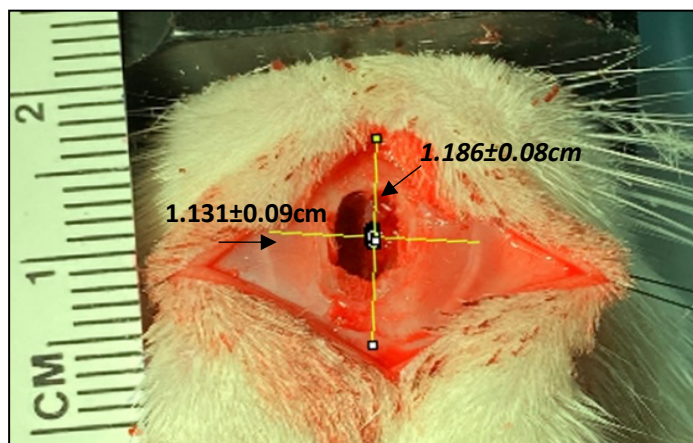


Figure S1. The dimensions of the rat submucosal space formed by the MIND surgical technique. The dimensions were measured with Image J software taking an average of five independent measurements.

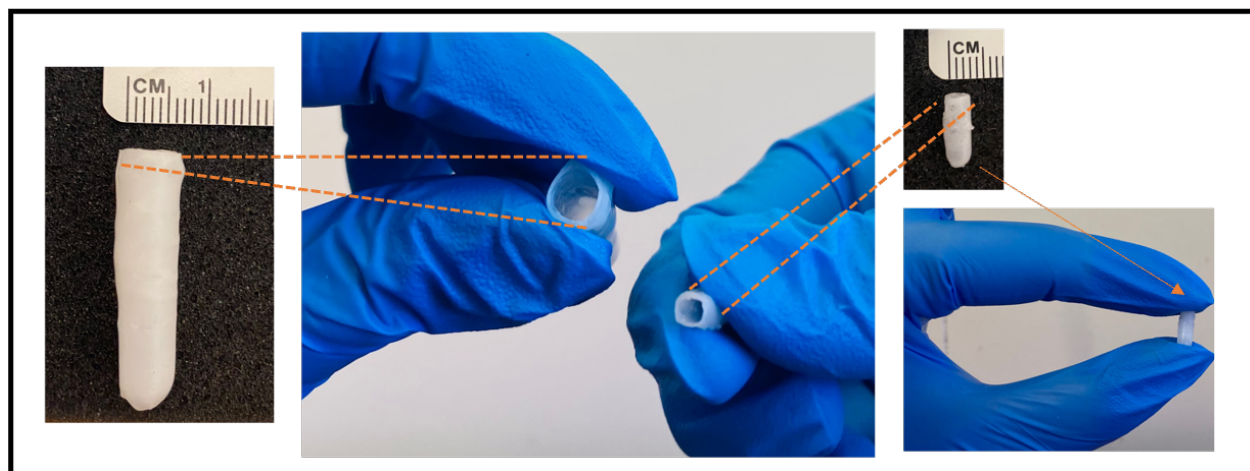


Figure S2. Flexibility of implant dimensions by control of fabrication parameters. Poly(epsilon-caprolactone) shells with inner diameters in the range of 2-5 mm.

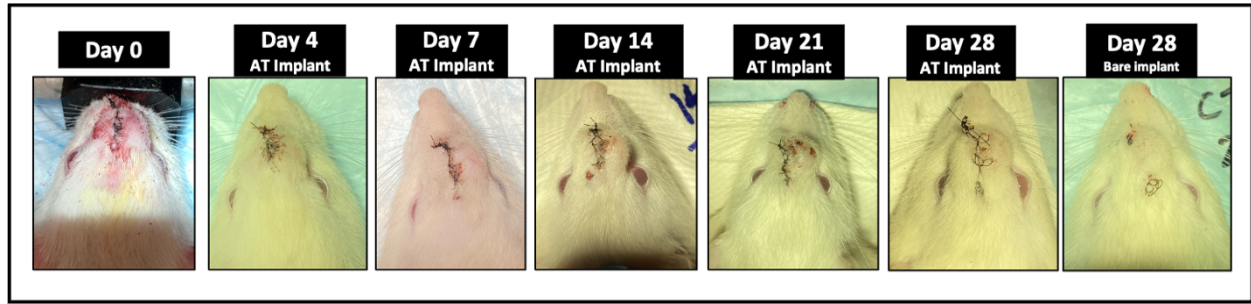


Figure S3. Visual inspection of snouts of rats subjected to MIND implantation surgery post euthanasia at different time points.

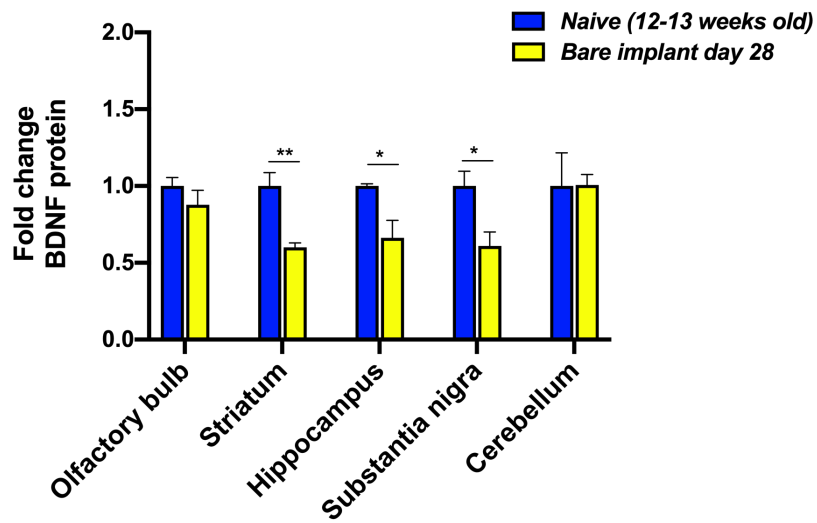


Figure S4. BDNF protein levels in brain sub-regions of rats administered with bare or placebo implants via MIND for 28 days relative to the BDNF levels of naïve animals of comparative ages, measured by BDNF ELISA ($n = 4$ rats/ group, fold change values represented as mean \pm SEM, student's t-test, ** $p < 0.01$, * $p < 0.05$)

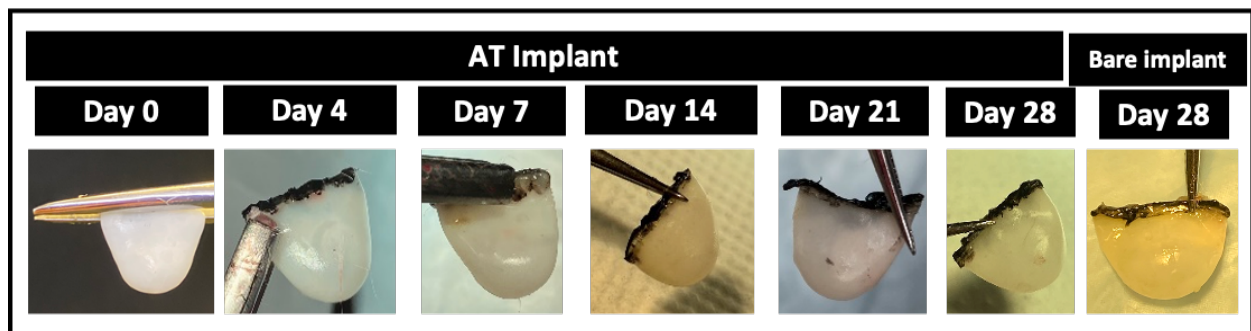


Figure S5. Implants explanted from rat submucosal space at different time points

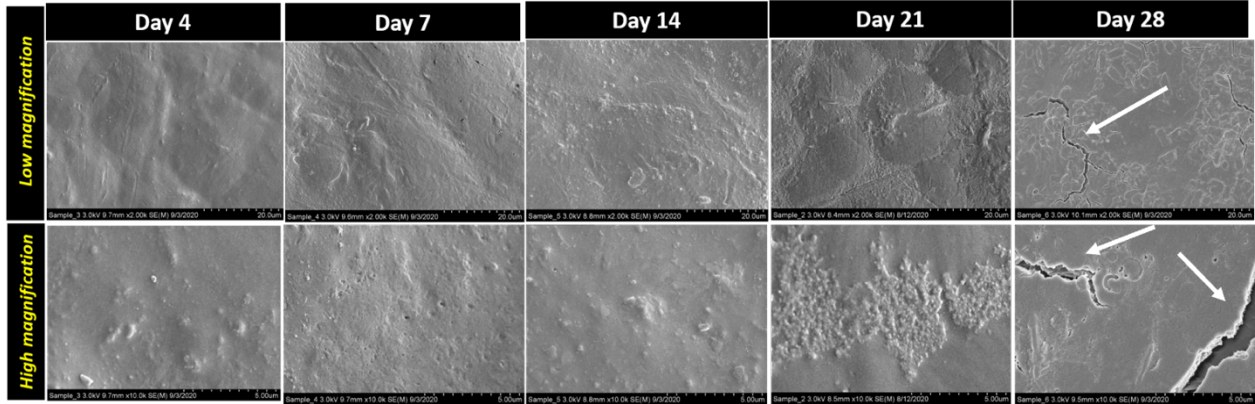


Figure S6. Morphology changes of implant with time evaluated by FESEM analysis of explanted implants. The white arrows in the last images show the presence of cracks or crevices on the implant surface at the 28th day time-point.

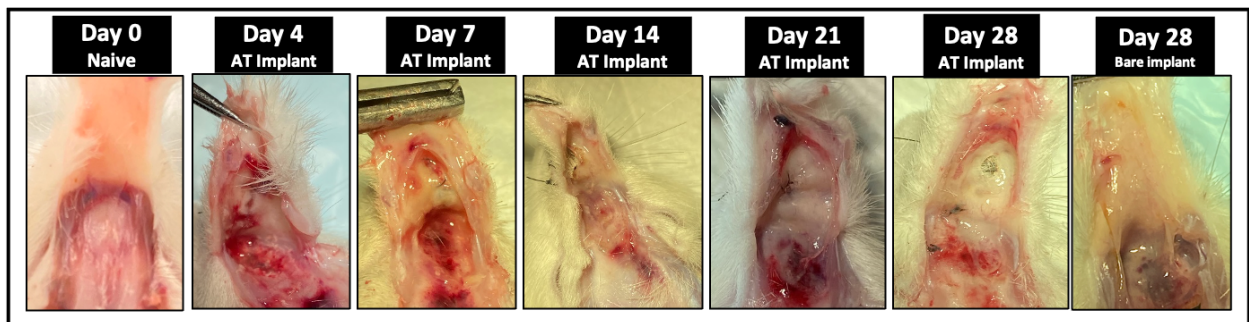


Figure S7. Rat submucosal space after removal of the implant post-euthanasia at different time points