

Supplementary information for

Chao Li, Li-Fang Zhu, Ming-Wei Chang, Hao Li, Shiheng Liu, Baolin Wang, 2025. Bone marrow mesenchymal stem cell-loaded HAMA hydrogel within highly bionic nerve guidance conduits for peripheral nerve regeneration. *Bio-Des Manuf*, 8(6):976-993. <https://doi.org/10.1631/bdm.2500026>

Table S1 Conductivity Values of the Prepared Solutions

Solution	Conductivity ($\mu\text{S}/\text{cm}$)
PCL loading with 5% cMWCNTs	749.3 ± 6.3
Pure PCL	0.047 ± 0.015

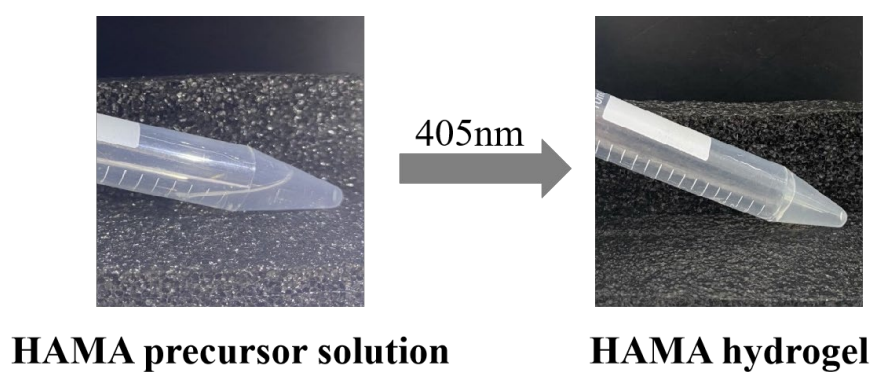


Fig. S1 The process of HAMA gelation

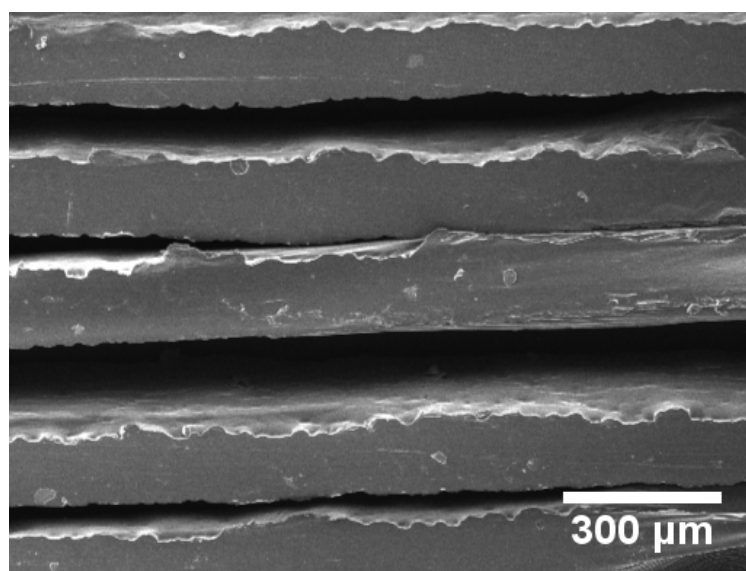


Fig. S2 The inner layer of the HB-NGC via EHD printing

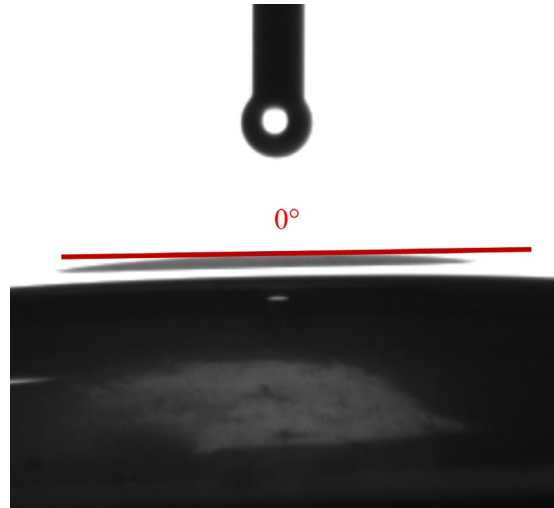


Fig. S3 Water contact angle of the HAMA hydrogel

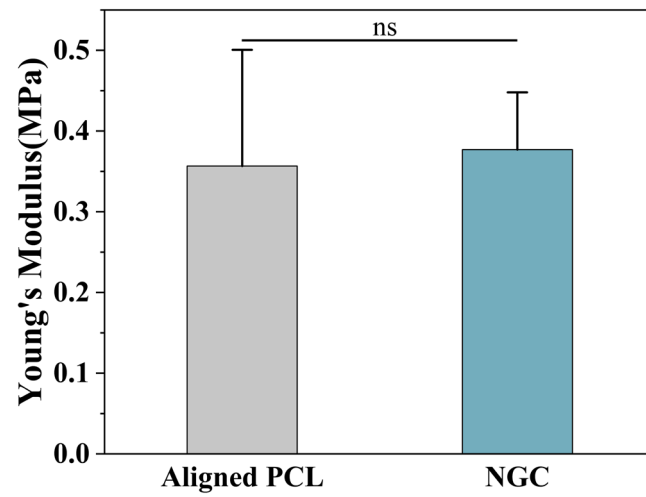


Fig. S4 Young's modulus of the inner layer and NGC

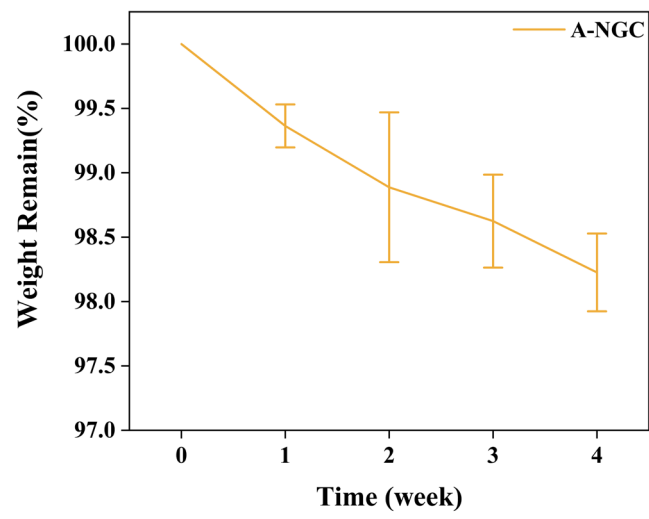


Fig. S5 Weight remain of the inner layer

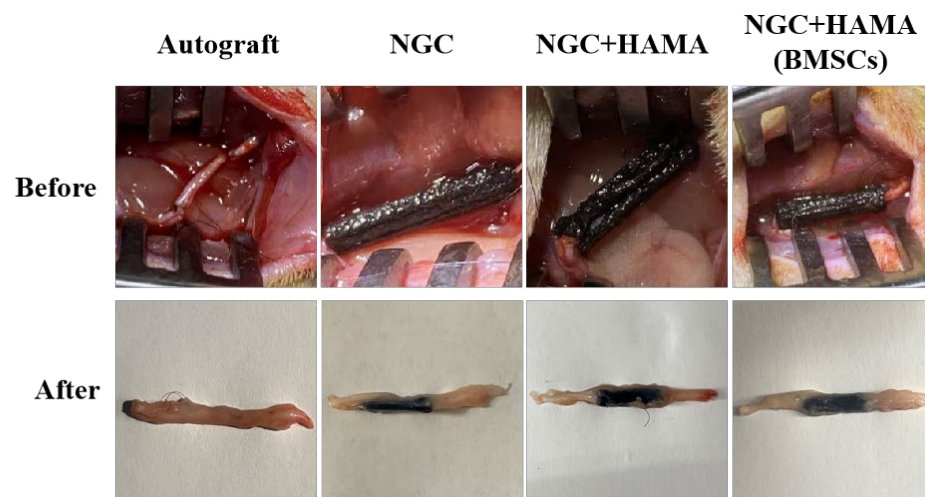


Fig. S6 Representative images of the nerve guidance conduit before implantation and after 12 weeks in vivo