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Supplemental information

Arched microfluidic channel for the promotion of axonal growth performance

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Supporting Information

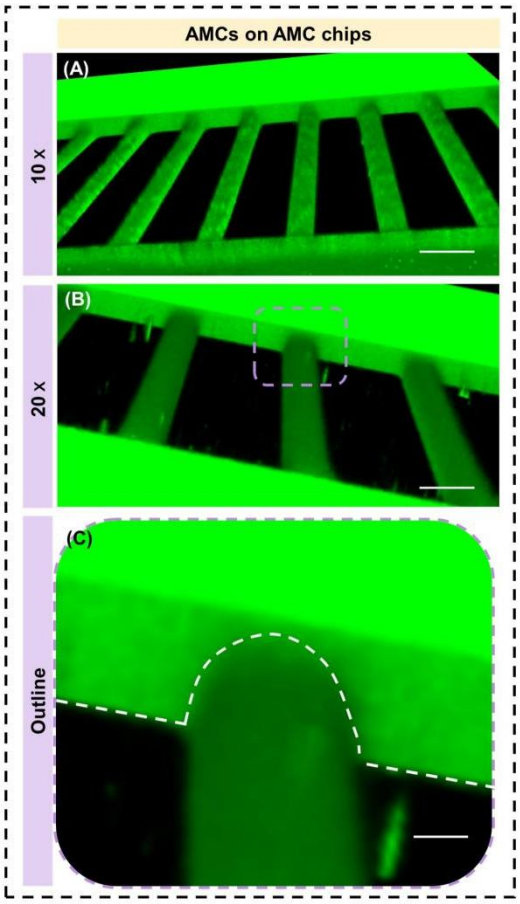

Fig. S1. 3D fluorescence images of the AMC chips observed by confocal microscopy, Related to Figure 3. (A) 3D fluorescence images of the AMCs on the chip under a 10× objective of a confocal microscope. (B) 3D fluorescence images of the AMCs on the chip under a 20× objective of a confocal microscope. (C) Internal contour of the AMC. Scale bar: 130 μm.

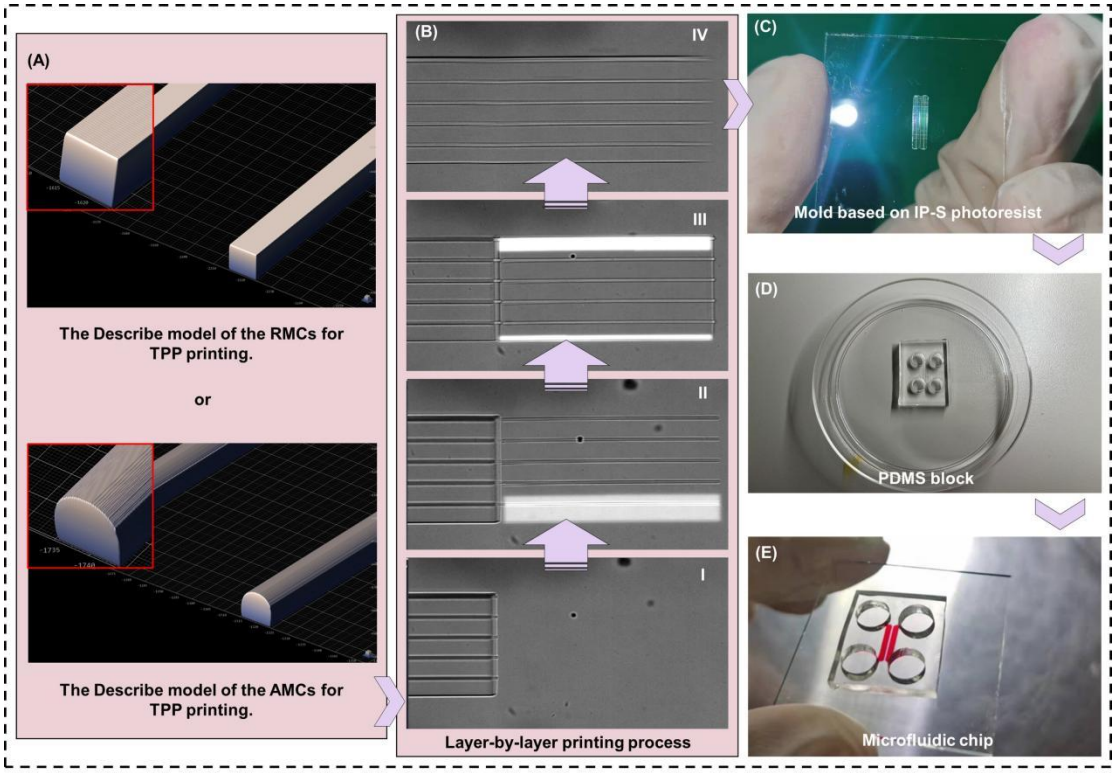

Fig. S2. Fabrication of the microfluidic chip with AMCs, Related to Figure 1. (A) Model of the AMC and RMC for TPP printing. (B) Layer-by-layer printing process of the AMCs. (C) Mold based on IP-S photoresist for fabricating the PDMS mold of the microfluidic chip. (D) PDMS block of the target microfluidic chip. (E) Fabricated PDMS microfluidic chip with AMCs.

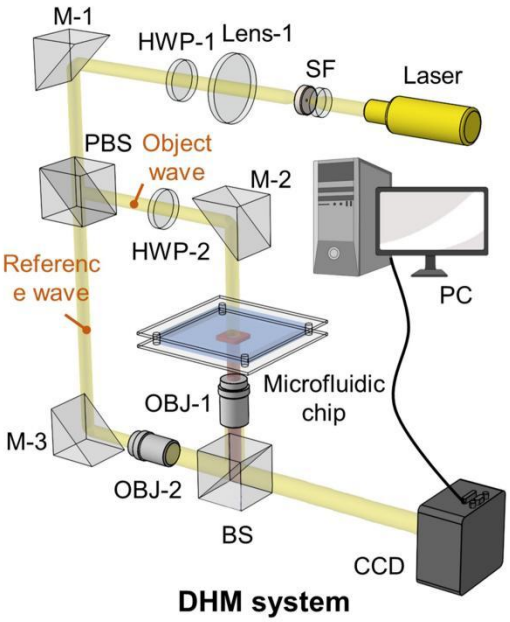

Fig. S3. Schematic diagram of the DHM system setup, Related to Figure 3. (CCD: Charge-coupled device. PC: Personal computer. M: Mirror. OBJ: Objective. HWP: Half-wave plate. BS: Beam splitter. PBS: Polarizing beam splitter. SF: Spatial filter.)

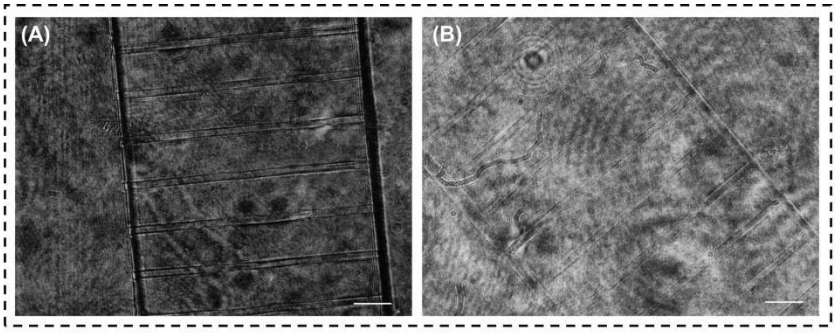

Fig. S4. Holographic phase of the RMCs and the AMCs based on the hologram captured by CCD, Related to Figure 3. (A) Holographic phase of the RMCs. (B) Holographic phase of the AMCs. Scale bar: 50 μm.

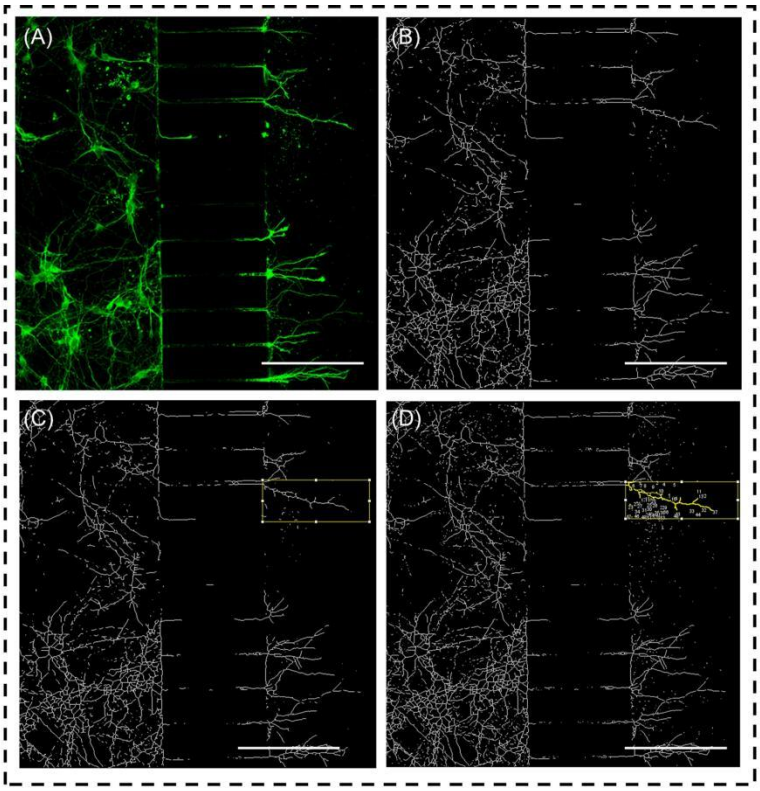

Fig. S5. Skeletonization analysis of axons within AMC chips on day D_0+1, Related to Figure 5. (A) Original Image of axons within AMC chips. (B) The binarized image of axons within AMC chips. (C) The target region of tagged skeleton. (D) The skeletonized images of axons after tagged. Scale bar: 180 μm.