



Supplementary Figure S5. Melanoma-secreted A β is Required for Growth and Survival in the Brain Parenchyma. **A-B**, Images of brain slice immunofluorescence showing live (white arrow) and dead (yellow arrows) 12-273 BM cells. Fluorescent markers: yellow = anti-Cleaved-Caspase 3 (dead cells), green = GFP (melanoma cells), red = tomato lectin (blood vessels), blue = DAPI (nuclei). **C**, Two-dimensional quantification of melanoma-associated astrocyte perimeter. sh-Scr vs. sh-APP (* $p < 0.05$). **D-F**, Example images demonstrating two-dimensional quantification method. Fluorescent markers: orange = GFAP (astrocytes), green = GFP (melanoma cells), blue = DAPI (nuclei). **D**, Image of melanoma cell in the brain parenchyma. **E**, conversion of image to binary image with thresholding of GFAP expression. **F**, Identification of discrete melanoma-associated (green outline) and control (white outline) astrocytes by two-dimensional ROI generation from the binary image.