Laminar stream of detergents for subcellular neurite damage in a microfluidic device: A simple tool for the study of neuroregeneration

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Supplementary Information

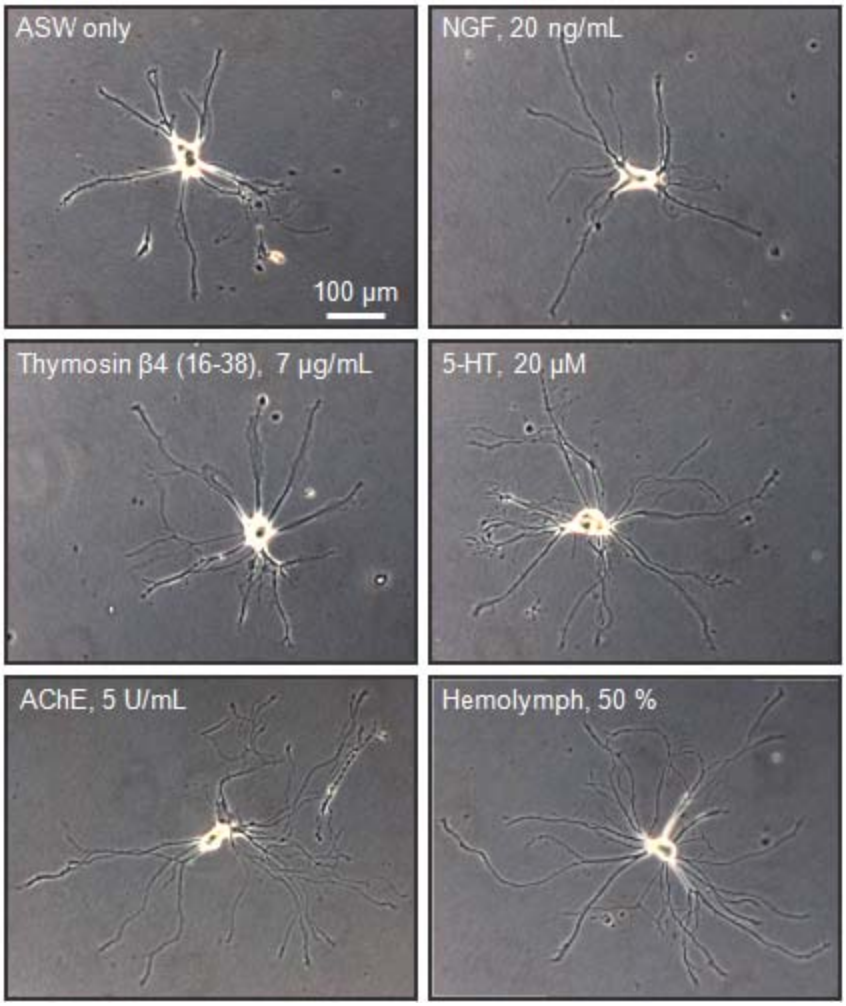

Figure S1. Bag cell neurons of *Aplysia californica* cultured in a dish containing ASW supplemented with different factors. Representative images are shown at 2 d *in vitro*. Based on qualitative comparisons between samples, we have chosen AChE and *Aplysia* hemolymph as potential neurotrophic factors in our regeneration studies. We tested nerve growth factor (NGF β human, recombinant, expressed in HEK 293 cells) from Sigma Aldrich, serotonin hydrochloride (5-HT) from Alfa Aesar (Ward Hill, MA) and *Aplysia* thymosin β4 (16-38, Lys-Leu-Lys-Lys-Thr-Glu-Thr-Gln-Glu-Lys-Asn-Pro-Leu-Pro-Ser-Lys-Glu-Thr-Ile-Glu-Gln-Glu-Lys), which was synthesized by American Peptide Company (Sunnyvale, CA).

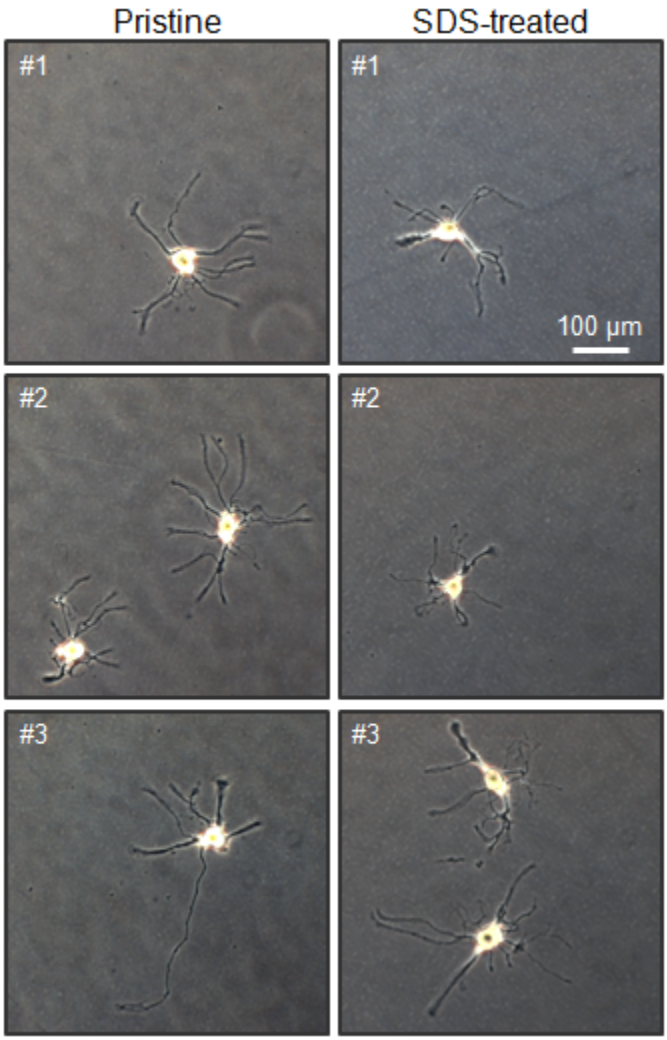

Figure S2. *Aplysia* bag cell neurons cultured in ASW on a pristine culture dish (left) and on a dish treated with SDS (right). For the latter, a culture dish was filled with the same solution used for microfluidic transection (i.e. 50/50 mixture of 20 mM SDS and 10 mM Allura dissolved in ASW), and kept for 10 min followed by ASW rinse. The treated dish was refilled with ASW, and cells were plated. Images are shown for three representative cells (#1, #2, and #3) for each case. There is no noticeable negative effect of SDS treatment on the cell viability and outgrowth.