

Supplementary Figure 1. C2 depolarization did not mimic the increase in C2 spike-evoked Ca^{2+} signals. A) Subthreshold depolarization of C2 membrane potential via somatic current injection (~ 0.7 nA, for 5s) ending 2s prior to eliciting C2 spikes (5 spikes at 10 Hz) did not enhance spike-evoked Ca^{2+} signaling in distal neurites (black traces – control C2 stimulation, green traces – C2 stimulation following the depolarization). Corresponding C2 voltage traces are shown below the C2 Ca^{2+} signals; C2's spikes were truncated to highlight the depolarization of C2 caused by the current injection (current shown below the C2 voltage trace). B) Depolarizing C2 prior to the C2 stimulation did not significantly alter the amplitude of spike-evoked Ca^{2+} signals in the distal neurites of C2 ($p > 0.05$; paired t-test; $n = 10$).

Supplementary Figure 2. DSI depolarizes C2's distal, not proximal, neurites. To determine where the depolarizing actions of DSI occur, we removed the contralateral pedal ganglion. A) With the pedal ganglion intact, a DSI spike train (10 Hz, 4 s) depolarized C2 (as recorded from C2's soma). B) After removing the contralateral pedal ganglion, the DSI spike train no longer depolarized C2, indicating that DSI depolarizes C2 in the contralateral pedal ganglion. We observed this in 3 preparations.