



**Examples of student-generated quantitative analyses, excerpted from final student presentations.**

- (A) Impact of acute abdominal injection of 500  $\mu$ M MK-801 or vehicle (1% DMSO) on acoustically-evoked spike number in the cricket terminal abdominal ganglion. No significant difference between treatment groups,  $p > 0.05$ , 1-way ANOVA.
- (B) Impact of acute abdominal injection of 250 $\mu$ M Glutamate or vehicle (water) on spike frequency (Hz) in the cricket cercal ganglion. ns:  $p > 0.05$ , paired t-test.
- (C) Change in average wind-evoked spike height (AU) in the cricket cercal ganglion following acute abdominal injection of 0.1mM Fluoxetine or vehicle (1% DMSO). No significant difference between treatment groups  $p > 0.05$ , unpaired t-test.
- (D) Impact of acute abdominal injection of 500  $\mu$ M MK-801 or vehicle (1% DMSO) on calculated Root-Mean-Squared (RMS) of spiking in the cricket cercal ganglion, averaged from 2 stimuli. ns:  $p > 0.05$ , paired t-test.
- (E) Impact of 20-minute 500  $\mu$ M MK-801 or vehicle (1% DMSO) treatment on acoustically-evoked peak calcium fluctuation ( $\Delta F/F_0$ ) in the soma and lateral dendrite of Mauthner neurons expressing GCaMP5G in 6 dpf zebrafish larvae. No significant difference detected between treatment groups in the soma or in the lateral dendrites  $p > 0.05$ , 1-way ANOVAs.
- (F) Impact of 20-minute 100 $\mu$ M Fluoxetine or vehicle (1% DMSO) treatment on acoustically-evoked peak calcium fluctuation ( $\Delta F/F_0$ ) in the soma or lateral dendrite of the Mauthner neuron expressing GCaMP5G in 6 dpf zebrafish larvae. No significant difference between treatment groups,  $p > 0.05$ , unpaired t-test of pre-post differences.