Crosby Lab Code

by

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Scripts for analyzing evoked currents and action potentials in R

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Levene's test

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Paired Pulse Ratio analysis

Shapiro

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AP Frequency t-test

Shapiro test

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Summary plot

Individual plots

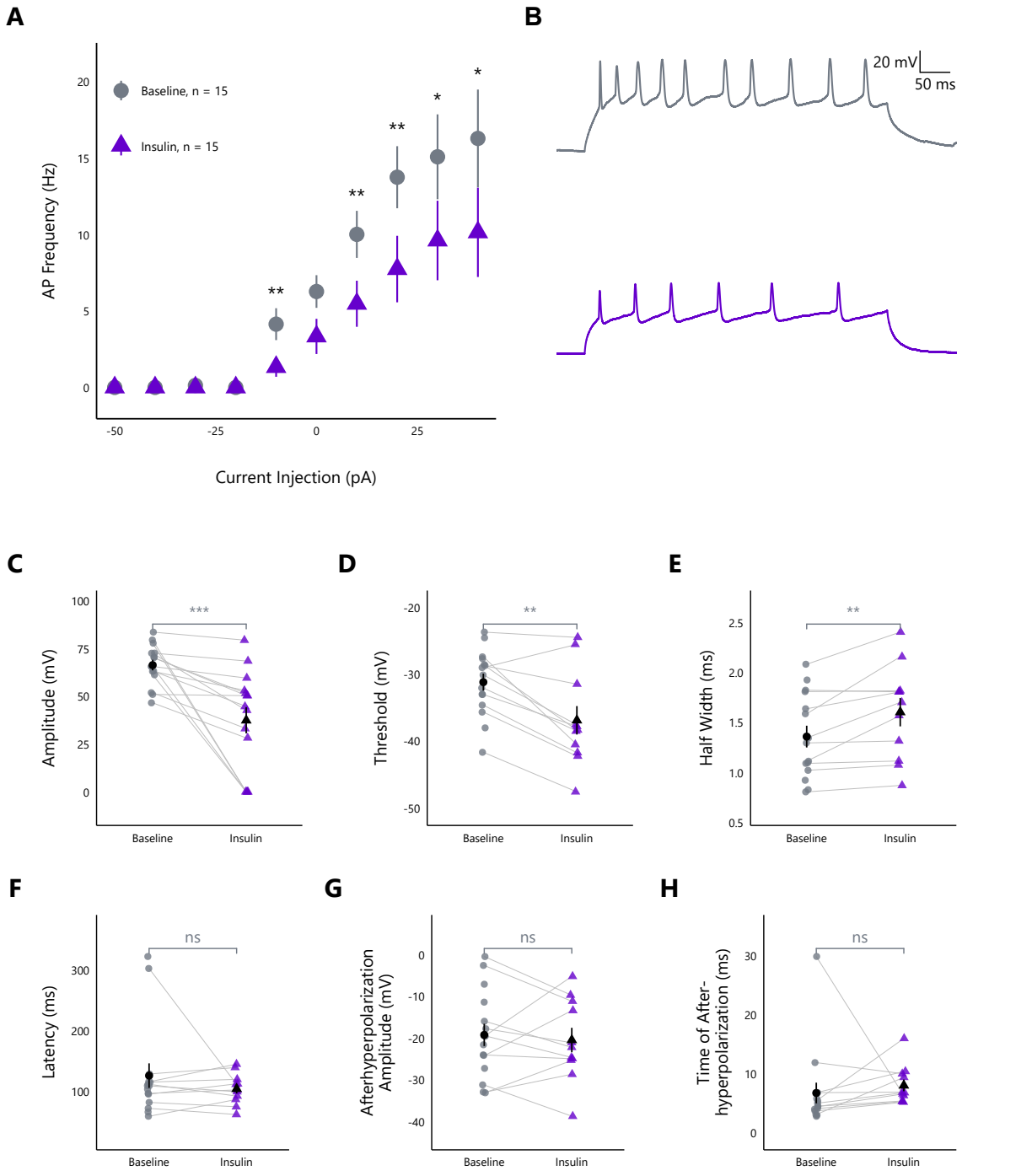

Figure 1: Insulin decreases the excitability of DMH neurons. Data were recorded before and then after 25 minutes of insulin exposure. *A)* Insulin significantly decreases action potential frequency (mean ± SE; *n* is the number of cells). *B)* Representative traces from a current injection of 40 pA (top: baseline, bottom: insulin). *C)* Insulin significantly decreases action potential amplitudes *C)* and thresholds *D)*, while significantly increasing half-widths *E)*. Insulin does not significantly affect latency to fire *F)*, after-hyperpolarization amplitude *G)* or after-hyperpolarization time *H)*. Overlay on Figures C-H: mean ± SE. $n = 15$ for baseline and $n = 11$ for insulin because 4 cells did not fire any action potentials after insulin exposure. Wilcoxon signed-rank test, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.