

## Supplementary Materials

**Title:** Thalamostriatal Degeneration Contributes to Cholinergic Interneuron Loss and Dystonia in a Huntington's Mouse Model

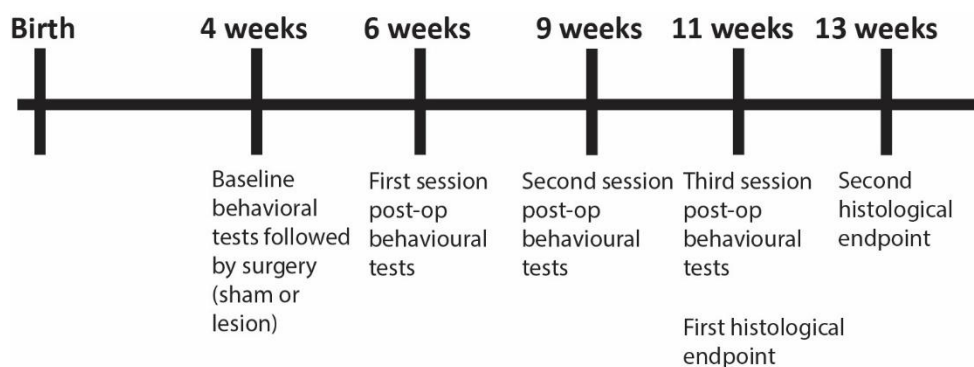
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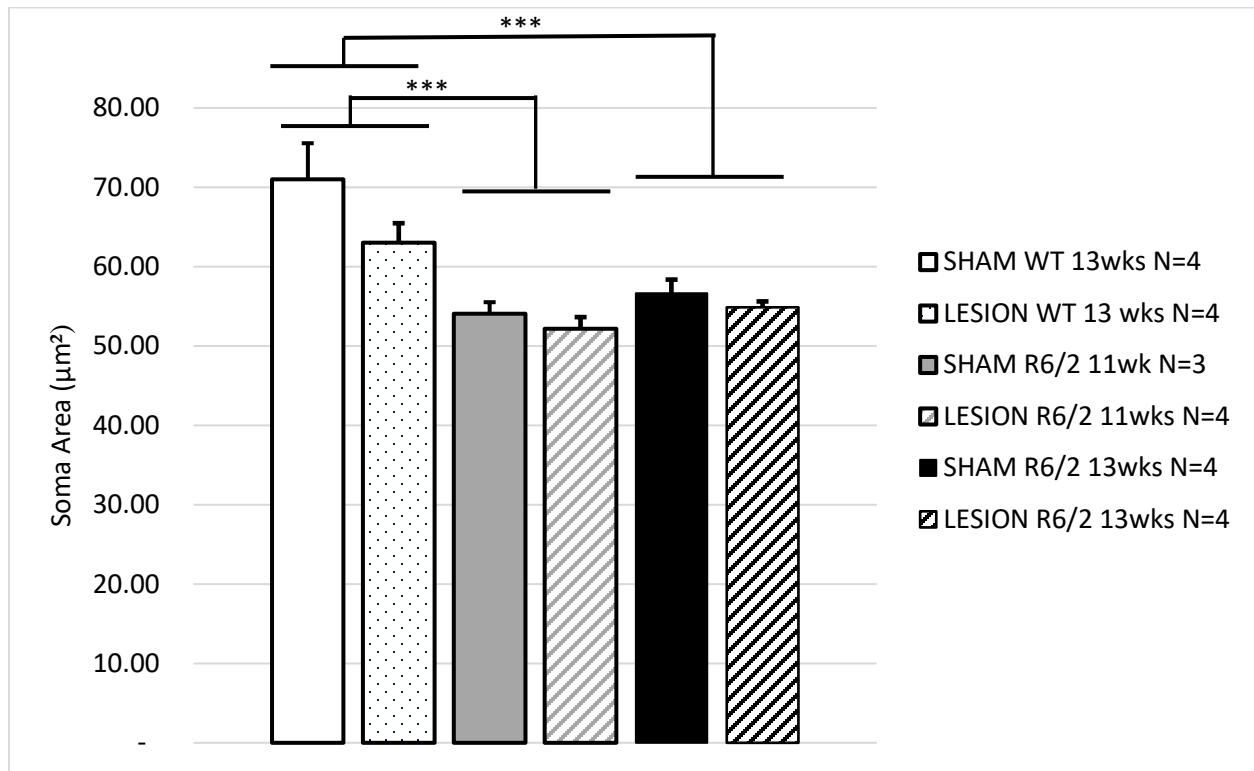
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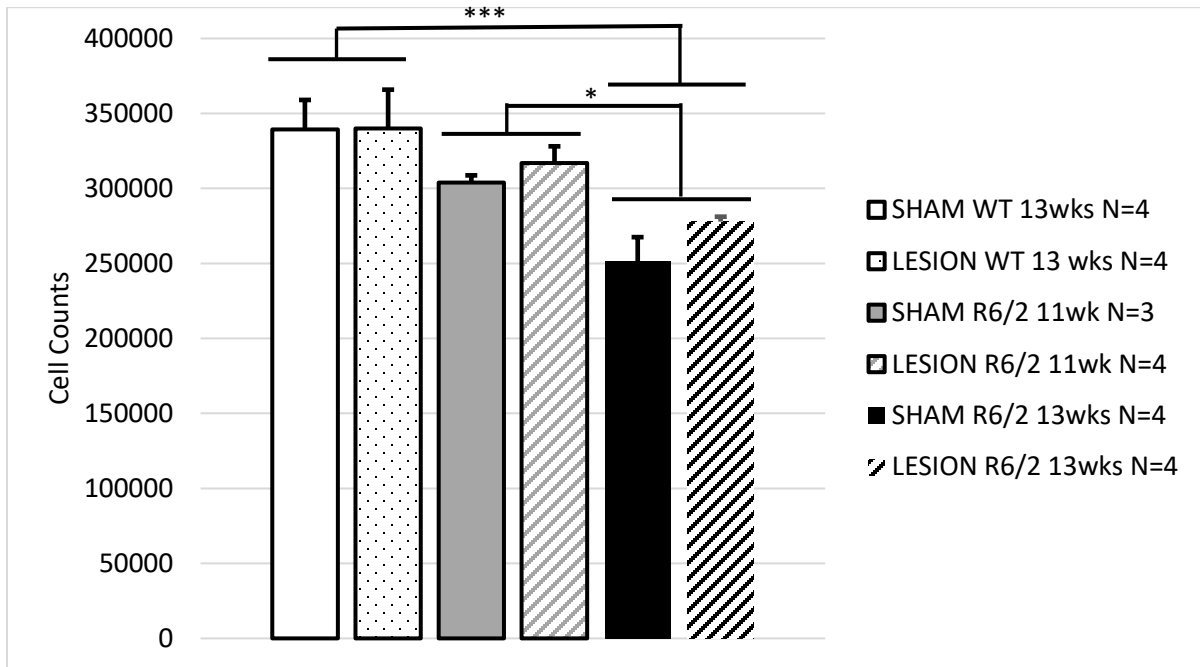
## Experimental Timeline



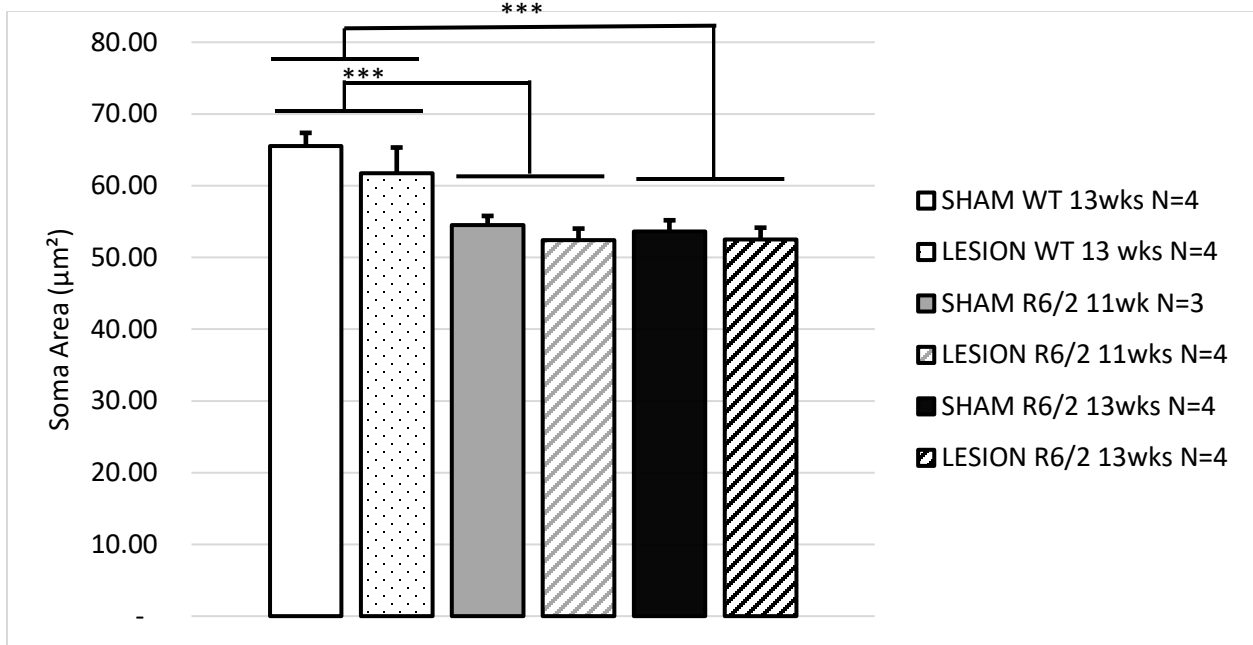
## Supplementary Figures



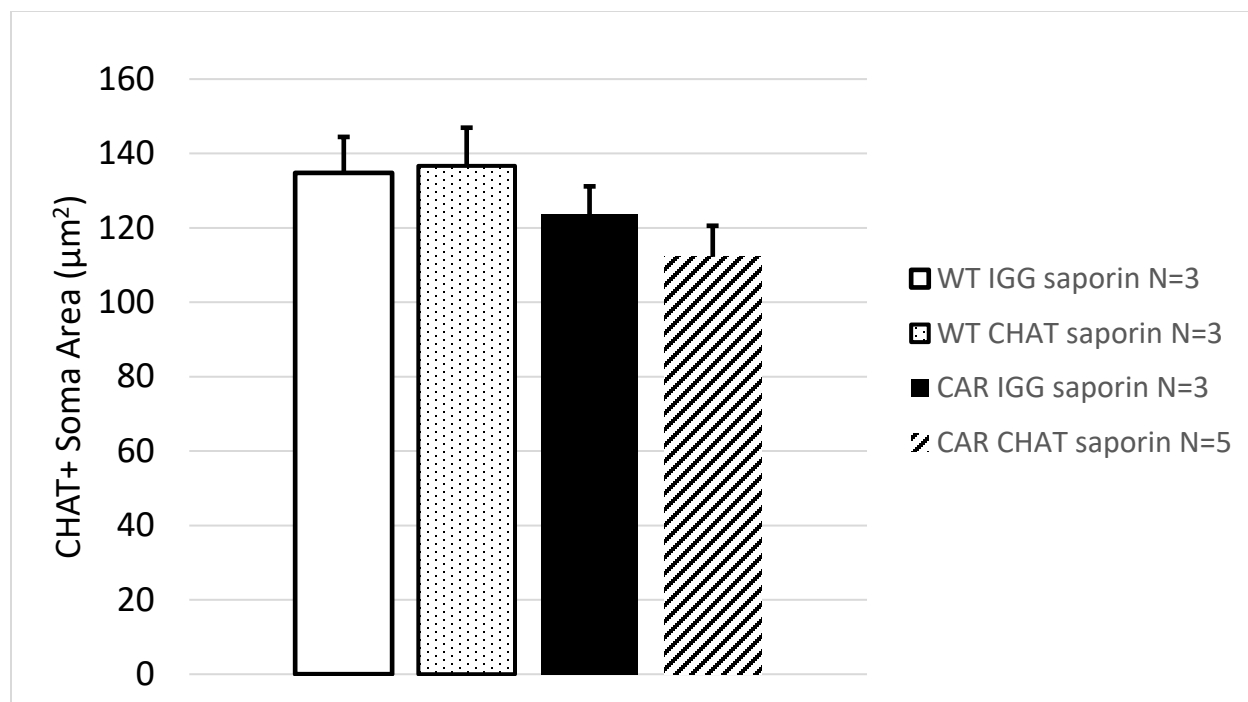
**Supplementary Fig. 1: Matrix Neuron Soma Area in WT and R6/2 mice.** Demonstrates a reduction in the R6/2 soma area of matrix neurons compared to WT at both 11 and 13wks with no significant effect of PF lesion. A 2-way between subject ANOVA was applied to the data and was followed by a Tukey HSD *post hoc* test where appropriate. \*\*\* $p < 0.001$ .



**Supplementary Fig. 2: Striosome cell count in WT and R6/2 mice.** Demonstrates a trend to reduction in number of striosome neurons is seen in R6/2 compared WT mice that was not significant (~8% decrease,  $p=0.23$ ) at 11wks but was significant ( $p<0.05$ ) at 13wks. There was no significant effect of thalamic lesion on striosome neuron number. A 2-way between subject ANOVA was applied, followed by a Tukey HSD *post hoc* test. \* $p<0.05$ ; \*\*\* $p<0.001$ .



**Supplementary Fig. 3: Striosome Neuron Soma Area in WT and R6/2.** Demonstrates a reduction in soma area of striosome neurons in R6/2 animals at both 11 and 13 wks compared to WT. There is no significant effect of lesion on striosome neuron soma area. A 2-way between subject ANOVA was applied followed by a Tukey HSD *post hoc* test. \*\*\* $p < 0.001$ .



**Supplementary Fig. 4: CHAT+ Cell Soma Area in Saporin Treated Animals.** No significant difference between remaining CHAT+ cells in either WT or R6/2 animals treated with saporin toxins. A 2-way between subject ANOVA was applied to the data and was followed by a Tukey HSD *post hoc* test.