	Group	Firing rate (Hz)	Spike duration (ms)	% cells firing
Spontaneously active and quiescent MSNs	WT-veh (46 cells)	$0.0031 \pm 0.002$	$1.30 \pm 0.024$	7.3%
	TG5-veh (46 cells)	$0.058 \pm 0.052$	1.35 <u>+</u> 0.030	10.8%
	WT-PDE9Ai (51cells)	$0.012 \pm 0.006$	1.37 <u>+</u> 0.025	13.7%
	TG5-PDE9Ai (27 cells)	$0.057 \pm 0.045$	1.32 <u>+</u> 0.026	14.8%
Spontaneously active and quiescent FSIs	WT-veh (7 cells)	4.25 <u>+</u> 2.88	$0.89 \pm 0.064$	71.4%
	TG5-veh (6 cells)	7.74 <u>+</u> 7.74	0.86 <u>+</u> 0.033	20.0%

**Supplemental Table 2.** Comparison of spontaneous firing activity of striatal MSNs and FSIs across genotypes and drug treatments.

Data are presented as mean <u>+</u> SEM. Data were analyzed using Two-way ANOVA (MSNs) and t-test (FSIs). p>0.05 for all comparisons. Abbreviations: FSI, fast-spiking interneuron; MSN, medium-sized spiny neuron; PDE9Ai, phosphodiesterase 9A inhibitor (PF-04447943), TG5, BAC transgenic HD rats; veh, vehicle; WT, wild-type rats.