

# Supplementary Material

## **Long-lasting contribution of dopamine in the nucleus accumbens core, but not dorsal lateral striatum, to sign-tracking**

Kurt M. Fraser<sup>1</sup> & Patricia H. Janak<sup>1,2</sup>

<sup>1</sup> Department of Psychological and Brain Sciences, Krieger School of Arts and Sciences, Johns Hopkins University, Baltimore, MD 21218, USA

<sup>2</sup> The Solomon H. Snyder Department of Neuroscience, Johns Hopkins School of Medicine, Johns Hopkins University, Baltimore, MD 21205, USA

To better understand when acquisition of sign-tracking response in rats later identified as sign-trackers reached an asymptote we performed repeated measures one-way ANOVAs with subjects as a repeated factor to assess the effect of session on performance. In each case there was a significant effect of session indicating that across acquisition rats improved their sign-tracking performance (see Table S1 and Figure S1). Additionally, we used Tukey's post-hoc analyses to assess the point at which session to session performance stopped differing statistically. For group NAcC 7 day post hocs were non-significant in all three measures beginning with session 4 (i.e pairwise comparisons of session 4 with all increasing sessions were non-significant and so on). For group NAcC 14 day, post hocs were non-significant for all three measures beginning with session 6. For group DLS 7 Day, post hocs were non-significant for all three measures beginning with session 3. For group DLS 14 day, lever pressing post hocs were non-significant after session 7, whereas probability and latency were non-significant after session 2. These data suggest that the rate at which sign-tracking behavior peaks is somewhere between 4-7 sessions, which is 100-175 trials, and after this point the behavior is relatively stable from session to session. This finding is similar to what was reported by Clark et al (2013). This suggests that for the 7 Day groups behavior was just reaching peak performance, and for 14 Day groups they had achieved stable performance about 175-200 trials earlier.

Table S1. Statistical results of repeated measures one-way ANOVAs on acquisition data of sign-trackers included in the study.

<b>Group</b>	<b>Measure</b>	<b>F-Statistic (Effect of Session)</b>	<b>p-value</b>
NAcC 7 Day	Lever Press	F(1.529,9.175)=11.19	0.0049
	Lever Probability	F(2.168,13.01)=17.38	0.0002
	Lever Latency	F(1.714,10.28)=14.53	0.0013
NAcC 14 Day	Lever Press	F(2.865,28.65)=14.82	<0.0001
	Lever Probability	F(3.75,37.5)=23.39	<0.0001
	Lever Latency	F(3.507,35.07)=19.56	<0.0001
DLS 7 Day	Lever Press	F(2.664, 29.3)=9.665	0.0002
	Lever Probability	F(2.423,26.65)=12.43	<0.0001
	Lever Latency	F(2.25,24.74)=11.22	0.0002
DLS 14 Day	Lever Press	F(4.153,41.53)=13.37	<0.0001
	Lever Probability	F(2.621,26.21)=9.688	0.0003
	Lever Latency	F(3.407,34.07)=10.85	<0.0001

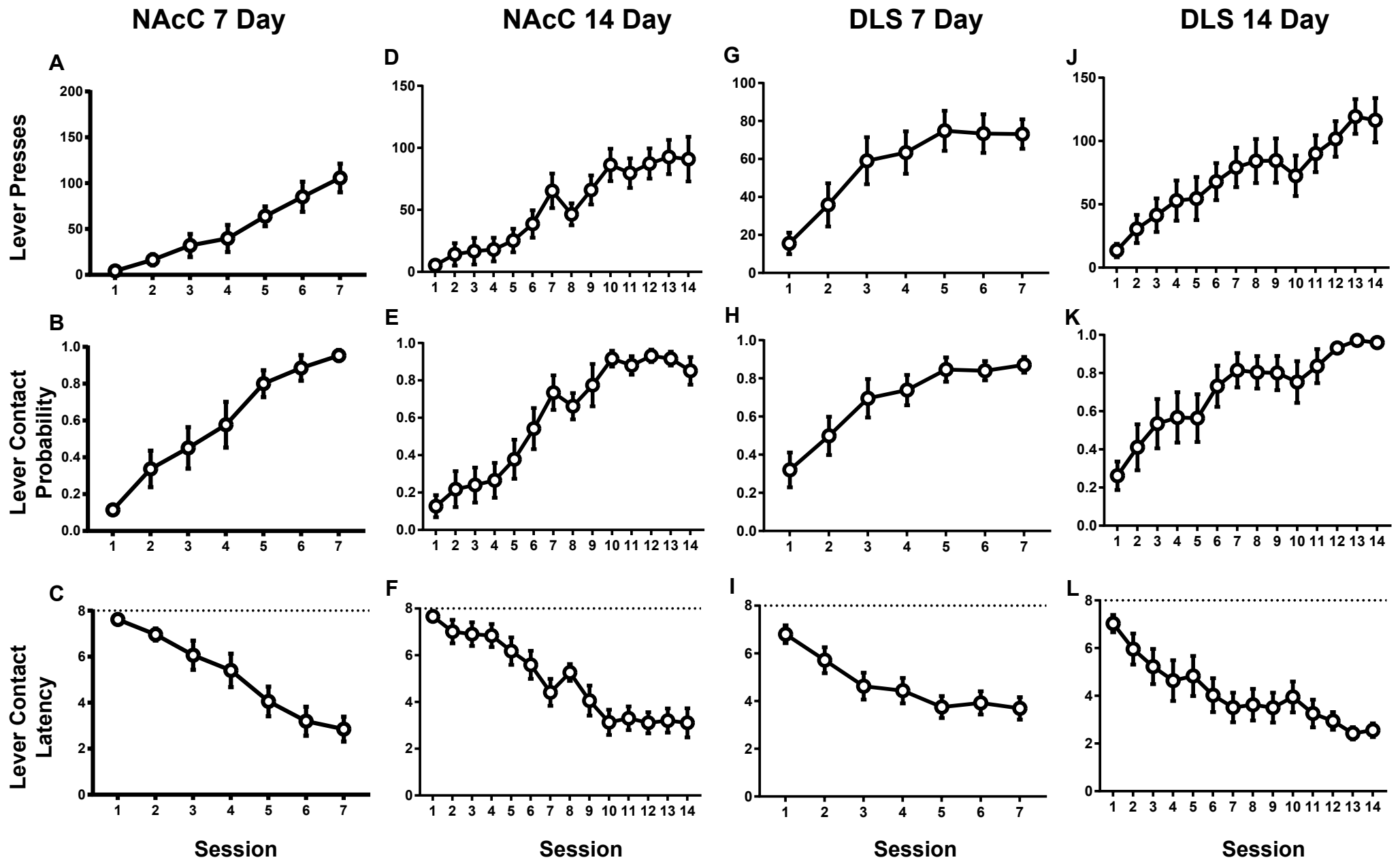


Figure S1. Acquisition data for rats later classified as sign-trackers and included in the study. Independent groups of rats received implantation of cannula prior to training and then were trained in daily 25-trial sessions for either 7 or 14 sessions. Data are presented as +/- standard error of the mean.