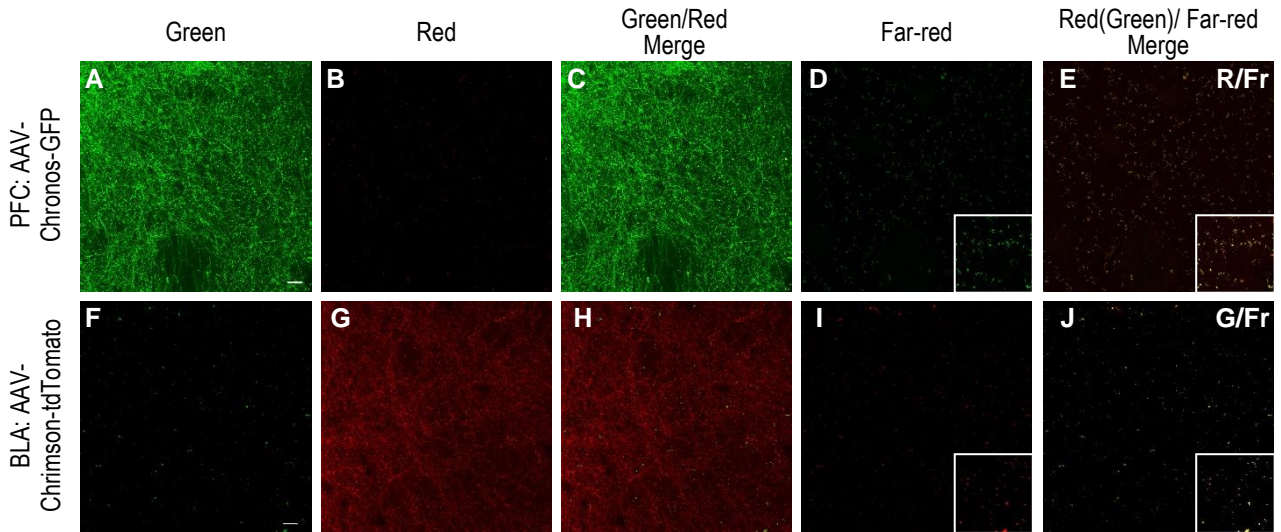
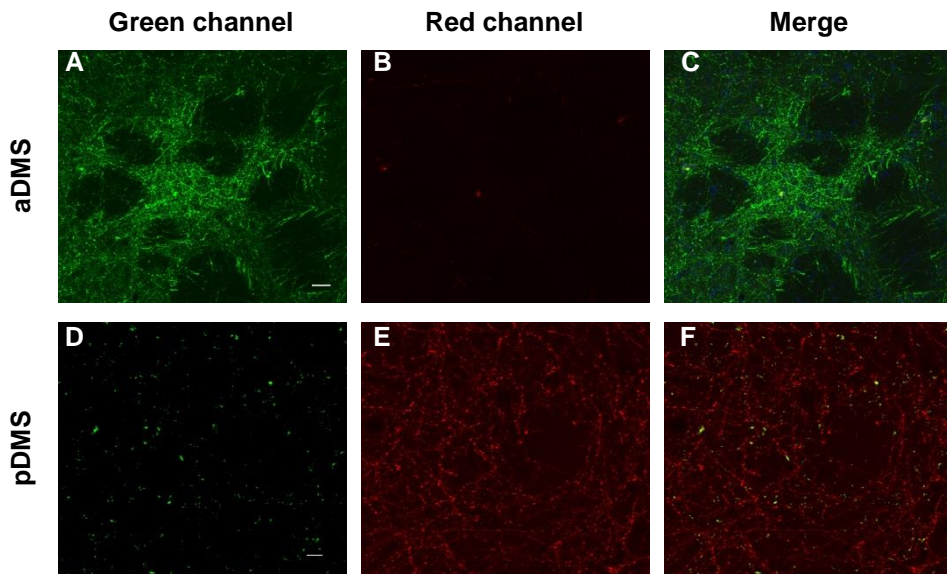


Supplemental Section – Ma et al. “Alcohol induces input-specific aberrant synaptic plasticity in the rat dorsomedial striatum”

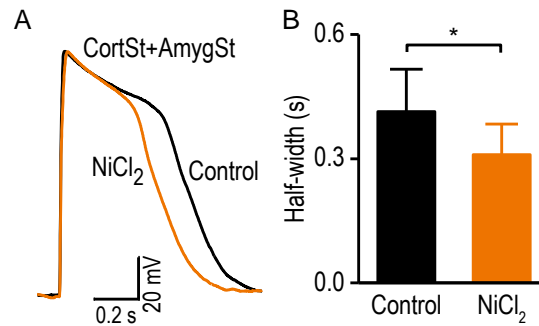


Supplementary Fig. 1. Selective confocal imaging of GFP-containing corticostriatal and tdTomato-expressing amygdalostriatal axonal fibers in the DMS. AAV-Chronos-GFP was infused into the mPFC of a rat (A-E) and AAV-Chrimson-tdTomato into the BLA of another rat (F-J). Animals were perfused 8 weeks post-infusion, and confocal images were acquired in the DMS. 473, 559, and 633 nm light were used to acquire images in the green, red, and far-red channels, respectively. The DMS at the same anterior-posterior plane as Figure 1C was imaged and same parameters were used. The laser power and HV values for 473 and 559-nm light were set the same as Figure 1C, and the values for 633 nm were set the same as 559 nm (D and E) and as 473 nm (I and J). The colors of the far-red images in panels D and I were set to green and red for comparison in panels E and J, respectively. Scale bar: 20 μ m (A and F).

PFC: AAV-Chronos-GFP; BLA: AAV-Chrimson-tdTomato



Supplementary Fig. 2. Representative images showing mainly corticostriatal fibers in an anterior DMS (aDMS) area (A-C) and predominately amygdalostriatal fibers in a posterior DMS (pDMS) region (D-F). AAV-Chronos-GFP and AAV-Chrimson-tdTomato were infused into the mPFC and BLA of the same rat, respectively. (A-C) Dual-channel confocal images showing predominant expression of GFP, but not of tdTomato in the aDMS. (D-F) The pDMS mainly contained expression of tdTomato, but not of GFP. Scale bar: 20 μ m (A and D).



Supplementary Fig. 3. Blockade of voltage-gated calcium channels caused a decrease in the duration of membrane depolarization induced by co-activation of the corticostriatal and amygdalostriatal inputs. The calcium channels were blocked by bath application of 50 μM NiCl_2 (Plotkin *et al.*, 2011). (A) Sample traces in the absence (Control) and presence of NiCl_2 . (B) Averaged data showing a significantly shorter half-width of the depolarization, as compared to the control. $*p < 0.05$, paired *t* test. $n = 4$ neurons from 2 rats.

Reference

Plotkin, J.L., Day, M. & Surmeier, D.J. (2011) Synaptically driven state transitions in distal dendrites of striatal spiny neurons. *Nat Neurosci*, **14**, 881-888.