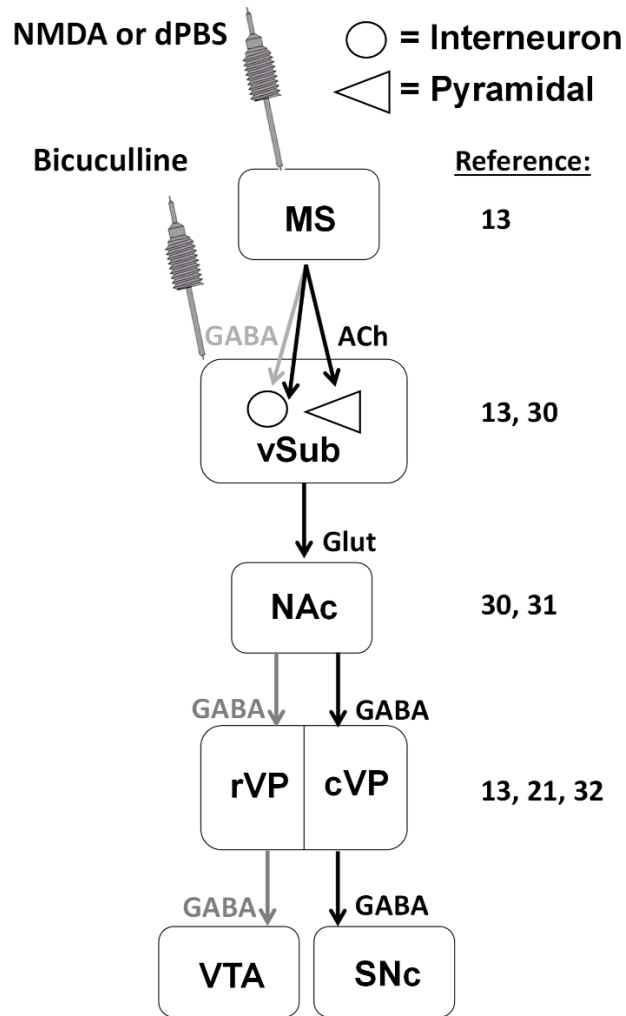


Supplementary Figure 1: MS activation does not increase stereotyped behavior in MAM versus Sal-treated rats. Amphetamine injection (2 mg/kg) following MS activation (NMDA, 0.75 μ g in 0.2 μ L or dPBS) results in a significant increase in stereotypy over time ($a = F_{8, 200} = 16.74, P < 0.0001$) that is greater in NMDA-treated versus dPBS-treated rats ($b = F_{3, 25} = 4.967, P = 0.0077$). However, this does not interact with MAM treatment ($F_{24, 200} = 0.6961, P = 0.85$), as MAM/NMDA rats do not differ from Sal/NMDA rats at any time point (all P 's > 0.05).



Supplementary Figure 2: Proposed multi-synaptic pathway from MS to midbrain and supporting references. The medial septum (MS) contacts the ventral subiculum (vSub)³⁸ through projections that are predominately cholinergic and GABAergic.¹⁵ GABAergic projections largely target GABAergic interneurons²⁵, whereas the cholinergic projections target both pyramidal neurons and interneurons⁴², leading to activation of the vSub.¹³ The vSub activates the nucleus accumbens (NAc)^{30,34}, which inhibits the ventral pallidum (VP).^{21,32} VP regulation of midbrain DA neuron activity is functionally split along the rostral/caudal axis (rVP, cVP), with the rVP selectively modulating population activity changes in the VTA and the cVP selectively modulating changes in the SNc.¹³ Sites of pharmacological manipulation and what was infused are indicated.