

Supplemental Information

Control Experiments

NaBut administered 10 hours post extinction

To address the temporal requirements of HDAC inhibition during extinction consolidation, a different set of mice was conditioned, divided into two groups, and subjected to extinction as in Experiment 2; however injections of NaBut (1.2 g/kg IP) or vehicle (water, 1.0 ml/kg IP) were administered 10 hours after a 3 minute exposure to the drug-paired compartment (see Figure 3A). All animals received a vehicle injection 10 hours after exposure to the drug-unpaired compartment. All animals received a 15 minute preference test (Test 2) in a drug free state 24 hours after two days of extinction.

NaBut administered without re-exposure to CPP apparatus

To investigate the requirement of context re-exposure paired with NaBut, a different set of mice was conditioned and divided into two groups based on Test 1 preference (see Figure 3B). The next day mice received either NaBut (1.2 g/kg IP) or vehicle (water, 1.0 ml/kg IP) following a 3 minute exposure to a distinct environment consisting of a clear plastic cage (19 cm x 34.5 cm), distinct from the home cage; 24 hours later, all mice received vehicle. All animals received a 15 minute preference test (Test 2) in a drug free state 24 hours after the last injection.

NaBut administered to a drug-unpaired group following exposure to CPP apparatus

To ensure NaBut did not produce an aversion to the CPP apparatus, we investigated the effects of NaBut on preference of a drug-unpaired group. All mice were

handled 3 days (days 1-3) for 1 minute each day prior to an initial preference test (day 4). These mice were given saline prior to confinement in each of the CPP apparatus compartments (30 minutes; days 5-6, 8-9). This group received cocaine prior to confinement in a distinct environment (30 minutes; days 7 & 10) to control for history cocaine treatment itself. These animals received a preference test (day 12; Test 1). The next day mice received either NaBut (1.2 g/kg IP) or vehicle (water, 1.0 ml/kg IP) immediately following a 3 minute exposure to one compartment and vehicle following exposure to the alternate compartment the next day. Preference was assessed in a drug free state 24 hours after the last injection (day 15; Test 2).