**Title:** The effects of systemic serotonin depletion on sexual preference of male Syrian hamsters (*Mesocricetus auratus*)

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**Introduction:** Depletion of serotonin increases copulatory behavior, and recent studies found that serotonin depletion caused a reversal of male-typical sexual preference in mice (Tsutsui et al., 1993); (Liu et al., 2011). With this information, we depleted serotonin with the drug $p$-Chlorophenylalanine ($p$CPA) in male Syrian hamsters, a model species to study sexual attraction, and tested their partner preference.

**Methods:** 24 adult male Syrian hamsters were gonadectomized, given testosterone implants and randomly assigned into 2 injection groups: 500mg/kg $p$CPA ($n=12$) or saline ($n=12$). Four days of injections were followed by three sexual preference tests: odor-cue preference, live stimuli animal preference and a copulatory test. All tests were recorded and scored for behavioral analysis. Following the copulatory test, animals were sacrificed via decapitation, brains were removed and analyzed for serotonin levels using high-performance liquid chromatography.

**Expected Results:** We predict that the male subject animals injected with $p$CPA will investigate the male odor or stimuli more than the female odor or stimuli. We expect that $p$CPA treated males will have a decreased latency and higher frequency of mounting the stimuli male in comparison to the control males.

**Conclusion/Discussion:** If given these expected results, then serotonin may mediate sexual preference of male Syrian hamsters. Future directions will target site-specific brain areas and test sexual preference.

**References:**