**The influence of dorsal hippocampal dopamine D1-type receptor inhibition on social learning, food intake, and social interactions in male and female mice**

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Dopamine is involved in addiction, feeding, and social learning. With systemic studies, our lab has previously found that dopamine D1-type receptors mediate social learning in the social transmission of food preferences paradigm (Choleris et al., 2011), however, the brain region(s) underlying this effect are unknown. The ventral tegmental area has dopaminergic projections to the hippocampus, a structure well known for its role in learning and memory processing, as well as social learning. We have microinfused the dopamine D1-type antagonist SCH23390 (at 1, 2, 4 and 6 μg/μL) into the Cornu Ammonis 1 (CA1) region of the dorsal hippocampus of adult male and female CD1 mice 15 minutes prior to a 30-minute social interaction where mice had the opportunity to acquire a food preference from a same sex conspecific. Consistent with our previous work, we found that the highest dose of SCH23390 blocked social learning, however, feeding behavior remained unaffected in both males and females. Video analysis during the social interaction also showed that the learning impairment was not due to reduced exposure to the socially acquired food odor, as oronasal investigation was not influenced by SCH23390. An olfactory discrimination control task using the effective of SCH23390 also showed that both male and female mice could distinguish between the two foods used in the social learning test. Thus, hippocampal dopamine D1-type receptors may be mediating social learning specifically. This study may help our understanding of the role that hippocampal dopamine plays in the ‘social brain’.