

Scopolamine – induced AD / ADHD symptoms

Scopolamine is a tropane alkaloid drug with competitive antagonism at muscarinic acetylcholine receptors (mAChR). Systemic application of scopolamine disrupts the performance on several reference memory tasks, such as Morris Water Maze, Fear Conditioning and Passive Avoidance. Therefore, this model can be used to mimic cognitive dysfunction observed in dementia and Alzheimer's disease as well as in Attention Deficit Hyperactivity Disorder (ADHD) and is a useful initial screening method to identify therapeutic candidates. Several different compounds can be used as positive control, including methylphenidate the widely described drug to treat ADHD.

Latency to enter dark compartment

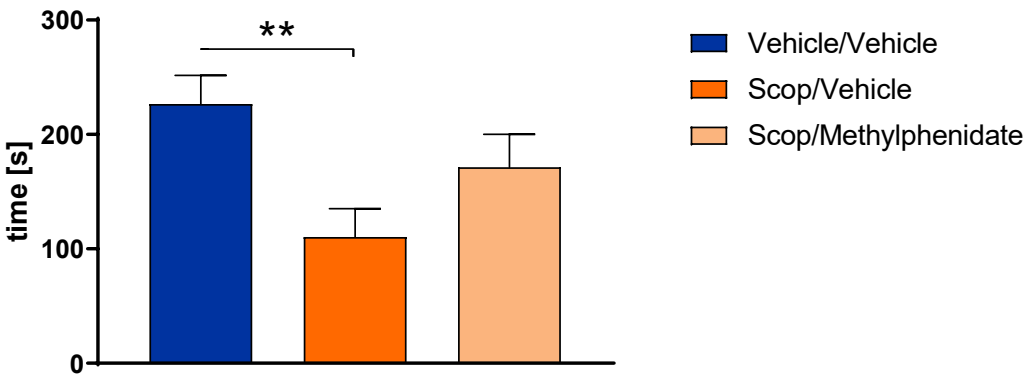


Figure 1: Effect of 1.0 mg/kg Scopolamine (Scop) on Passive Avoidance response of Wistar rats. Latency to enter the dark compartment. Effect of Scopolamine can be reduced by 1.0 mg/kg methylphenidate treatment. Mean \pm SEM; Kruskal-Wallis test with Dunn's multiple comparison test. n = 12 per group; **p<0.01.