

Methamphetamine use disorder (MUD) and other stimulant use remains high in the Western area of the United States, with New Mexico having one of the highest stimulant use percentages in adolescents, at 11.4%. Additionally, adolescence is a time of enhanced sensitivity to drug reward and there are currently no FDA approved treatments for MUD. Therefore, there is a critical need to develop effective interventions for adolescents using methamphetamine. The present study utilized a conditioned place preference paradigm (CPP) for determining if agonizing the serotonin-2C (5-HT<sub>2c</sub>) receptor attenuates expression of methamphetamine reward in adolescent Sprague-Dawley rats (PND 30). Rats were randomly assigned into four separate groups: 2c agonist-low/Meth, 2c-agonist high/Meth, Vehicle/Meth, and Vehicle/Saline. During conditioning rats were given methamphetamine (1 mg/kg, i.p.) for 2 conditioning sessions/day for 4 consecutive days following baseline preference testing. Rats received injections (s.c. ;0.3, 1 mg/kg) of the 5-HT<sub>2c</sub> agonist, CP809101, or a saline vehicle 30 minutes before final expression testing. Similar to previous studies examining cocaine, rats that received the high dose and low dose of CP809101 demonstrated reduced expression of methamphetamine-induced CPP. These findings suggest that agonizing the 5-HT<sub>2c</sub> receptor may be an effective pharmacotherapy intervention for those diagnosed with MUD.