Bupropion is an antidepressant that is also commonly used as a smoking cessation aid. This compound has additional therapeutic potential, as it promotes modest weight loss, shows efficacy as an ADHD treatment, and may also be an effective treatment for neuropathic pain. Bupropion is a DA and NE reuptake inhibitor, decreasing the firing rate of NE neurons due to activation of their inhibitory somatodendritic α2-adrenoreceptors by circulating NE; bupropion’s effects on NE reuptake are somewhat stronger than its effects on DA reuptake. Additionally, bupropion is a noncompetitive antagonist at α3β2, α3β4, α4β2 nicotinic acetylcholine receptors (nAChRs), decreasing the probability of channel opening in closed nAChRs and accelerating desensitization in open nAChRs.

References


