



## Acupuncture attenuated increase in ethanol-induced DA release in the nucleus accumbens through GABAB receptor

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Clinical trials are currently underway to determine the effectiveness of acupuncture in the treatment of drug abuse. However, there are still many unanswered questions about the basic mechanisms of acupuncture. Studies have shown that the GABAB receptor system may play a significant modulatory role in the mesolimbic system in drug abuse, including ethanol. The present *in vivo* microdialysis study was designed to investigate the effect of acupuncture on acute ethanol-induced dopamine release in the nucleus accumbens and the potential role of the GABAB receptor system in acupuncture. Male Sprague-Dawley rats were pretreated with the highly selective GABAB antagonist SCH 50911 (3 mg/kg, *i.p.*) and 1 hour later, given acupuncture at bilateral Shenmen (HT7) points for 1 min immediately after an intraperitoneal injection of ethanol (1 g/kg). Results showed that acupuncture at the specific acupoint HT7, but not at control points (PC6 or tail) significantly decreased dopamine release in the nucleus accumbens. The inhibitory effect of acupuncture on DA release was completely blocked by the GABAB receptor antagonist SCH 50911. These results demonstrate that stimulation of specific acupoints can inhibit DA release in the nucleus accumbens and implicate the GABAB receptor system in the mechanism underlying acupuncture inhibition of DA release in the nucleus accumbens.