Effect of Benzodiazepines within the PBN on Taste Guided Licking Behavior

Baker Bragg, Alexandra Brantly, Sarah Evans & Reed Mulbry

Wofford College

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Abstract

Research shows that benzodiazepines, specifically chlordiazepoxide (CDP), increases palatability through a GABA_A agonistic effect. The parabrachial nucleus (PBN) in the hindbrain may represent a site of action. The purpose of this study was to examine the effects of directly administered CDP into the PBN on the palatability of aversive tastants. Bilateral cannulae were inserted into the PBN of naïve male Sprague-Dawley rats. Subjects received microinjections of CDP or artificial cerebrospinal fluid (aCSF) and were exposed to brief access trials of varying concentrations of sodium chloride, quinine, and citric acid. Results showed that rats injected with CDP displayed more licks at intermediate concentrations. Our results suggest the endogenous presence of GABA receptors in the PBN that may be able to modify the hedonic nature of tastants.