Place conditioning with ethanol in rats bred for high (UChB) and low (UChA) voluntary alcohol drinking

Quintanilla, María Elena

Tampier, Lutske

The main goal of this study was to investigate the ability of an ethanol dose (1. g/kg) administered intraperitoneally to induce conditioned place preference (CPP) and/or conditioned place aversion (CPA) in two lines of rats selectively bred for their high (UChB) or low (UChA) voluntary ethanol intake. It was found that five pairings with ethanol induced CPA in ethanol-naïve rats of both lines, but the magnitude of avoidance was lower in the UChB relative to the UChA rats, indicating that ethanol was less aversive to naïve rats bred for high alcohol drinking. After 2 months of high voluntary ethanol drinking (?6-7. g/kg/day), in free choice between 10% ethanol and water, ethanol produced CPP in UChB rats, reflecting that ethanol had become rewarding to these rats. By contrast, the low voluntary ethanol intake (<1. g/kg/day) displayed by UChA rats preexposed for 2 months in free choice did not change ethanol-induced CPA. However, preexposure of UChA rats to forced ethanol drinking (?5.7