

# Biology and deviance

Sociology



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Alcoholism and Genetic Link Alcoholism is a behavior with both environmental and genetic association. Many researchers have demonstrated a genetic link with alcoholism but still no one is able to identify the exact gene responsible for development of this behavior. This paper summarizes one research by Subhash Pandey and other colleagues regarding association of one anxiety prone gene and alcoholism.

The main focus of this experimental study was CREB gene. This gene codes for Cyclic AMP Responsive Element Binding (CREB) protein. It was hypothesized that CREB protein is associated with alcohol tolerance, dependence and withdrawal symptoms. It does so by interacting with a specific brain structure called central amygdala (Pandey et al. 176-184). The study aimed to discover if any deficiency of CREB gene can lead to anxiety and alcohol drinking behavior.

For this study special rats were bred lacking in CREB gene and their behavior were noted in series of experiments. To observe anxiety they were introduced to maze test. Different experiment setups introduced these rats to different conditions. Both alcohol and water were given to them and their preference was noted. It was observed that rats deficient in CREB protein consumed 50% more alcohol when compared to the normal rats. Moreover, they showed more signs of anxiety than the control group. Interestingly, anxiety was reduced on alcohol consumption in both control and CREB deficient rats but the effect was less pronounced in normal rats (Pandey et al. 176-184).

Pandey, in this study gave the first concrete evidence that CREB gene is associated with alcohol consumption behavior.

Reference:

<https://assignbuster.com/biology-and-deviance/>

Pandey, SC, EH Chartoff, WA J. Carlezon, J Zou, H Zhang, AS Kriebich, JA Blendy, and FT Crews. " Creb Gene Transcription Factors: Role in Molecular Mechanisms of Alcohol and Drug Addiction." *Alcoholism, Clinical and Experimental Research*. 29. 2 (2005): 176-84. Print