

## IS COGNITIVE FUNCTION IMPAIRED IN A RODENT MODEL OF ALCOHOLISM?

**Brianna M. Todd** (Christopher C. Lapish), Department of Psychology,  
Purdue School of Science, Indianapolis University–Purdue University  
Indianapolis, Indianapolis, Indiana 46202

Alcohol abuse is a major problem in society resulting in issues of health, family, and economics. The relationship between an individual's genetic makeup and their environment is becoming a primary focus of preclinical and clinical research that seeks to understand the etiology of alcoholism. Excessive drinking may be the result of the inability of advanced forms of cognition to properly govern behavior, and the current proposal explored this possibility. This study used Wistar and alcohol preferring rats (P-rats) to investigate the relationship between the phenotypic vulnerability for alcoholism and its relationship to cognitive functions. Rats were given four weeks of intermittent alcohol access and completed a cognitively demanding task known as operant set-shifting. The effects of prior alcohol exposure in vulnerable versus non-vulnerable phenotypes was examined. Thus far no differences between lines have been observed in the ability to learn a new task that gauges function of the prefrontal cortex. These data are inconclusive and require further analysis, but may indicate that the cognitive task is not demanding enough to show differences in prefrontal cortex functioning. Results from the drinking study confirmed that alcohol drinking significantly increased over the four weeks of testing for P-rats, but not Wistars. P-rats also significantly increased ethanol consumption measured during the first 30 minutes of access throughout the drinking protocol. Results from this study show how future tests could improve our current understanding of the relationship between alcohol abuse and cognition and can help guide future research to better understand this disease.

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