POSTER ABSTRACT

The Effects of Fetal Alcohol Exposure on Rats: The Hypothalamic-Pituitary-Adrenal Axis and the Ability of Adolescents to Cope with Anxiety

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This study will explore the effects of FAS on the HPA axis and the ability of adolescents to cope with anxiety. Previous research has neglected to address both the physiological and behavioral implications of FAS concurrently during adolescence. Pregnant dams were assigned to three groups, one maintained on a liquid diet containing ethanol (A), one pair-fed to A without ethanol, and one control fed ad lib. Animals were tested on an elevated-plus maze for 5 minutes during adolescence. Corticosterone and ACTH levels were analyzed. This study has not yet concluded, however, developmental weights demonstrate all groups were significantly different from each other at all time points. Preliminary visual analysis of behavioral testing suggests a difference in exploration tendencies. Preliminary conclusions demonstrate that this animal model successfully replicated clinical findings. The tendency of EE rats to avoid open-arms suggests that adolescents are at increased risk of both social and anxiety disorders. If this can be correlated to the HPA axis, then clinicians have a possible target for treatment/therapy.