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Efficacy of a Cocaine-Schizophrenia Model in Rats: Behavioral and Physiological Measures

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Poster Presentation P41

**EFFICACY OF A COCAINE- SCHIZOPHRENIA MODEL IN RATS:
BEHAVIORAL AND PHYSIOLOGICAL MEASURES**

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Behaviors exhibited during exposure to acute levels of cocaine are similar to behaviors exhibited by patients with schizophrenia and psychosis, leading researchers to hypothesize that rats exposed to acute levels of cocaine may serve as a valid research model for schizophrenia. In addition to behavior, cocaine addiction and schizophrenia share many other commonalities, including similar neurochemical and neuroanatomical substrates. This study looks to test the validity of this model by measuring whether cocaine exposure in rats results in common behavioral deficits (e.g., aggression, spatial memory and cognitive flexibility) observed in patients with schizophrenia. The behaviors were measured in a cocaine experimental group (5 mg/kg) and a saline control group. The aggression was measured based on the Resident-Intruder paradigm. Cognitive flexibility and spatial memory were measured by examining performance in an Attentional Set Shift paradigm. Though no statistical significance was found, the trends seen in the data for spatial memory and cognitive flexibility support the hypothesis. However, the results of the aggression measure do not support the hypothesis. Overall, more research is necessary to determine the overall validity of the use of cocaine exposed rats as a model of schizophrenia.