

## ABSTRACTS

**Poster Session: Psychopharmacology: Lab to Clinic**  
*Monday, August 26, 10:00–11:50 a.m.*  
*Los Angeles Convention Center, Petrie Room*

**EFFECTS OF MARIJUANA ON HUMAN CIGARETTE SMOKING AND SUBJECTIVE RATINGS.** R. Nemeth-Coslett, Jack E. Henningfield, Mary O'Keefe and Roland R. Griffiths. Johns Hopkins University School of Medicine, Baltimore, MD.

Multiple measures of cigarette smoking, subjective effect and physiological effect were collected during 90 minute test sessions in volunteers with histories of recreational marijuana use. Before sessions, subjects smoked cigarettes containing THC (1.29%, 2.84%, 4.00%) or placebo using a standardized puffing procedure. Each dose was given four times in a randomized block sequence. Marijuana altered cigarette smoking rates in each of the eight subjects; however, results varied across subject and produced no consistent or significant group effect. Marijuana produced dose-related increases in heart rate and self-reported ratings of dose strength.

**ABUSE LIABILITY OF ATROPINE ASSESSED IN NORMAL VOLUNTEERS.** Jack E. Henningfield, National Institute on Drug Abuse Addiction Research Center and Johns Hopkins University School of Medicine, and David M. Penetar, Letterman Army Institute of Research, Presidio of San Francisco, CA.

Subjective effects of atropine sulfate injections were assessed in normal volunteers (n=10), as one portion of a 3-part study (behavioral, subjective and physiologic effects of atropine). Two standard psychometric instruments were evaluated to determine their utility in such studies. Each volunteer was given 0, 2 or 4 mg/70 kg atropine sulfate intramuscularly according to randomized block sequences on different test days. To assess psychoactivity of atropine, the Single Dose Questionnaire (SDQ) and the Addiction Research Center Inventory (ARCI) were given 1 hr before and 1 hr following drug injections. Data from the SDQ indicated that atropine produced significant discriminative effects but did not elevate scores on a drug-liking scale. Data from the ARCI indicated that atropine produced significant sedative-like effects (pentobarbital-chlorpromazine-alcohol scale). Despite the apparent lack of abuse potential determined by group analysis of the results, individual data suggested that 10 to 20% of such subjects would be vulnerable to atropine abuse.

**MOTIVATION AND TREATMENT OUTCOME: COMMITMENT TO ABSTINENCE.** Sharon M. Hall and Barbara Havassy. University of California, San Francisco, CA.

Motivation to change considered a crucial variable in addiction treatment outcome. In the present study, motivation was defined by commitment to abstinence, and was as-

sumed to have similar effects across addictions. Commitment was measured in samples of abstinent drug treatment clients, alcoholics and smokers. Level of commitment was correlated with treatment. It was hypothesized that greater commitment would predict longer time to relapse and fewer slips before relapse. It was also hypothesized that commitment would interact with mood, life events, and withdrawal symptoms to predict time to relapse and number of slips. Data has been collected on 100 subjects. A sample of 270 is anticipated. Hierarchical multiple regression will be used to test the hypotheses.

**DIETARY INFLUENCE ON MOOD DISTURBANCE.** Larry B. Christensen, Beth White and Kelly Krietsch. Texas A&M University, College Station, TX.

The influence of caffeine and sugar on mood disturbance was investigated using a single-subject reversal design. Ten of eighteen volunteer subjects exhibited a significant improvement in mood disturbance following a dietary change which eliminated caffeine and sugar from their diet. A deterioration in mood disturbance was demonstrated when these two dietary substances were added to their diet. Double-blind challenges confirmed that caffeine and sugar consumption contributed to the mood disturbance.

**AVOIDANCE/ESCAPE CONTINGENCIES AND d-AMPHETAMINE EFFECTS ON HUMAN AGGRESSIVE RESPONDING.** Don R. Cherek, Joel L. Steinberg and Dean Robinson, Department of Psychiatry, Louisiana State University, and Thomas H. Kelly, Veterans Administration Medical Center, Shreveport, LA.

Male subjects were administered placebo and three doses (5, 10 and 20 mg/70kg) of d-amphetamine in a laboratory situation which provided both aggressive and non-aggressive response options. Aggressive responding was elicited by subtracting money from the research subjects, which was attributed to a fictitious person. Aggressive responding was maintained by avoidance or escape from scheduled provocations (subtractions of points) for specified periods of time. D-amphetamine resulted in increases in non-aggressive monetary reinforced responses in most subjects. Aggressive responses typically evidenced inverted-U-shaped dose response curves, with increases in aggressive responses observed at 5 or 10 mg/70kg doses and decreases at higher doses.

**EFFICACY OF PREANNOUNCED AND UNANNOUNCED URINE MONITORING IN METHADONE MAINTENANCE.** John G. Baker and James B. Rounds, State University of New York at Buffalo, and Carol A. Carson, Sisters of Charity Hospital, Buffalo, NY.

Weekly preannounced urine testing and weekly un-

announced urine testing were compared in a counter balanced design with two random samples of clients (N=74) from a methadone maintenance program. Results indicated no significant difference in the detected rate of positive uring specimens for the two types of testing. Clients reported preference for the preannounced testing and indicated that urine testing was not helpful in avoiding the use of illicit drugs. The cost effectiveness of alternative psychosocial procedures and their relative contribution to the durability of treatment, especially to the development of self control, remains to be investigated.

**PSYCHOMETRIC EVALUATION OF ALCOHOL WITHDRAWAL SYNDROME TREATED WITH CHLORDIAZEPoxide/TETRABRAMATE.** Donald R. Denver, Alain Lagace and Richard Matte, Laval University, Quebec (Quebec).

A modification of MMPI-R profiles and anxiety levels for ten patients was observed following treatment of acute alcohol withdrawal syndrome with chloridazepoxide and tetrabramate. All subjects were inpatients at a university affiliated hospital and completed a phase of partial alcoholization over 24 hr and a detoxication phase extending over 8 days. Withdrawal was divided into three levels of intensity with corresponding levels for posology. All subjects were treated with one of the two medications in both its active and placebo form. Results obtained must be interpreted with caution. The absence of follow-up limits speculation as to the durability of these results. Additionally, these results reflect not only the impact of the medication taken but also that of alcohol cessation. Quantitative and significant differences between groups on MMPI profiles were not evident. Differences in anxiety levels between day zero and seven for the chlordiazepoxide (CDZ) group were significant. For this group, the variables; indices of the evaluation of the withdrawal syndrome, posology and MMPI scale 4 (Pd) were significantly correlated ( $p < 0.05$ ). For the tetrabramate (Tb) group, reductions in anxiety correlated significantly with scales 2, 3, 7 and 9 after days three and seven ( $p < 0.05$ ). These results suggest differences at the level of impact of the medications on MMPI profiles and on the type of anxiety.

**EMPLOYMENT STATUS AMONG METHADONE CLIENTS: THE IMPACT OF WORK.** Jerome J. Platt, and David S. Metzger. Hahnemann University, Philadelphia, PA.

This paper reports the findings of a recently completed study which examined methadone client characteristics associated with employment status and their stability at a three month follow-up. These variables most strongly associated with employment status included: self-evaluation, risk taking, methadone dose, behavior, and interpersonal cognitive problem solving skills. Demographic and treatment involvement variables were not significantly related to employment. The findings provide a basis for viewing the factors most strongly associated with employment status as lying within the domain of interpersonal and cognitive processes. Implications for treatment are discussed.

**ACTIVATION PEAKING IN INTOXICATED AND DETOXIFIED ALCOHOLICS DURING VISUAL-SPATIAL LEARNING.** Steven L. Schandler, Michael J. Cohen, David L. McArthur and Bruce D. Naliboff. Veterans Administration Medical Center, Sepulveda, CA.

The investigation applies physiological patterning and a controlled hemispheric laterality learning paradigm to assess visual-spatial information processing in 11 intoxicated and 11 detoxified male alcoholics. During a single experimental session, each participant was given a rest/adaptation period, followed by a learning and an overlearning phase. During learning and overlearning, participants were required to learn the spatial position of six "nonsense shapes." Analyses of learning behavior and physiological response patterns indicated superior processing of the visual-spatial information in the intoxicated participants. The results indicated an interaction between right-hemisphere mediated information processing and acute and chronic alcohol use in alcoholics.

**USING MATERNAL REPORT FOR ASSESSING PRE-NATAL EXPOSURE TO POTENTIAL TERATOGENS.** Jeffrey K. Dowler, New England Medical Center, Boston, MA and Sandra W. Jacobson, Gail A. Brumitt, Karen Kopera, Joseph L. Jacobson, Wayne State University, Detroit, MI.

The present study assessed both the 6-week reliability and the validity of a questionnaire used to obtain information from mothers regarding their smoking and use of caffeinated and alcoholic beverages. Fifty-nine mothers were interviewed in the hospital 1-3 days after delivery and again 6 weeks later. Thirty-one mothers also kept a daily record of their use of these substances postnatally for 7 days. Test-retest reliabilities ranged from .78 to .82 for the pre-pregnancy period, and from .33 to .77 for during pregnancy. Validity coefficients for coffee, tea, hard liquor, and a caffeine summary measure were high for the postnatal period.

**EFFECTS OF PUFF AND INHALATION VARIATIONS ON CARBON MONOXIDE BOOST.** James P. Zachy, Maxine L. Stitzer and Roland R. Griffiths. Johns Hopkins University School of Medicine and Francis Scott Key Medical Center, Baltimore, MD.

In a series of three studies, three smoking topographies were varied to determine their effects on carbon monoxide (CO) boost. In Experiment 1, puff volume was varied while inhalation volume and breathhold duration were held constant. In Experiment 2, inhalation volume was varied while puff volume and breathhold duration were held constant. In Experiment 3, breathhold duration was varied while puff and inhalation volumes were held constant. Auditory cues were integrated into the smoking topography measurement system to aid subjects in puffing, inhaling, and breathholding in accordance with experimenter-specified criteria. Results indicated that CO boost was functionally related to puff volume and breathhold duration, but not inhalation volume. While CO boost appears to be sensitive to puff size and the duration of time that smoky air is in the lungs, it does not appear to be sensitive to the volume of air that is mixed with the smoke bolus in the lungs.