

L. Goodman,* Suzette M. Evans† and Jack E. Henningfield.*
*NIDA Addiction Research Center, Baltimore, MD, and †
Columbia University School of Medicine, New York, NY.

Humans were trained to discriminate between *d*-amphetamine (30 mg), caffeine (400 mg), and placebo. Daily experimental sessions tested one drug dose or placebo. Subjects learned the discrimination and reported increased subjective ratings of drug-liking, drug strength, and good drug effects after administration of *d*-amphetamine, but not caffeine. Generalization testing involved determining dose-response curves for: *d*-amphetamine (0, 7.5, 15, 30 mg), caffeine (5, 100, 200, 400 mg), and mazindol (0, 1.5, 3, 6 mg). Doses of *d*-amphetamine and caffeine produced dose-related increases in drug-appropriate responding. The highest dose of mazindol (6 mg) partially substituted for *d*-amphetamine (57%), and lower doses of mazindol engendered a mixture of *d*-amphetamine, caffeine, and placebo responding. These results suggest that a three-choice paradigm may allow a more detailed analysis of the discriminative stimulus effects of various stimulant drugs in humans.

OPIOID-ANTAGONIST EFFECTS OF NALTREXONE AND NALTRINDOLE. Anthony Liguori and Jack Bergman. Harvard Medical School, Southborough, MA.

In rhesus monkeys responding under a 30-response fixed-ratio schedule of food presentation, cumulative-dosing procedures were used to determine the rate-decreasing effects of levorphanol (μ -selective), U50,488 (κ -selective), and BW373 (δ -selective) alone and after doses of the opioid antagonists naltrexone (0.01–3.0 mg/kg) and naltrindole (0.1–10.0 mg/kg). Naltrexone most potently and extensively antagonized the effects of levorphanol, whereas naltrindole most potently and extensively antagonized the effects of BW373. These results are consistent with the characterization of naltrexone and naltrindole as μ -selective and δ -selective opioid antagonists, respectively.

REWARDING AND AVERSIVE PROPERTIES OF IP AND SC COCAINE: ASSESSMENT BY PLACE AND TASTE CONDITIONING. Linda A. Parker and Lori A. Mayer. Wilfrid Laurier University, Waterloo, Ontario, Canada.

Three experiments were conducted to compare the effectiveness of intraperitoneally (IP-administered) or subcutaneously (SC-administered) cocaine to produce place and/or taste conditioning after four conditioning trials. In experiment 1, a taste was presented for 15 min prior to an injection (IP or SC) of cocaine. Five minutes later the rats were placed in one side of a three-choice (drug-paired, saline-paired, and novel chambers) place-conditioning apparatus for a 15-min period. Experiment 1 demonstrated that IP cocaine (20 mg/kg) produced a conditioned place preference, but no conditioned taste avoidance; however, SC cocaine (20 mg/kg) produced conditioned taste avoidance, but no conditioned place preference. Experiment 2 assessed the ability of a range of doses of IP (5–15 mg/kg) and SC (0.5–15 mg/kg) cocaine administered 5 min prior to a 15-min conditioning trial to produce place conditioning. Across the doses tested, a place preference was established with IP but not SC cocaine. Experiment 3 demonstrated that IP cocaine produced a place preference with conditioning

trial durations of 30–120 min, but SC cocaine did not produce place conditioning at any conditioning trial duration. Within the present parameters, IP cocaine appears to be a more effective rewarding stimulus than SC cocaine.

COMPARING THE EFFECTS OF SEVERAL MU OPIATES IN HEALTHY VOLUNTEERS. James P. Zacny. University of Chicago, Chicago, IL.

In three separate placebo-controlled, double-blind crossover trials using healthy volunteers, the subjective, behavioral, and physiological effects of different doses of fentanyl, dezocine, and meperidine were studied. There were several similarities between the opiates in that all of them increased LSD ("Dysphoria") and PCAG ("Sedation") scores on the Addiction Research Center Inventory (ARCI). Dezocine's subjective effects, unlike the other two opiates, 1) tended not to be dose-related and 2) included increased scores on the MBG ("Euphoria") scale of the ARCI. Psychomotor impairment was least apparent with meperidine. We conclude that there are some differences in how healthy volunteers respond to opiates of the mu class.

PAPER SESSION

Human Behavioral Pharmacology: Clinical Issues II.

Chair: Linda S. Grossman, University of Illinois, Chicago, IL.

SEXUAL DYSFUNCTION AND CONDOM ATTITUDES AMONG METHADONE PATIENTS. Brenda Chabon. Albert Einstein College of Medicine, Bronx, NY.

The relationship between sexual dysfunction, condom attitudes, and condom use was studied in a sample of 48 male and female intravenous drug users in an inner city methadone clinic. Ninety-one percent of the sample was found to be sexually dysfunctional on the Derogatis Sexual Functioning Inventory (DSFI). Condom attitudes were significantly related to sexual dysfunction, psychological symptoms, and length of time in methadone treatment.

Psychologists designing AIDS risk reduction programs must be familiar with the psychophysiological effects of chronic drug use on sexual functioning.

MEDICATION NONCOMPLIANCE AMONG STATE-HOSPITALIZED PSYCHIATRIC INPATIENTS. Linda S. Grossman,* Thomas W. Haywood,† Christopher G. Fichtner,‡ John M. Davis,§ James L. Cavanaugh, Jr.¶ and Dan A. Lewis.# *University of Illinois, Chicago, IL, †Rush-Presbyterian, Chicago, IL, ‡Loyola University, Niles, IL, §Illinois State Psychiatric Institute, Chicago, IL, ¶Rush-Presbyterian, Chicago, IL, and #Northwestern University, Evanston, IL.

To provide information about factors associated with medication noncompliance, we assessed 241 psychiatric inpatients with standardized interviews inquiring about medications, side effects, symptoms, and psychosocial functioning. *Results:* 1) There were high rates of noncompliance among patients taking neuroleptics (67%) and anxiolytics (68%). 2) Frequency of taking medications was significantly associated with noncompliance ($p < .02$) 3) Sixty-six percent of patients report-

ing side effects were noncompliant, compared to 57% reporting no side effects. *Conclusions:* High rates of noncompliance may be a function of psychiatric patients' lower level of insight and self-care. Significant relationships between noncompliance and frequency of administration have clinical implications reinforcing the importance of infrequent administrations to maximize compliance.

TREATMENT EFFICACY OF MEDROXYPROGESTERONE FOR PARAPHILIACS. Howard M. Kravitz, Thomas W. Haywood, Johathan Kelly, Carl Wahlstrom, Susanne Liles and James L. Cavanaugh, Jr. Rush Presbyterian—St. Lukes Medical Center, Chicago, IL.

This study examines responsiveness of 29 male paraphiliacs to medroxyprogesterone acetate (MPA; Depo-Provera®) treatment. The principal outcome measures were derived from a weekly self-report psychosexual inventory, testosterone levels and recidivism. There was a differential rate of suppression of sexual activities for deviant (a median of up to 2 weeks) and nondeviant (2-10 weeks) behaviors ($p \leq .01$ for each of the 5 behavioral dimensions). Testosterone levels were significantly lowered and recidivism was reported for 1 patient. However, the relative rapidity and completeness of the response raises questions regarding possible distortions in self-reported sexual activities. Collateral sources of information should be considered when interpreting treatment outcome data from patients with paraphilic behaviors.

LONG-TERM RECOGNITION OF UNRELATED WORDS WITH AMPHETAMINE. Eric L. L. Soetens, Ruth R. D., Coekaerts and Johan E. Heuting. University of Brussels, Belgium.

Previous research with free-recall tests of unrelated words has shown that amphetamine enhances memory consolidation. However, repeated testing of the same material under amphetamine influence could be responsible for the improvement of later retrieval. To circumvent this criticism recognition tests were used, so that subjects were tested only once on each item. Whereas in recall experiments we found a significant amphetamine improvement after one hour, significance was only reached here after one-week delay. The difference between recall and recognition could be explained by a ceiling effect for some subjects in the recognition test after one day. Taking into account the number of false positives, an increased sensitivity is measured with amphetamine on all delayed tests.

PAPER SESSION

Human Behavioral Pharmacology: Clinical Issues I
Chair: Timothy A. Roehrs, Wayne State University, Detroit, MI.

AIDS RISK REDUCTION FOR DRUG INJECTORS THROUGH OUTREACH INTERVENTIONS. L. Mabel Comacho,* D. Dwayne Simpson,* Kenneth N. Vogtsberger,† Mark L. Williams,‡ Richard C. Stephens,§ Adelbert Jones¶ and Deena Watson.# *Texas Christian University, Ft. Worth, TX, †University of Texas, San Antonio, TX, ‡Affiliated Systems, Houston, TX, §Cleveland State University, Cleveland,

OH, ¶Desire Narcotic Rehabilitation Center, New Orleans, LA, and #Personalized Nursing Corp., Detroit, MI.

One thousand and eighty IDUs were recruited through outreach efforts for AIDS intervention programs in five cities. A $2 \times 2 \times 2$ factorial design was implemented with the following conditions: 1) receiving or not receiving an in-depth interview at intake, 2) participating in a standard or an enhanced intervention, and 3) one-month versus no one-month follow-up interview. Results indicated significant reductions in drug and sex risky AIDS behaviors at month 1 and month 6 follow-up but were unrelated to intervention conditions. Urinalyses were highly concordant with self-reported drug use, and validating self-reported change positive urines dropped significantly at follow-up periods. Thus, modest intervention efforts have positive behavioral impact.

CHARACTERISTICS OF FEMALE BULIMICS AND THE EFFECTIVENESS OF DESIPRAMINE TREATMENT. Andrew R. Getzfeld, Teresa A. Hutchens and R. Steve McCallum. University of Tennessee, Knoxville, TN.

The effectiveness of desipramine as a treatment for bulimia and coexisting personality characteristics was examined. A significant difference existed between the experimental and control groups in the reduction of bulimic symptoms ($n = 18$). Pretreatment analyses revealed a moderately strong positive correlation between the severity of bulimia and depression; posttreatment analyses of the experimental group revealed a low inverse correlation between final desipramine blood plasma levels and the severity of bulimic symptoms.

Results support earlier indications that bulimia may be related to depression. Desipramine was effective in reducing the severity of bulimic symptoms and presents evidence supporting pharmacological consideration.

COCAINE EXPECTANCIES AND SELF-EFFICACY AS PREDICTORS OF AFTERCARE COMPLIANCE. Julie A. Harmon. Cleveland VA Medical Center, Cleveland, OH/Wayne State University, Detroit, MI.

Cocaine expectancies and self-efficacy regarding drug-use situations were assessed pretreatment and in the last week of a 28-day VA drug treatment program in an effort to discriminate groups who were aftercare compliant and noncompliant at five weeks postdischarge. A sample ($N = 142$) of primarily African-American male veterans diagnosed with cocaine dependence or abuse (primarily smoking crack) was utilized. Hypotheses that 1) expectancies and self-efficacy would significantly predict one-month aftercare status over demographic variables alone and 2) overall cocaine-related expectancies would not significantly change across treatment were not upheld. As hypothesized, across-treatment increases in self-efficacy evaluations showed predictive utility. Results suggested that cocaine addicts hold fewer, less discrete expectancies from cocaine use than scale development samples of nonusers.

EXPECTANCY EFFECTS ON ANALGESIC EFFECTIVENESS FOR EXPERIMENTAL AND CLINICAL PAIN. Mannon Houle,* S. Kogon,† G. Moran,† and P. A. McGrath.‡ *Concordia University, Montreal Quebec, Canada, †Univer-