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), an 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 chracterization 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, Nines, 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-