choice procedure was used to examine preference for higher versus lower methadone doses. Five methadone maintenance research volunteers were given forced exposures to two coded drugs (regular versus a higher methadone dose) and then given six opportunities to select one of the two alternatives. Percent selection of the higher doses (60, 75 and 100 mg) over 50 mg of methadone increased in a dose related fashion.

CHANGES IN PSYCHOPHYSIOLOGICAL AND CONDITIONING VARIABLES DURING ETHANOL WITHDRAWAL. Michael Wang. University Hospital of South Manchester, United Kingdom.

A study was undertaken to investigate the psychophysiology of ethanol withdrawal with particular reference to changes in vulnerability to aversive Pavlovian conditioning. In addition, the effect of the sedative preparation chlormethiazole on these variables was examined. Seventy withdrawing subjects were examined at varying time-intervals after the last ethanol-containing drink in groups of 10, 4 groups receiving chlormethiazole, and 3 groups unmedicated. In addition, abstinent alcoholic and 'normal' control groups were included. The results suggested increasing autonomic activity in unmedicated subjects, whilst chlormethiazole produced reduced indices in medicated subjects. Unmedicated subjects 5–6 days after their last drink were significantly more vulnerable to aversive conditioning than their medicated counterparts.

EXCITATORY AND INHIBITORY CONDITIONING FROM REPEATED ADMINISTRATIONS OF NALOXONE. Janet D. Greeley, Howard Cappell and Constantine X. Poulos. Department of Psychology, University of Toronto, and Clinical Institute, Addiction Research Foundation, Toronto (Ontario).

A discrimination design was used in which one group of rats received repeated injections of naloxone (5 mg/kg) in one environment (A+) and saline injections in another (B−). A control group received saline injections in both. Hot-plate analgesia developed over repeated naloxone injections. In a test for conditional control, this analgesia was displayed only in A+. Subsequently, half the animals in each group were tested with morphine (5 mg/kg) in either A+ or B−. In A+, naloxone-experienced rats showed significantly *enhanced analgesia* to morphine relative to saline controls. In b−, naloxone-experienced rats showed significantly *reduced analgesia* to morphine compared to controls. These findings provide clear evidence for conditioned inhibitory and conditioned excitatory effects.

ENKEPHALIN HYDROLYSING ACTIVITY AND SYMPATHETIC AROUSAL IN CHRONIC ALCOHOLICS. Larry J. Benoit, Synergon, Inc., Lafayette, LA., and E. H. Harrell and P. L. Jones, North Texas State University, and J. L. Caffrey, Texas College of Osteopathic Medicine, Ft. Worth, TX.

This study was concerned with enkephalin hydrolysing activity (EHA) in chronic alcoholism as well as the relationship of enkephalin degradation to voluntary relaxation. Chronic alcoholics (N=20), recovering alcoholics (N=20), and abstinent controls (N=20) were compared for EHA, EMG, and peripheral skin temperature. The relationship between these variables and alcohol use (recency and average daily intake) and abuse (time abstinent since last abuse) were also analyzed. Alcohol use was found to be significantly related to EMG and temperature but not EHA. EHA was significantly related to EMG and temperature. EMG was negatively correlated with temperature. Training effects were demonstrated. Total enkephalin hydrolysing enzyme activity was ruled out as a regulator of circulating enkephalins in alcoholics. EHA was proposed as a significant variable in performance of a relaxation task.

CHARACTERIZATION OF THE PROCESSING SYSTEM FOR DRUG-INDUCED INTEROCEPTIVE STIMULI. David V. Gauvin and Alice M. Young. Wayne State University, Detroit, MI.

Morphine (MS) and *d*-amphetamine (AMP) interactions were examined with a three-choice discrimination procedure in pigeons. MS (3.2 mg/kg), saline (SAL), and AMP (1.8 mg/kg) were established as discriminative stimuli for food-maintained responding within 65 sessions. Subthreshold doses of either drug engendered *only* SAL-appropriate responding. At higher doses, each drug occasioned responding only to its own appropriate key. Tests of drug combinations suggested (1) that such combinations retained features of the original training stimuli, and (2) that MS overrode even the training dose of AMP. While the AMP training dose continued to evoke AMP-key responses when combined with subthreshold MS doses, it evoked only MS-key responses when combined with higher MS doses. In contrast, the MS training dose evoked MS-key responses in the presence of all AMP doses.

RATE-DEPENDENT EFFECTS OF AMPHETAMINE AND CHLORDIAZEPOXIDE ON SCHEDULE-CONTROLLED RESPONDING. Paul C. Mele, Department of Psychology, Adelphi University, Garden City, NY, Joy D. Mele, Virginia Commonwealth University and Victor J. DeNoble, Ayerst Laboratories, Princeton, NJ.

The rate-dependent effects of amphetamine (0.25–3.0 mg/kg) and chlordiazepoxide (2.5–20 mg/kg) were compared in rats responding under a multiple FI 120 sec DRL 18 sec schedule of sweetened milk presentation. Rate-dependent effects were evaluated by examining (1) increases in overall rates of responding maintained by each component schedule, (2) changes in local FI response rates using slopes, y-intercepts and correlation coefficients of least square linear regression lines, (3) whether the observed changes in DRL response rates fell on the regression lines for local FI response rates, (4) changes in local FI response rates when local rates after drug administration were expressed in absolute (actual rates) or relative (drug rates as percentage of control rates) terms.