

drug-taking behavior on the part of clients should help promote maintenance of treatment effects. A combined approach using pharmacological agents (aimed at initiating a change in drinking or drug use) in conjunction with relapse prevention counselling procedures (aimed at fostering internal attribution and maintenance of change) should improve long-term outcome results. A controlled clinical trial was conducted at the Addiction Research Foundation in which 56 alcoholic clients receiving the short-acting alcohol-sensitizing drug, citrated calcium carbimide (Temposil), were randomly assigned to a) a Physician Advice condition in which subjects took the drug within a context designed to reinforce the medical management of their drinking problem; and b) a Relapse Prevention condition in which subjects were instructed to pair use of the drug with planned entry into high-risk drinking situations and to gradually reduce reliance on the drug by developing alternative coping behaviors. As predicted, subjects receiving carbimide in conjunction with relapse prevention counselling showed significant growth in internal attribution for change; whereas those receiving carbimide under more traditional medical management showed no movement toward internality. On measures of alcohol consumption at 6, 12, and 18 months follow-up, there was a trend toward superior maintenance of treatment gains at 18 months posttreatment for subjects who had received relapse prevention counselling. The findings are interpreted as consistent with a cognitive social-learning analysis of the maintenance of behavior change.

DISULFIRAM TREATMENT OF ALCOHOLISM: PAST, PRESENT AND FUTURE. Richard K. Fuller. National Institute on Alcohol Abuse and Alcoholism, Rockville, MD.

Disulfiram (Antabuse®) was introduced in the United States in 1948. Yet its efficacy was controversial due in large part to the methodological problems in the design of clinical trials to evaluate it. These problems included lack of control groups, assignment that was not random in the few studies with comparative groups, lack of blinding, the use of therapists to assess the response to treatment, reliance exclusively on client's self-report, high attrition, only rare attempts to measure compliance with the medication regimen, high attrition, and lack of statistical analysis. This has changed during the past decade, and methodologically sophisticated clinical trials have been done. The results of a multisite Veterans Administration (VA) Cooperative Study of 605 male alcoholics will be presented. These results indicate that disulfiram in conjunction with standard treatment does not achieve more continuous abstinence than standard treatment without disulfiram. However, assignment to disulfiram and counseling resulted in significantly fewer drinking days than counseling without disulfiram in almost half of the men who were not abstinent. Other results from that VA study will be presented: a) The importance of having other sources of information (collateral reports, laboratory tests) in addition to the client's self-report will be demonstrated, and b) the relationship between abstinence and compliance with the medication regimen will be shown. Poor compliance with the medication regimen is the Achilles' heel to disulfiram treatment. Additional studies will be presented which indicate that the supervised administration of disulfiram is beneficial, and this may be an appropriate treatment strategy in the future.

SYMPOSIUM (ETHNIC MINORITY MINICONVENTION)
Interethnic Psychopharmacology: Current Pharmacogenetic, Pharmacokinetic, and Diagnostic Considerations.

Chair: *Tony L. Strickland*, Drew University of Medicine, Madison, NJ.

Discussant: *Matthew V. Rudorfer*, National Institute of Mental Health, Bethesda, MD.

TRICYCLIC ANTIDEPRESSANTS AND RBC/PLASMA LITHIUM DIFFERENCES IN BLACK AMERICANS. Tony L. Strickland. Drew University of Medicine, Madison, NJ.

Recent advances in psychopharmacology have facilitated some interesting and provocative interethnic comparisons of pharmacogenetic, pharmacokinetic, and pharmacodynamic differences. Though the majority of existing interethnic psychopharmacology studies include comparisons of Asian and Caucasian patient groups, significant research on blacks is beginning to emerge. Tricyclic antidepressants (TCAs) in blacks appear mediated by significant pharmacogenetic and pharmacokinetic influences, and result in higher plasma TCA levels, faster therapeutic response, though with more toxic side effects compared to whites. Additionally, problems with appropriate diagnosis of mood disturbance in this population continues to be a major issue relative to accurate assessment of the efficacy of TCAs in blacks.

One area where well-controlled studies of pharmacokinetic differences have been fairly consistently demonstrated is with lithium. This literature suggests that blacks have less efficient cell membrane lithium-sodium countertransport ability, and higher RBC/plasma lithium ratios. Differences in the cellular lithium efflux rate in blacks are highly suggestive, though needing to be confirmed by more extensive study.

In general, the psychopharmacology literature on blacks reveals important differential trends along a number of important pharmacogenetic, pharmacokinetic, and pharmacodynamic parameters. Much work remains to clearly delineate these important interethnic differences. Future psychopharmacology studies should control for patient nutritional status, diet, alcohol and other substance abuse. Also, due to historical problems with accurate diagnosis of mood disturbance in blacks, efforts to improve assessment in this area should be undertaken. Finally, we noted few studies of benzodiazepine use in this population. Research relevant to kinetic and dynamic responses to antianxiolytics in black Americans is much needed.

In this presentation, the author will first review and summarize these recent pharmacokinetic and pharmacogenetic research findings on blacks. Next, the author will discuss potential environmental factors related to differential drug responsiveness.

ETHNICITY AND PSYCHOPHARMACOLOGY: THE ASIAN PERSPECTIVE. Keh-Ming Lin. Harbor-UCLA Medical Center, Torrance, CA.

The last decade has witnessed substantial progress in our understanding of ethnic differences and similarities between Asians and other ethnic groups in response to various psychotropics. Substantial pharmacokinetic differences have been consistently reported between Asians and Caucasians with haloperidol, diazepam, and alprazolam. Similar comparisons of tricyclic antidepressants (TCAs) between these two ethnic groups have led to contradictory findings. In addition to phar-