

Special Blending Issue

“Smart Practice, Practical Science”

NIDA’s June 6-7, 2005 Blending Conference Brings Clinicians & Researchers Together in Florida

This special edition of *NewsScan* focuses on research supported by the National Institute on Drug Abuse (NIDA) that is related to NIDA’s 2005 Blending Conference in Miami Beach, Florida, June 6–7, 2005. NIDA is a component of the National Institutes of Health, Department of Health and Human Services.

NIDA holds annual, 2-day Blending Conferences for bench scientists and clinicians to examine cutting-edge research findings about drug abuse and addiction and their application to clinical practice.

This year’s conference—at the Sheraton Bal Harbour Hotel—is co-sponsored with the University of Miami and the Florida Node of the NIDA Clinical Trials Network (CTN). The CTN is a research infrastructure that tests the effectiveness and usefulness of new and improved interventions in community-based treatment settings with diverse populations.

The 17 research “nodes” of the CTN make it possible for NIDA to establish partnerships with drug abuse researchers and community treatment providers. The Florida Node consists of 5 community treatment programs that include urban and semi-rural areas.

NIDA Director Dr. Nora D. Volkow and other experts in the field will chair plenary sessions at the Blending Conference. Sessions will include topics such as:

- HIV;
- Treatment of ADHD in the context of treating addiction;
- Buprenorphine treatment: a guide for non-physicians;
- Family therapy for adolescent substance abuse: strategies for engagement and treatment;
- The impact of gender on treatment;
- Co-occurring disorders; and
- Drugs, the brain, and behavior.

The 2005 Blending Conference—Smart Practice, Practical Science: Blending Research and Practice—is being held June 6–7, 2005, Sheraton Bal Harbour Hotel, Miami Beach, Florida.

To register or obtain more details about the conference visit NIDA’s Web site at www.drugabuse.gov.

NEWS UPDATE

Research News

Drug Abuse and Depression Often Co-Occur

People who have major mental illnesses often have co-occurring substance abuse disorders. Conversely, individuals with substance abuse disorders often have accompanying psychiatric disorders. In a recent editorial in *Biological Psychiatry*, NIDA Director Dr. Nora D. Volkow discussed the co-occurrence of drug abuse and one such disorder, depression.

Past research has determined that more than 19 percent of people with mood disorders, such as depression, also abuse drugs other than alcohol or nicotine. Among people whose primary disorder is drug abuse, mood disorders were found to be 4.7 times more prevalent compared with the general population.

"It is likely," Dr. Volkow says, "that the high prevalence of co-occurring drug abuse and depression partly reflects overlapping environmental, genetic, and neurobiological factors."

For example, environmental factors associated with both conditions include family disruption, poor parental monitoring, poverty, and stress. Estimates from epidemiologic studies indicate that at least 40 percent of the vulnerability for addiction is related to genetic factors, while for depression estimates are between 24 percent and 58 percent. Brain imaging studies have demonstrated that the same brain regions and structures are involved in mediating symptoms of depression and drug abuse. Rodent studies suggest that early exposure to certain drugs can lead to neurobiological changes associated with depression.

- **WHAT IT MEANS:** Patients with co-occurring depression and drug abuse should be treated for both disorders.

Dr. Volkow's editorial was published in the November 15, 2004 issue of *Biological Psychiatry*.

Mothers More Likely Than Fathers to Allow Family Interventions

Mothers who abuse drugs are more likely to allow their children to participate in interventions for substance abuse treatment than fathers who abuse drugs.

Results of a study involving 214 drug-abusing fathers and 106 drug-abusing mothers indicate that more than one-half of the mothers and only one-third of the fathers said they would consent to their children's participation in family or individual treatment programs.

Factors associated with a mother's willingness to allow their children to receive help included higher reported levels of individual and family distress and social services referrals. However, the presence of a live-in partner was significantly associated with a mother's unwillingness to allow their children's participation in interventions because the action might anger the partner.

For fathers, more frequent substance abuse in the year prior to program entry, family problems, referral by a legal agency, and increased psychiatric distress were associated with a decreased likelihood of allowing children's participation in family interventions. Fathers seemed more likely to characterize their problems as "personal" and to be addressed by them.

- **WHAT IT MEANS:** Children who live with substance-abusing parents often have emotional and behavioral problems. While mothers are more likely than fathers to allow their children to participate in substance abuse interventions, a parent's perceptions and beliefs about addressing problems associated with their own drug abuse may make them unwilling to include their children in treatment programs. Identifying specific factors that impede parental consent may serve as a point to begin helping such children.

This research was partly funded by NIDA. Dr. William Fals-Stewart and his colleagues at the State University of New York at Buffalo and at Old Dominion University in Norfolk, VA, published this study in the December 2004 issue of the *Journal of Family Psychology*.

Nicotine Patch Therapy Effective for Adolescents Trying to Quit Smoking

Results of one of the first studies of nicotine replacement therapy in teens show that the use of a nicotine patch is an effective means of helping adolescents quit smoking.

This study, conducted by researchers at NIDA's Intramural Research Program, also is the first to evaluate the use of nicotine gum by teens. It included 120 volunteer adolescent smokers aged 13 to 17 who smoked at least 10 cigarettes per day. The teens were randomly assigned to receive: active nicotine patch and placebo gum; active nicotine gum and placebo patch; or placebo gum and placebo patch. All of the participants also received cognitive behavioral therapy.

At the end of the 12-week study, and at a follow-up visit 3 months later, the researchers observed that teens who received the nicotine patch were more than 8 times as likely to have quit smoking than teens who received the placebo patch. Those who received the nicotine gum were almost 3 times as likely to be abstinent, compared with those who received the placebo gum.

- **WHAT IT MEANS:** These findings lend support for practitioners to more consistently prescribe or recommend the nicotine patch in addition to counseling to adolescent smokers who are trying to quit.

The study, led by Dr. Eric T. Moolchan, Director of NIDA's Teen Tobacco Addiction Research Clinic in Baltimore, MD, was published in the April 2005 issue of the journal *Pediatrics*.

Tobacco Smoking Linked to Cognitive Impairments in Adolescents

Researchers at the Yale School of Medicine report that adolescents who smoke cigarettes show impairment of memory and other cognitive functions.

The scientists tested working memory—used when keeping information in mind and manipulating it—as well as verbal learning and memory, attention, mood, symptoms of nicotine withdrawal, and tobacco cravings in 41 adolescent daily smokers and 32 nonsmokers. The groups were similar in age, gender, and education.

They found that adolescent smokers had impairments in accuracy of working memory performance. Male adolescents, who as a group begin smoking at an earlier age than females, showed significantly greater impairment in selective and divided attention, perhaps resulting from more prolonged exposure to tobacco smoke.

Girls, however, showed more pronounced symptoms of nicotine withdrawal and associated increased anxiety. All of the adolescent smokers showed further disruption of working memory and verbal memory when they stopped smoking—indicating that nicotine withdrawal is disruptive to cognition in teens.

- **WHAT IT MEANS:** According to the 2004 Monitoring the Future (MTF) survey, almost 16 percent of 12th-graders, 8.3 percent of 10th-graders, and 4.4 percent of 8th-graders report that they smoke daily. Teens appear to be particularly susceptible to the negative consequences of smoking, which include cognitive impairment at a time when their brains are still developing. Further research is needed to know the long-term consequences and how these affect their educational potential.

Dr. Leslie Jacobsen and her colleagues published the study in the January 2005 issue of the journal *Biological Psychiatry*. This research was partly funded by NIDA.

Followup Care Shows Promise for Alcohol, Cocaine Addiction

Investigators report that telephone-based monitoring and brief counseling is at least as effective as two face-to-face forms of continuing care for alcohol- and cocaine-addicted people who have completed an initial stabilization phase of outpatient treatment.

Following completion of a 4-week intensive outpatient program (IOP), 359 individuals who were addicted to alcohol and/or cocaine were randomly assigned to one of three continuing care treatments for 12 weeks: weekly telephone-based monitoring and brief counseling contacts combined with weekly supportive group sessions for the first 4 weeks; twice-weekly cognitive-behavioral relapse prevention; or twice-weekly standard group counseling.

Overall, participants in the telephone group achieved higher rates of total abstinence during the 2-year followup period than those who received standard group counseling. Patients in the telephone group and the relapse prevention group achieved comparable rates of total abstinence. In addition, the percentage of cocaine-positive urine samples obtained during the 2-year followup was lower in the telephone group than in the relapse prevention group. However, for one biological measure of heavy alcohol use, patients in the telephone group had lower scores than the relapse prevention patients. The analyses also indicated that a small number of patients who failed to achieve a number of important therapeutic goals during IOP had better outcomes in standard group counseling.

- **WHAT IT MEANS:** The researchers report that telephone monitoring may work well for patients who have achieved initial stabilization because it is highly focused, more convenient, and does not interfere with other daily responsibilities, such as employment and child care. However, patients who make poor progress during the initial phase of treatment may be poor candidates for telephone-based continuing care.

Dr. James McKay, of the University of Pennsylvania, and his colleagues published their research in the February 2005 issue of the *Archives of General Psychiatry*.

Medication in Combination with Behavioral Therapy May Reduce Cocaine Abuse

Recent studies suggest that medication combined with behavioral therapy may be the next step in cocaine abuse treatment. Several medications, when combined with some form of behavioral therapy, have been reported to reduce cocaine abuse in controlled clinical trials.

Disulfiram, a medication used to treat alcoholism, has demonstrated consistent reductions in cocaine abuse. A recent study confirmed the direct effect of disulfiram in reducing cocaine abuse when used as an adjunct to a behavioral treatment program.

While these findings are promising, subsequent studies examining interactions between disulfiram and cocaine have observed increased cocaine-related stimulatory effects—including nervousness, paranoia, and cardiac output. Consequently, researchers and clinicians must consider safety concerns when designing clinical trials.

GABAergic agents, a class of medications with broad clinical use—including treatment of spastic disorders and daytime sleepiness—have shown favorable results in the reduction of cocaine abuse when combined with behavioral therapy. A recent study found topiramate, an anti-epileptic medication, to be effective at reducing cocaine craving and abuse. Preliminary data suggest topiramate may also be effective in relapse prevention. Although cocaine-related side effects, such as impulsive behavior and euphoria, have been reduced in studies examining the effects of modafinil and baclofen, additional research is necessary to measure the sum of their pharmacological effects.

- **WHAT IT MEANS:** These studies suggest a combination of pharmacotherapy and behavioral therapy may soon be the gold standard for cocaine-addiction treatment.

NIDA's Dr. Frank Vocci and Dr. Ahmed Elkashef published this study in the May 2005 issue of *Current Opinions in Psychiatry*.

Childhood Sexual Abuse, PTSD, Depression Increase High-Risk Sexual Behavior in Men

New research reports that men who were sexually abused as children and who exhibit symptoms of both posttraumatic stress disorder (PTSD) and depression as adults are significantly more likely to report risky sexual histories.

Dr. William Holmes, of the Philadelphia Veterans Affairs Medical Center and the University of Pennsylvania School of Medicine, and his colleagues surveyed 197 adult men. Of the 43 who had histories of childhood sexual abuse, the researchers noted statistically significant associations with PTSD and depression. They also noted that history of sexual abuse and co-occurring PTSD/depression were associated with substantially higher numbers of lifetime sexual partners.

Psychological changes associated with childhood sexual abuse may lead to membership in social networks that, in turn, affect sexual behavior patterns. Dr. Holmes hypothesizes that this relationship also may include practices like drug abuse.

- **WHAT IT MEANS:** Men with histories of childhood sexual abuse and co-occurring PTSD and/or depression appear to have sex with substantially higher numbers of partners than do men who are not similarly affected. Identifying this pattern has potential implications for preventing sexually transmitted diseases via treatment of childhood sexual abuse and related PTSD/depression.

Dr. Holmes and his colleagues published their research in March 2005 in the *Journal of Urban Health*.

Patients Who Attend Psychotherapy Sessions Have Better Success with Buprenorphine Treatment

New research by NIDA scientists and their colleagues indicates that patients dually addicted to heroin and cocaine who were being treated with buprenorphine and who attended a high proportion of psychotherapy sessions were less likely to use the two drugs.

Led by NIDA's Dr. Ivan Montoya, the researchers evaluated the influence of attending counseling sessions in 90 dually-addicted adults who completed 70 days of treatment with buprenorphine, a medication that can be used to treat opiate addiction in a doctor's office. The patients were randomly assigned to receive 16 mg, 8 mg, or 2 mg daily, or 16 mg every other day of buprenorphine.

Dr. Montoya and his colleagues found that patients who attended a higher proportion of scheduled sessions were less likely to abuse heroin and cocaine. The relationship was most apparent in those who received 16 mg of the medication every other day.

- **WHAT IT MEANS:** When patients fail to adhere to prescribed treatment, the success of that treatment may be compromised. The results of this study suggest that psychotherapy should be an integral part of the buprenorphine treatment plan for patients addicted to heroin and cocaine.

The scientists published their study in the April 2005 issue of the *Journal of Substance Abuse Treatment*.

Funding Announcements

NIH Funds for Drug Abuse Dissertation Research (PAR-05-083)

NIDA is inviting applications from public and state institutions of higher learning to support doctoral dissertation research on drug abuse.

Up to \$50,000 per year for 2 years will be awarded for research on epidemiology, prevention, treatment services, and women and gender differences as they relate to drug abuse. An applicant must be matriculated in an accredited doctoral degree program, a U.S. citizen or permanent lawful resident, and his or her institution must be adequately equipped for research in these areas of study.

Examples of research topics that may be considered for funding under this program announcement (PA) include:

- Studies of multiple factors (i.e., genetic, neurologic, environmental, social, developmental, etc.) that influence drug abuse outcomes;
- Research on emerging trends, including studies that relate these trends to influences such as changes in social attitudes, new technologies, and new drugs of abuse;
- Adapting findings on cognitive interventions and functioning to improve or develop targeted prevention strategies;
- Studies that focus on developing new tools—such as quantitative tests that assess personality traits—that can clinically assess factors involved in a person's drug-abuse and HIV risk;
- Research to measure the efficacy and cost-effectiveness of drug abuse prevention and treatment services; and
- Gender differences that underlie the basic behavioral, biological, and genetic mechanisms that influence drug abuse and addiction.

For more information on this PA, go to <http://grants.nih.gov/grants/guide/pa-files/PAR-05-083.html>. The receipt date for letters of intent is September 1, 2005. For additional information on application receipt dates and peer review dates, go to <http://grants.nih.gov/grants/funding/submissionschedule.htm>.

NIDA Encourages Methamphetamine Research (NOT-DA-05-008)

NIDA has issued an addendum to program announcement (PA) 03-126, to further encourage research on the development, refinement, and testing of behavioral and integrative treatments for methamphetamine abuse and addiction.

Methamphetamine abuse is becoming increasingly more common, spreading into new regions and new populations. More research is needed on treating methamphetamine addiction, as well as reducing the accompanying risk of infectious disease among those receiving treatment.

Research topics that may be considered under this announcement include:

- Translating neuroscience or basic research findings into more effective behavioral approaches;
- Examining the dose-response of behavioral and integrative treatments;
- Developing methods to train community practitioners to administer effective behavioral therapies.

Program announcement PA-03-126 should be consulted in conjunction with this addendum. The expiration date for PA-03-126 is May 30, 2006 unless reissued. For more information, go to <http://grants.nih.gov/grants/guide/notice-files/NOT-DA-05-008.html>.

Upcoming Events

The College on Problems of Drug Dependence (CPDD) will host its 67th annual meeting on June 18–23, at the Wyndham Plaza Resort & Spa, in Orlando, Florida.

NIDA will sponsor several events at this meeting, including:

- Translating Basic Research from Neural, Behavioral, & Social Sciences to Prevention;
- Proteomics & Its Application to Drug Abuse; and
- Mice Tales: Novel Insights Into Understanding Addiction.

More details about the conference can be found at <http://www.cpdd.vcu.edu>.

For more information about any item in this *NewsScan*:

- Reporters, call Michelle Person at 301-443-6245.
- Congressional staffers, call Geoffrey Laredo at 301-594-6852.

The National Institute on Drug Abuse (NIDA) is a component of the National Institutes of Health, U.S. Department of Health and Human Services. NIDA supports most of the world's research on the health aspects of drug abuse and addiction. The Institute carries out a large variety of programs to ensure the rapid dissemination of research information and its implementation in policy and practice. Fact sheets on the health effects of drugs of abuse and other topics are available in English and Spanish. These fact sheets and further information on NIDA research and other activities can be found on the NIDA home page at <http://www.drugabuse.gov>.

NOTES



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