Drug Research Symposium at Drew:

"Drug Addiction is a Brain Disease"

Charles R. Drew University of Medicine and Science

W.M. Keck Lecture Hall

July 28, 2005

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Charles R. Drew University of Medicine and Science, July 28, 2005

Agenda

7:30-8:30 am Registration/Pre-Conference Evaluation and Breakfast

8:30-9:00 am Welcome and Background on MIDARP at Drew
Ted Friedman, MD, PhD
MIDARP Program Director, Charles R. Drew University
Email: tefriedm@cdrewu.edu

9:00-9:30 am Keynote Speech
"Diversity in Biomedical Sciences: Implications for Achieving Healthy People 2010 Goals"
Keith Norris, MD, FACP
Professor of Medicine, Associate Dean for Research, and Program Director of the Clinical Research Center at Charles R. Drew University
Email: knorris@ucla.edu

9:30-10:30 am Keynote Speech
"Science to Service"
H. Westley Clark, MD, JD, MPH, CAS, FASAM
Director, Center for Substance Abuse Treatment
Substance Abuse and Mental Health Services Administration
U.S. Dept of Health and Human Services

10:30-10:45 am Morning Break

10:45-11:05 am "Substance Abuse and Mild Traumatic Brain Injury: Relevance to Treatment Planning"
Tony L. Strickland, PhD
Director, Behavioral Neuroscience Research Center and Memory Disorders and Cerebral Function Clinic
Email: tstrick@ucla.edu

11:05-11:15 am "Navigating New Pathways in Addressing Substance Abuse and Mental Health Challenges"
Paulette Gorsuch, PhD, MFCC
Substance Abuse Counseling Program, Charles R. Drew University
Email: pagorsuc@cdrewu.edu

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11:15-11:35 am "Harm Reduction Approaches to Drug Abuse Problems"
Ricky Bluthenthal, PhD
Assistant Professor, Charles R. Drew University
Social Scientist at RAND
Email: Rickyb@rand.org

11:35-11:55 am "Revealing the Secrets of the Opium Poppy"
Chris Evans, PhD
Stefan Hatos Professor, Semel Institute
Director, UCLA Brain Research Institute
Email: cevans@ucla.edu

11:55-12:15 pm "Treatment of Methamphetamine Use Disorders"
Richard Rawson, PhD
Associate Director, UCLA Integrated Substance Abuse Programs
Email: rrawson@mednet.ucla.edu

12:15-1:45 pm Lunch Break/ **Poster Presentations**

Mohammed Abdelhamid, MS: "The Addiction Severity Index and Quality of Life Among Stimulant Abusers"

Michael Campos, PhD: "Psychopathy and Outcomes in a Prison-Based Substance Abuse Treatment Therapeutic Community"

B. J. Jackson: "Methamphetamine-induced alterations to sleep architecture in methamphetamine-dependent patients"

Sherry Larkins, PhD: "Methamphetamine-dependent Gay Men's Disclosure of Their HIV Status to Sexual Partners"

Namiko Nerio, MS: "Antalarmin and Astressin: CRH Suppression Profiles"

Pinky Tripathi: "Short and long-term morphine exposure in GH3 cells lead to alteration in PC-2 activity"

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1:45-2:45 pm **Trainee Oral Presentations**

Frank Galvan, PhD: "Co-occurring Psychiatric Symptoms and Drug Dependence or Heavy Drinking among HIV-Positive People in the U.S."
Uyen Kao, MPH: "Screening for HIV and Drug-related Behaviors Using a Kiosk-based Intervention"
Maria Brown: "Repeated Stress Alters the Ability of Nicotine to Activate the HPA Axis"
Adrian Anghel, MD: "Regulation of PC 1/3 and PC2 by morphine: Implication for the Switch From Drug Use to Drug Abuse"
Kevin Heslin, PhD: "Abstract Submission for Drew Substance Abuse Research Day"
Didra Taylor, PhD: "What Parents, Adolescents, and Providers Should Know About Alcohol Beverage Types, Household Items Containing Alcohol, and Underaged Drinking"

2:45-3:00 pm "Medication(s) for Treating Cocaine Abuse"
Steve Shoptaw, PhD
Research Psychologist, UCLA Integrated Substance Abuse Programs
Email: SShoptaw@mednet.ucla.edu

3:00-3:15 pm "Endogenous Opioids and Cocaine Addiction"
Kabirullah Lutfy, PhD
Charles R. Drew University & Western University of Health Sciences
Email: klutfy@westernu.edu

3:15-3:30 pm "NicotineCauses Insulin Resistance"
Yanjun Liu, MD, PhD
Charles R. Drew University
Email: dryanjunliu@hotmail.com

3:30-3:45 pm Closing Remarks/Post-Conference Evaluation/Awards
Ted Friedman, MD, PhD

4:00 pm Adjourn

Drug Research Symposium at Drew: *"Drug Addiction is a Brain Disease"*

Sponsor

MINORITY INSTITUTIONS' DRUG ABUSE RESEARCH DEVELOPMENT PROGRAM (MIDARP)

Charles R. Drew University is a site of the **MIDARP**. Dr. Theodore Friedman is the Program Director. The overall goals of the MIDARP are to: (1) develop the drug abuse research at Drew; (2) provide research development support and experiences to faculty and staff to facilitate independent drug abuse research careers, (3) foster interest in drug abuse research for students and residents and provide them research experiences, and 4) provide for continued drug abuse research funded by NIDA or other agencies. We will specifically encourage the development of minority faculty and students.

The theme of the training and education program will be "Addiction is a brain disease and it matters" and will incorporate expertise at Drew in both the basic and clinical aspects of substance abuse. We have elected not to limit the area of substance growth at Drew; all projects related to the theme of substance abuse as a disease of the brain will be encouraged. Although the primary projects are both basic science projects related to mechanisms of opiate addiction, the aims of this grant will be to increase all aspects of substance abuse research (basic science, translation, clinical and survey research), based on the interests of the faculty.

Co-Sponsor

UCLA Integrated Substance Abuse Program

The UCLA Integrated Substance Abuse Programs (ISAP) coordinates substance abuse research and treatment within the Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine at UCLA. As one of the largest substance abuse research groups in the United States, ISAP works to: develop and evaluate new approaches for the treatment of substance abuse disorders; move empirically supported treatments into mainstream application; advance the empirical understanding of substance abuse and support efforts to ameliorate related problems; and investigate the epidemiology, neurobiology, consequences, treatment, and prevention of substance abuse. With more than 300 researchers, clinicians, and support personnel, ISAP is led by Walter Ling, M.D. (Director), M. Douglas Anglin, Ph.D. (Associate Director), Douglas Longshore, Ph.D. (Associate Director), and Richard Rawson, Ph.D. (Associate Director). ISAP's network of activities extends from highly sophisticated and specialized laboratory research (including molecular genetics, brain imaging, and medication testing), to pharmacological an behavioral clinical research, to community-based research, research on public health policy, and substance abuse treatment services. For more information, visit www.uclaisap.org.

Pacific Southwest Addiction Technology Transfer Center (PSATTC)

Funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) as one of 14 regional centers, the Pacific Southwest Addiction Technology Transfer Center (PSATTC) is jointly operated by the UCLA Integrated Substance Abuse Program and the University of Arizona Applied Behavioral Health Policy Division. The PSATTC's vision is that all individuals with alcohol and drug problems receive the most up-to-date, clinically effective, and culturally competent substance abuse treatments to help them overcome addiction, and, as a result, lead productive and meaningful lives. The PSATTC's mission is to establish an infrastructure among key stakeholders in Arizona, California, and New Mexico to facilitate the transfer of addiction technology based on sound science through knowledge dissemination, training, and enhanced professional standards and practices that will improve the delivery of effective treatment for substance abuse disorders. Guiding principles include: inclusion, collaboration, sound science, information sharing, quality standards and programs, cultural competency, and informing public policy. For more information, visit www.psattc.org.

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Presenter's Biographical Paragraphs

Keynote Speaker:

H. Westley Clark, MD, JD, MPH, CAS, FASAM

Dr. H. Westley Clark, Director of the Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services, leads the agency's national effort to provide effective and accessible treatment to all Americans with addictive disorders. Dr. Clark was the former chief of the Associated Substance Abuse Programs at the U.S. Department of Veterans Affairs Medical Center (DVAMC) in San Francisco, California. In addition to his duties at the DVAMC, Dr. Clark served as a senior program consultant to the Robert Wood Johnson, Substance Abuse Policy Program, a co-investigator on a number of the National Institute on Drug Abuse-funded research grants in conjunction with the University of California, San Francisco (UCSF) and as an associate clinical professor, Department of Psychiatry, UCSF.

Dr. Clark is a noted author and educator in substance abuse treatment, anger and pain management, psychopharmacology, and medical and legal issues. He has received numerous awards for his contribution to the field of substance abuse treatment, including The President of the United States of America the rank of Meritorious Executive in the Senior Executive Service for his sustained superior accomplishments in management of programs of the United States Government and for noteworthy achievement of quality and efficiency in the public service, 2003; U.S. Department of Health and Human Services Secretary's Award for Distinguished Service for his leadership in spearheading a new anti-addiction treatment enabling thousands of Americans to recover from heroin addiction, along with reducing the transmission if infectious diseases, 2003; U.S. Department of Health and Human Services Secretary's Award for Distinguished Service for far exceeding Departmental standards of achievement exhibiting outstanding teamwork and timeliness on the complex task of completing the Methadone Final Rule which required coordination among several Federal agencies, 2001; Vernelle Fox Award from the California Society of Addiction Medicine for excellence in Addiction Medicine, Education and Public Service, 2000.

Dr. Clark received a B.A. in Chemistry from Wayne State University in Detroit, Michigan; he holds a Medical Degree and a Masters in Public Health from the University of Michigan, Ann Arbor; where he completed a Psychiatric Residency at University Hospital, Neuropsychiatric Institute. He obtained his Juris Doctorate from Harvard University Law School and completed a two-year Substance Abuse Fellowship at the DVAMC-SF. Dr. Clark received his board certification from the American Board of Psychiatry and Neurology in Psychiatry and sub-specialty certifications in both Addiction and Forensic Psychiatry. Dr. Clark is licensed to practice medicine in California, Maryland, Massachusetts and Michigan. He is also a member of the Washington, D.C., Bar Association.

Keynote Speaker:

Keith C. Norris, MD, FACP

Keith C. Norris, MD, is Professor of Medicine, Associate Dean for Research, and Program Director of the Clinical Research Center at Charles R. Drew University of Medicine and Science in Los Angeles, California.

After receiving his medical degree from Howard University School of Medicine in Washington, DC, Dr. Norris completed an internship and a residency at Howard University Hospital, also in Washington, DC, where he served as chief resident in the Department of Internal Medicine. Dr. Norris then completed fellowships in nephrology at the University of California at Los Angeles School of Medicine and at Wadsworth VA Medical Center in Los Angeles. Board-certified in internal medicine and nephrology, Dr. Norris is also certified as a specialist in clinical hypertension by the American Society of Hypertension, a Reiki Master and a postdoctoral candidate in metaphysics, spirituality, and holistic health at the College of Metaphysical Studies and New Age Ministries in Clearwater, Florida.

Dr. Norris was elected into the Alpha Omega Alpha, Medical Honor Society in 1980 and inducted into the National Black College Alumni Hall of Fame (Science) in 2003. Dr. Norris's research interests focus on the impact and outcomes of chronic kidney disease in African American and Latino populations, the role of vitamin D in chronic kidney disease, calcium management in end-stage renal disease, and hypertension. He is currently a principal investigator or co-investigator on 11 National Institutes of Health (NIH) grants, researching such diverse topics as health disparities in chronic kidney disease, testosterone and muscle function, self-management of diabetes, and transcendental meditation in cardiovascular disease. Dr. Norris is a member of the NIH Study Section for the National Center for Research Resources and the National Institute of Diabetes and Digestive and Kidney Diseases, the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative Advisory Committee, and the NIH/National Center for Research Resources Clinical Research Working Group. A frequent presenter in both professional and academic settings, Dr. Norris has co-authored more than 100 scholarly publications and over 100 abstracts. He currently serves as editor-in-chief of the journal Ethnicity & Disease.

Presenters in alphabetical order:

Ricky N. Bluthenthal, PhD

Dr. Ricky N. Bluthenthal is a Social Scientist at RAND and an Assistant Professor in the Department of Psychiatry and Human Behavior at Charles R. Drew University of Medicine and Science. He is also the Director of the Outreach and Community Core of Project Export at Drew and UCLA. Dr. Bluthenthal is currently the Principal Investigator (PI) on two National Institute on Health (NIH) funded studies: *Community context, SEP operations, & HIV risk among IDUs* (National Institute on Drug Abuse, 9/02 to 5/06) and *Understanding Outcome Disparities in Alcohol Treatment* (National Institute on Alcohol Abuse and Alcoholism (NIAAA), 5/03 to 4/06). He recently completed two other studies: *Malt beverage use & outcomes in a minority community* (NIAAA 9/01 to 9/04) and *HIV Impacts of Local Legalization of SEPs in California* (Center for Disease Control and Prevention, 10/00 to 9/04). Additionally, Dr. Bluthenthal serves as a researcher on or advisor to almost a dozen other major research projects at RAND, UCLA

and Drew. His work focuses on health concerns of and outcomes for low-income populations and communities of color; specific research interests include alcohol and drug use, community and structural prevention strategies, and racial and ethnic disparities in health outcomes. Dr. Bluthenthal is active as an advisor to numerous community health organizations, and has an ongoing interest in the community impact / policy implications of public health research. Results from his studies have been published in journals such as *The Lancet, American Journal of Public Health, American Journal of Epidemiology,* and *Addiction*. Dr. Bluthenthal received his doctoral degree in Sociology from the University of California, Berkeley in 1998.

Christopher Evans, PhD

Christopher Evans received his PhD from Imperial College London, conducting his thesis research entitled structural and metabolic investigation of endorphins and enkephalins, at the Medical Research Council Institute in Mill Hill. After a postdoctoral fellowship at Stanford University, Dr. Evans joined the UCLA faculty in the Department of Psychiatry and Biobehavioral Science. His research accomplishments have included identification of a number of novel endogenous opioid peptides and the cloning of the first opioid receptor. Dr. Evans is currently Director of the UCLA Brain Research Institute and the Stefan Hatos Professor directing the Shirley and Stefan Hatos Center for Neurophamacology in the UCLA Semel Institute. Dr. Evans is also director of a NIH-funded center – The Center for Opioid Receptors and Drugs of Abuse or CSORDA. CSORDA, now in its 18th year of continuous NIH funding, aims to understand the action of opioid drugs such as morphine and heroin at the molecular, cellular and behavioral levels.

Theodore C. Friedman, MD, PhD

Dr. Theodore Friedman is an Associate Professor of Medicine-UCLA School of Medicine, Charles R. Drew University of Medicine & Science; Chief, Division of Endocrinology, Molecular Medicine and Metabolism; Director, Body Composition Core of the Drew Center of Excellence for Metabolic Research, Director of the Minority Institutes Drug Abuse Research Program (MIDARP) and Director of the Minority Biomedical Research Support (MBRS) Program. Dr. Friedman is board certified in Internal Medicine and Endocrinology, Diabetes and Metabolism. He received his undergraduate degree from Stanford University in Chemistry and Biological Sciences and his MD-PhD from Mount Sinai School of Medicine, with his PhD from City University of New York in Pharmacology. He completed his Internal Medicine residency from University of Michigan and his fellowship in Endocrinology at the National Institutes of Health, National Institute of Child, Health and Human Development. He held a faculty appointment in the Endocrinology Division at Cedars-Sinai Medical Center prior to coming to Charles R. Drew University. His basic science research interests are in pro-hormone processing as related to drug addiction, diabetes, thyroid disease and obesity. He is also studying the effects of nicotine on the hypothalamic, pituitary, adrenal axis and the effects of opiates on genes and proteins. His clinical interests are adrenal, pituitary, thyroid and fatigue disorders.

Paulette Ann Gorsuch, PhD, MFCC

Dr. Paulette Gorsuch is a state licensed MARRIAGE, FAMILY, CHILD COUNSELOR, SOCIAL WORKER and College Professor with an expertise in Substance Abuse education. Dr. Gorsuch has diversified experience in teaching adult college students the drug counseling profession and the inmate population substance abuse education, parenting, and workforce preparation. She has five years experience as a Program Director in the Counselor Certificate and degree program at Charles Drew University College of Allied Health and ten years experience as a Orange County Senior Social Worker supervising court ordered child abuse cases. Currently she teaches 12 units and supervises one full time faculty and have a history of several years as a supervisor of social workers, counselors and shelter rehabilitation program staff. Dr. Gorsuch has facilitated community staff training in Mental Health, conducted mental health patient interviews and provided both faculty and staff evaluations in a varity of mental health settings. She was the principal investigator on a Community Service Grant at the College and currently work Saturdays with the Orange County Sheriff Department to conduct pre-release rehabilitation classes for inmates, giving them a community network of resources for positive transition in to the surrounding Orange County and Los County communities. She has actively participated in the creation of a Community run-away Youth Shelter and an adolescent group home. Her skills include being a Student Academic Advisor, Grant Writer, Public speaker, College Program Director/ Assistant Professor, Red Cross HIV / AIDS Community Educator, Program volunteer Coordinator, and Program Consultant for Drug Rehabilitation/ Mental Health programs and Human Services Non profit organizations. Dr. Gorsuch received her PhD degree in Psychology from California Graduate Institute.

Yanjun Liu, MD, PhD

Dr. Yanjun Liu is a Postdoctoral fellow at Division of Endocrinology, Charles R. Drew University of Medicine & Science – UCLA School of Medicine under the direction of Dr. Theodore C. Friedman. He received his MD in medical science, with his Master Degree of Medicine from Jilin University in China. He received his Ph.D. in Biochemistry and Molecular Endocrinology from Hamamatsu University School of Medicine in Japan. He held visiting professor and Pediatrician appointments in Pediatrician Department of Pediatrics, 1st Teaching Hospital, Jilin University in China. His basic science research interests are in pro-hormone processing and to study the regulation of the enzymes 11□-hydroxysteroid dehydrogenase (type 1 and type 2) and how they regulate glucocorticoid occupancy of tissue mineralocorticoid (MR) and glucocorticoid receptors (GR) relation to insulin resistance, obesity, diabetes, hypertension. He is also studying the interaction of nuclear hormone receptors between oxysterol liver x receptors (LXR) and GR-mediated local glucocorticoid action in the pathogenesis of type 2 diabetes with obesity.

Kabirullah Lutfy, PhD

Dr. Kabirullah Lutfy is an Associate Professor in the Department of Pharmaceutical Sciences, College of Pharmacy, Western University of Health Sciences (Pomona, CA). He also holds an adjunct assistant professor position at Charles R. Drew University of Medicine and Science (Los Angeles, CA). Dr. Lutfy has received his degree in pharmacy from the Faculty of Pharmacy, Kabul University (Kabul, Afghanistan). He received his master's degree in Pharmaceutical Sciences from St. John's University (Queens, NY) and his Ph.D. in Pharmacology & Toxicology from the University of California, Irvine (UCI). He has completed his post-doctoral training at the

laboratory of Dr. Nigel T. Maidment at the University of California, Los Angeles (Los Angeles, CA) and became an assistant research pharmacologist at UCLA before joining Western University in 2003. His area of research deals with understanding the neurobiological mechanisms of Pain and Drug Addiction.

Richard Rawson, PhD

Richard Rawson is the Associate Director of the UCLA Integrated Substance Abuse Programs in the UCLA School of Medicine. He received a PhD in experimental psychology from the University of Vermont in 1974. Since that time he has spent his career conducting research and developing systems for treating individuals with substance use disorders. Dr. Rawson has been a member of the UCLA Department of Psychiatry for over 20 years and is currently an Adjunct Associate Professor. Dr. Rawson oversees a portfolio of addiction research ranging from brain imaging studies to numerous clinical trials on pharmacological and psychosocial addiction treatments, to the study of how new treatments are applied in the treatment system. During the past decade, he has worked with the US State Department on large substance abuse research and treatment projects, exporting US technology and addiction science to Mexico, Thailand, Israel, Egypt South Africa and the Palestinian Authority. He is currently principal investigator of the Pacific Southwest Addiction Technology Transfer Center, the NIDA Methamphetamine Clinical Trials Group and Co-PI of the Pacific Node of the NIDA CTN. Dr. Rawson has published 2 books, 20 book chapters and over 150 professional papers and has conducted over 1000 workshops, paper presentations and training sessions. He was raised on a dairy farm in Vermont and despite over 25 years of California residence he is a hopeless Boston Red Sox fan.

Steven Shoptaw, PhD

Steven Shoptaw, PhD is a Research Psychologist at the UCLA Integrated Substance Abuse Programs and Principal Investigator of a NIDA-funded P-50 investigating medication development for stimulant abuse. His research work involves evaluations of behavioral and pharmacological treatments for substance abuse, particularly as they intersect HIV-relevant populations. Dr. Shoptaw works with his colleague, Dr. Cathy Reback, to evaluate behavioral drug-counseling methods for their value in preventing HIV transmission and reducing drug abuse in gay/bisexual substance users in Los Angeles. He is Director of the Intervention Core of the UCLA Center for HIV Identification, Prevention and Treatment Services and Executive Director for Safe House, a residential facility for persons with HIV/AIDS who have co-occurring mental illness and/or chemical dependency, a project supported by the City of Los Angeles Housing Opportunities for Persons With AIDS program.

Tony L. Strickland, PhD

Tony Strickland, PhD is a Professor of Psychiatry, Director of the Behavioral Neuroscience Research Center, and Program Director of the Memory Disorders and Cerebral Function Clinic at Charles R. Drew University of Medicine and Science. He is an Associate Professor of Psychiatry-in-Residence, Neuropsychiatric Institute, David Geffen School of Medicine at UCLA. He received his doctorate in clinical psychology (Behavioral Medicine) from the University of Georgia, and completed postdoctoral fellowship training in clinical neuropsychology at the Neuropsychiatric Institute, UCLA School of Medicine. Dr. Strickland also completed a postdoctoral clinical research fellowship in psychopharmacology at Harbor-UCLA Medical

Center. He is a fellow of the National Academy of Neuropsychology, the American Psychological Association Division 50 (Addictions), and the American College of Professional Neuropsychology. Dr. Strickland is a Diplomate of the American Board of Professional Neuropsychology, with extensive clinical and research experience in the areas of neurobehavioral sequela of traumatic brain injury, substance abuse, ethnobiologic variations in response to psychotropic medications, cross-cultural neuropsychology, and forensic neuropsychological evaluations. Dr. Strickland is the Director of the Concussion Management Program of the California Athletic Association. He has been the principal investigator of a number of NIH supported research investigations, and has managed a large number of other projects primarily related to clinical neuroscience. He is the author of numerous research articles and has presented nationally and internationally on these issues.

Poster Presentation Abstracts:

"The Addiction Severity Index and Quality of Life among Stimulant Abusers."

Mohammed Abdelhamid, M.S., Tony L. Strickland, Ph.D., Burton Alperson, Ph.D., and Javier Hernandez, Psy.D.
Charles Drew University of Medicine and Science, Behavioral Neuroscience Research Center

Currently, best estimates of cocaine use reveal that there are 5 million regular users of cocaine, and at least 30 million or more who have reported experimenting with the drug (Adams, 1982; Fishburn, 1979, HHS News, 1989), and as mentioned previously, cocaine now accounts for an increasing proportion of treatment admissions across the country, with central nervous system dysfunction prominently represented among patients seeking treatment.

Cocaine, particularly the smokable and more potent derivative "crack," continues to be one of the most abused psychoactive substances in the United States, and thus remains the drug of greatest public concern (Abelson & Miller, 1985). Although according to recent national surveys, current illicit drug use in the United States population is declining (defined as use of any illicit drug within the last 30 days), this trend is not consistent for cocaine use (HHS News, 1989). In fact, frequent cocaine use has intensified over the past decade, with reported daily and weekly use of cocaine nearly doubling. Concurrently, the number of cocaine-related deaths doubled from 1984 to 1988; and emergency room episodes attributed to crack cocaine use increased 28-fold during this same period (HHS News, 1989).

Drug Use Evaluation

Addiction Severity Index (ASI). Drug-related behavioral data are collected by the ASI (McLellan et al 1980). The ASI is a structured clinical interview that measures the severity of drug and alcohol abuse problems in a subject's life. Since its development, the ASI has become the most widely used instrument for assessing substance abuse, and facilitates the development of appropriate treatment plans and referrals. We used the computer version in the current study and it required approximately 35 minutes to complete in one session. The ASI is used to identify and assess subject's needs in seven domains of functioning related to the specific aims of this study and include: general information, medical status, employment/support status, alcohol/drug use, legal status, family and social relations, and psychiatric status. The results indicate that the stimulant abuse group had greater problem severity than the normal group across all the ASI scales such as: Medical Severity, Employment Severity, Alcohol Severity, Drug Severity, Legal Severity, Family/social Severity, and Psychiatric Severity.

Quality of Life Evaluation

World Health quality of Life (WHOQOL-BREF): The WHOQOL-BREF Domain Scales cover seven domains: Overall quality of life, physical health, psychological quality of life, social relationships, and environment. Scores on these domains are transformed to have a possible range of 0 to 100 with higher scores indicating greater quality of life. The results indicate that the stimulant abuse group had significant lower scores than the normal group on the overall quality of life and psychological quality of life domains.

“Psychopathy and Outcomes in a Prison-Based Substance Abuse Treatment Therapeutic Community”

Michael Campos, Ph.D. & Michael L. Prendergast, Ph.D.
UCLA Integrated Substance Abuse Programs

Therapeutic communities (TC) rely on the force of community rather than an individual therapeutic relationship to effect change (DeLeon, 1994a; DeLeon, 1995). Individuals diagnosed with psychopathy are characterized by disturbed relationships with others and may lack the ability to form meaningful bonds with other individuals or groups, which may make them poor candidates for TC treatment. Ogloff, Wong, & Greenwood (1990) evaluated a TC designed to treat inmates with broadly defined personality disorders. Psychopaths in this TC demonstrated poor retention, less motivation, and worse progress relative to nonpsychopathic TC participants. Rice, Harris and Cormier (1992) evaluated outcomes for psychopathic and nonpsychopathic individuals in a TC designed to increase empathy. In this study, treated psychopaths demonstrated an increased likelihood for violent reoffending relative to treated controls and untreated psychopaths. Since these studies are either entirely or primarily retrospective in nature, prospective studies are required to strengthen the findings. The current study sought to address the methodological problems with the literature cited above (i.e., better assessment, prospective design) in an effort to evaluate outcomes for individuals high in psychopathic traits after treatment in a TC substance abuse program. The findings from the preliminary analyses offered concurrent validity for the clinical diagnoses derived from assessments using the PCL:SV. Results from the return to custody analysis indicated that significantly more individuals in the psychopathy group were convicted of a new offense within 12 months of release from custody ($F = 4.00$, $p < 0.05$). Nearly 46% of the individuals in the psychopathic group, as compared to nearly 13% of individuals in the non-psychopathic group, were returned to custody on a new charge or technical violation within 12 months of release. The combination of AQ total scores, NPI total scores, and the Impression Management Subscales of the PDS successful classified 89.5% of individuals in the study. Given the current findings, it appears that psychopaths fare more poorly than do non-psychopaths after treatment in a prison-based substance abuse treatment therapeutic community. Whereas findings from the current study are provocative, further work is necessary to validate the current findings and to fine-tune any self-report screening measures for psychopathy.

“Methamphetamine-induced alterations to sleep architecture in methamphetamine-dependent patients”

B.J. Jackson*; R. De La Garza; T.F. Newton

Dept Psychiatry and Biobehavioral Sciences, University of California Los Angeles, Los Angeles, CA, USA

Methamphetamine (MA) has widespread effects on brain function, especially monoaminergic systems. As a stimulant, MA is known to decrease fatigue and increase wakefulness. Despite this information, little is known about the effects of long-term MA exposure on sleep architecture. Accordingly, we sought to investigate the effects of an acute MA challenge (30 mg, IV) on sleep architecture in non-treatment seeking, MA-dependent individuals. Sleep architecture was measured using polysomnography the evening after morning administration MA. Electrodes were attached per the International 10-20 system with additional EOG and EMG electrodes attached to the face for characterization of rapid eye movement (REM) sleep.

Additional sensors for body position, pulse and blood oxygen levels, and abdomen movements were also included in the array. To date, two subjects have completed the protocol, though a larger cohort is planned for the final analysis. The preliminary data reveal that MA exposure decreased total sleep time (mean 424 minutes before vs. 347 minutes after) and sleep efficiency (88% before vs. 74% after). Additionally, acute MA decreased percentage of time spent in REM sleep (34% before vs. 14% after), and increased latency to sleep onset (17 minutes before vs. 60 minutes after) and latency to REM (4 minutes before vs. 187 minutes after). Most striking, time spent in slow wave sleep (SWS) was negligible during every recording period, a profile similar to that previously reported in alcohol-dependent patients. All data will be presented with reference to sleep architecture patterns previously established in healthy controls. The data represent the first step towards characterizing sleep disturbances in MA-dependent individuals. It is tempting to speculate that pharmacological treatments for MA-dependence that improve altered sleep patterns may enhance cognitive performance, and therefore improve addiction treatment outcomes.
Support Contributed By: NIDA: DA014593, DA017182, DA38824, DA18185

"Methamphetamine-dependent Gay Men's Disclosure of Their HIV Status to Sexual Partners"

Sherry Larkins, Ph.D.[1,2], Cathy J. Reback, Ph.D.[1,2,3], Steven Shoptaw, Ph.D.[1,2, 4] and Rosemary Veniegas, Ph.D. [4]

[1]Friends Research Institute
[2]UCLA Integrated Substance Abuse Programs
[3]Van Ness Recovery House/Prevention Division
[4]UCLA Center for HIV Identification, Prevention, and Treatment Services

Disclosure of one's HIV status to a potential sexual partner has important HIV prevention implications. This paper qualitatively evaluates the social and sexual contexts that influence disclosure of HIV status among methamphetamine-dependent gay men enrolled in an outpatient drug treatment research program. As part of an open-ended, semi-structured interview, 34 HIV-positive and HIV-negative men discussed how, when, to whom, and under what circumstances they reveal information about their HIV status. The four factors that influence participants' decision to disclose include: (1) an HIV-negative sexual partner's disclosure; (2) sexual venue (private versus public); (3) primary versus non-primary partner; and (4) the perceived risk of the sexual act. Sexual encounters among the men in this sample often occurred in public environments with non-primary partners, and involved use of illicit substances. In these social and sexual contexts, both HIV-positive and HIV-negative participants believed that it is HIV-negative rather than HIV-positive men who should initiate safer sex dialogue and safer sex practices. Findings are helpful in crafting HIV-prevention interventions targeting substance-using gay men whose sexual practices place them at high-risk for HIV-infection.

"Antalarmin and Astressin: CRH Suppression Profiles"

Namiko Nerio, Adrian Anghel, Otaren Aimiuwu, Theodore Friedman.
Dept of Endocrinology, Charles R. Drew Univ, Los Angeles, CA

OBJECTIVE: Activation of the stress response via the HPA axis has been associated with nicotine addiction. A firmer grasp on its role in the addiction process and its maintenance will allow for the development of novel treatments able to curb addiction. To this end, we examined the profiles of CRH receptor antagonists, antalarmin and astressin, and their respective abilities to suppress CRH release in C57B/L6 mice.

METHODS: Administration of antalarmin (20-mg/kg, ip), astressin (0.3-mg/kg, ip), or control (ip) preceded administration of nicotine (1.0-mg/kg, sc), CRH (10-µg/kg, sc), or control (sc). Following astressin and antalarmin administration, the second injection occurred 30-minutes and 90-minutes post-injection, respectively. Animals were decapitated 15-minutes thereafter and blood collected in tubes containing 7% EDTA. Plasma was extracted and stored at -80ºC until analyzed by RIA.

DATA: CRH enhanced corticosterone ($p<0.001$) and ACTH release. Administering antalarmin diminished corticosterone levels to baseline($p<0.05$) and attenuated ACTH to sub-baseline ($p<0.05$). Astressin blunted ACTH ($p<0.05$) and corticosterone ($p<0.001$) release to sub-baseline. Nicotine increased ACTH more than two-fold ($p<0.001$) and doubled corticosterone release ($p<0.001$). Antalarmin partly diminished this nicotinic effect, decreasing ACTH levels ($p<0.05$). Astressin suppressed ACTH ($p<0.001$) and corticosterone release ($p<0.05$). Moreover, astressin decreased ACTH and corticosterone ($p<0.001$) levels associated with a vehicle injection, depressing the stress response. Antalarmin exhibited a similar effect only on corticosterone.

CONCLUSIONS: Antalarmin and astressin appeared to equally inhibit the stress response associated with a CRH injection. However, astressin proved slightly more suitable in inhibiting nicotine-stimulated release of ACTH and corticosterone. Though these preliminary data should be interpreted with caution, astressin displayed some slight advantages over antalarmin in inhibiting nicotine's activation of the HPA axis.

"Short and long-term morphine exposure in GH3 cells lead to alteration in PC-2 activity"

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Objective: Prohormone convertase 2 (PC2), an enzyme found exclusively in neural and endocrine cells, processes a variety of prohormones including proopiomelanocortin (POMC) and pro-ekephalin. As PC2 is critical in the cleavage of the beta-endorphin and enkephalin from POMC and pro-enkephalin, respectively, it is unclear whether the activity of PC2 will be affected by exogenous opioids. Thus, the primary objective of this study was to determine PC2 activity after morphine exposure using GH3 cells expressing mu opioid receptors.

Methods: GH3 cells expressing mu opioid receptors were cultured and exposed to morphine for 0, 1, 3, 6, 12, 24, 48, 96 h. GH3 cells without mu opioid receptors were also cultured and exposed to morphine. Activity was measured at the same time points and in order to serve as

controls. PC2 enzyme activity was measured by a specific enzyme assay and PC2 expression was measured by real-time PCR.

Results: After exposing GH3 cells containing the mu-opioid receptor to morphine, we found that PC2 activity decreased steadily for three hours. Longer than 3 h exposure to morphine, however, showed a steady return towards control levels. In GH3 cells without the mu opioid receptor there is no change in PC2 activity at the times measured. In mu-opioid receptor expressing GH3 cells, PC2 mRNA levels showed a decrease in expression with a nadir at 3 hours, and steadily rose until 24 h. There was a significant decrease in PC2 mRNA levels at 30 min for wild-type GH3 cells lacking the mu-opioid receptor, suggesting that morphine binds the somatostatin receptor.

Conclusion: Our results demonstrate that PC2 activity is suppressed after short-term morphine exposure, but the effect dissipates when drug exposure lasts for more than 12 h. Overall, the present data suggests that alteration in PC2 activity may play a modulatory role in phenomena, such as dependence and withdrawal, mediated by chronic opiate administration.

Trainee Presentations Abstracts:

"Regulation of PC 1/3 and PC2 by Morphine: Implication for the Switch From Drug Use to Drug Abuse"

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Morphine is supposed to regulate prohormone convertases (PC1/3 and PC2) expression via regulation of the active form of cyclic-AMP response element binding protein (CREB), the phosphorylated CREB (CREB-P). Rats were treated with morphine for 1 day or 7 days and PC1/3, PC2 and CREB-P levels were measured by Western blot and immunohistochemistry. Morphine treatment significantly decreased PC1/3, PC2 and CREB-P protein expression in anterior and intermediate pituitary and CREB-P expression in the hypothalamus. In contrast, long-term morphine treatment increased PC1/3, PC2 and CREB-P protein expression in anterior, intermediate pituitary and the hypothalamus, and increased PC1/3, PC2 and CREB-P staining in the anterior pituitary and hypothalamus. The role of the cyclic-AMP response elements (CREs) was explored using a human PC1/3 promoter construct coupled to luciferase. Morphine decreased PC1 promoter activity by 30% and PC2 promoter activity by 79% in GH3 cells stably transfected with the mu opiate receptor. Also morphine decreased PC2 mRNA levels (determined by RT-PCR) and PC2 enzymatic activity in a time- and dose-dependent manner. Our results suggest that opiates demonstrate a biphasic effect on PC1/3 and PC2.

"Repeated Stress Alters the Ability of Nicotine to Activate the HPA Axis"

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Acute nicotine administration causes secretion of adrenocorticotrophic hormone (ACTH) and corticosterone/cortisol and β-endorphin, suggesting that activation of the hypothalamic-pituitary-adrenal (HPA) axis by nicotine may mediate some of the effects of nicotine. It is well documented that stress can increase the risk of drug use and abuse. Thus, we hypothesized that repeated stress increases the ability of nicotine to activate the HPA axis and that the nature of the stress (mild vs. severe) may be critical in subsequent activation of the HPA axis by nicotine. To test our hypothesis, mice were exposed to either mild or severe stress once a day for 5 days and sacrificed 15 min following saline or nicotine on day 8. Trunk blood was collected and assayed for levels of ACTH, β-endorphin and corticosterone using radioimmunoassays. Chronic stress increased the ability of nicotine to cause secretion of corticosterone, ACTH, and β-endorphin. However, repeated stress also increased basal serum corticosterone levels which might have been responsible for the increase in secretion of these hormones induced by nicotine. Present results suggest that chronic stress leads to enhanced basal levels of stress hormones and also an increased sensitivity of the HPA axis to a subsequent nicotine challenge.

"Co-occurring Psychiatric Symptoms and Drug Dependence or Heavy Drinking among HIV-Positive People in the U.S."

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This study sought to establish population-based estimates of the prevalence of co-occurring psychiatric symptoms and either or both drug dependence symptoms or heavy drinking among HIV-positive individuals and to identify the factors associated with such comorbidity. Data from the HIV Cost and Services Utilization Study (HCSUS), to date the only nationally representative sample of HIV-infected adults receiving medical care in the U.S. (N = 2,864), were used to estimate the prevalence of comorbidity in this population. Logistic regression was used to identify the independent influences of sociodemographic and HIV-related variables on comorbidity. We estimate that 13% of HIV-positive people receiving care in the U.S. in 1996 had co-occurring psychiatric symptoms and either or both drug dependence symptoms or heavy drinking. Sixty-nine percent of those with a substance-related condition also had psychiatric symptoms; 27% of those with psychiatric symptoms also had a substance-related condition. The odds of having a comorbid condition were higher for males, heterosexuals and people with more HIV-related symptoms. The odds were lower for people living with AIDS, African Americans, people who were gay or sexually abstinent, those living with a spouse, those aged 50 years or older, and those with private insurance. Comorbid conditions can contribute to a lower quality of life, interfere with adherence to antiretroviral treatment, and increase caregiver burden as well as increase health care costs. Thus it is important for HIV service providers to screen for such comorbidities among their clients and to provide appropriate referrals to treatment and prevention services as needed.

"Provision of substance abuse and other health services by U.S. congregations"

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Background: Health services are commonly provided by religious congregations, particularly in racial/ethnic minority communities; however, limited information is available about congregations that assist persons with substance abuse (SA) and other health problems.

Methods: From a representative sample of 1,236 U.S. congregations, we identified organizational characteristics associated with the provision of 1) both SA and general health services, 2) SA services only, and 3) general health services only.

Results: Five percent of congregations provided both SA and health services, 11% provided SA services only, 9% provided health services only, and 75% provided neither type of service. A multinomial logistic regression model controlling for income sources, congregational size, and other covariates showed that congregations with racial/ethnic minority members were more likely to provide both SA and general health services (RR=3.16; 95% CI=1.36,7.36) and SA

services only (RR=3.67; 95% CI=1.97,6.84) than were congregations with all-white memberships. There was no association between government or private funding sources and any category of program activity.

Implications: Among congregations, race/ethnicity is an important determinant of service provision. The finding on external funding sources also suggests that policies to fund faith-based organizations may not affect the involvement of congregations in serving persons with SA and other health problems.

"Screening for HIV and Drug-related Behaviors Using a Kiosk-based Intervention"

Uyen H. Kao, MPH, Rosemary C. Veniegas, PhD, and Steven Shoptaw, PhD

The data were collected as a part of a demonstration project funded by the Centers for Disease Control and Prevention and the County of Los Angeles, Office of AIDS Programs and Policy, using computerized health kiosks. Four kiosks were placed in various sub-regions of Long Beach based on their relative disease burden for HIV and substance abuse. The sample (N=974) was self-selected and comprised of individuals who utilize the health kiosks between November 2004 and April 2005. The kiosks collected users' demographics and conducted self-directed HIV and substance abuse screening. Majority of kiosk users were African American or Latino with an average age of 33 years. Latino men were more likely to report a perceived risk for drug abuse whereas African American men were more likely to report a perceived risk for HIV. Of those that completed the risk screening module, 39% reported having sex while being high on drugs, 22% using crack cocaine or methamphetamine, 57.6% having unprotected sex with a partner of unknown HIV status and 30.5% with an HIV positive partner during the last 3 months. The findings suggest that kiosk-based intervention have potential value in collecting client information and assessing for HIV and substance abuse risks.

"**What Parents, Adolescents, and Providers Should Know About Alcohol Beverage Types, Household Items Containing Alcohol, and Underaged Drinking"**

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Alcohol is the substance most abused by American young people. Further, alcohol use plays a significant role in all three of the leading causes of death for adolescents: unintentional injury, homicide, and suicide. While there is a plethora of studies on drug-specific use by youth, little information is available regarding alcohol beverage-specific consumption patterns or the extent to which youth are using readily available household items to get drunk.

This presentation will use a "hands-on" didactic approach to give participants the opportunity to experience the challenge in distinguishing between alcohol and non-alcoholic beverages. Participants will also learn which elements to focus on when looking at various beverages (alcoholic and non-alcoholic) and how to determine whether a household product contains alcohol. In addition, there will be facilitated dialogue on collaborative strategies parents, churches, physicians, law enforcement and treatment providers can take to help eliminate underaged drinking.