

NATIONAL HISPANIC SCIENCE NETWORK

Eighteenth Annual International Conference

***“Bridging the Gap Between Basic and Clinical Addiction Science
and the Implications for Drug Policy.”***

Hilton Washington DC/Rockville Hotel & Executive Meeting Center
October 3-5, 2018 🌿 Rockville, M.D.

Mission Statement

The National Hispanic Science Network is dedicated to improving the health equity of Hispanics by increasing the amount, quality, and dissemination of interdisciplinary translational research; and fostering the development and advancement of Hispanic scientists to promote future leaders.

National Steering Committee

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*Co-Chair, NHSN
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*Professor, Clinical Internal Medicine
Director, Center for Reducing Health Disparities
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Margarita Alegria, Ph.D.

*Chief, Disparities Research Unit
Professor, Department of Medicine
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James Anthony, Ph.D.

*Professor, Department of Epidemiology
Michigan State University*

Carlos Bolanos-Guzman, Ph.D.

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Alice Cepeda, Ph.D., M.S.

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Felipe González-Castro, Ph.D.

*Professor, College of Nursing & Health Innovation
Arizona State University*

Flavio Marsiglia, Ph.D.

*Distinguished Foundation Professor of
Cultural Diversity and Health & Director,
Southwest Interdisciplinary Research Center (SIRC)
School of Social Work - College of Public Programs
Arizona State University*

Laura O'Dell, Ph.D.

*Professor, Department of Psychology
The University of Texas at El Paso*

EARLY CAREER LEADERSHIP CHAIR

Jennifer Reingle Gonzalez, Ph.D., M.S.

*Associate Professor, Division of Epidemiology,
Human Genetics, and Environmental Sciences
University of Texas Health Science Center at
Houston*

Welcome from the Conference Chairs

On behalf of the Conference Planning Committee and the Steering Committee of the National Hispanic Science Network (NHSN), we welcome you to the 18th Annual International Conference of the NHSN. Our theme this year is “Bridging the gap between basic and clinical addiction science and the implications for drug policy” in recognition of the important role of science in the development of evidence-based drug policies. This meeting will engage and challenge researchers, and those engaged in policy and community work, to work together to improve health equity by eliminating existing racial/ethnic disparities in health access, quality of care and outcomes.

This year we are excited to be joined by several leaders from the National Institute of Health (NIH), Drs. Eliseo Perez-Stable (Director of the National Institute on Minority Health and Health Disparities), George Koob (Director of the National Institute on Alcohol Abuse and Alcoholism), and Wilson Compton (Deputy Director of the National Institute on Drug Abuse), who will be discussing cutting-edge research as well as future directions for the advancement of science. Our conference will start with a panel on Immigrant Health and Immigration Policy which includes policy analysts, social and health service providers, and researchers. The Conference Planning Committee has also identified several special conference themes that will be covered in the following panels: 1) leveraging advances in alcohol research to inform education policy, 2) translational perspectives on the issue of cannabis reform; 3) trends in tobacco addiction and 3) social aspects of the opioid outbreak. These plenary panels will feature distinguished researchers who have made significant contributions to each of these scientific areas in substance use.

We have also brought back two important past sessions: the “Veterana” talk and grant writing for successful NIH funding. The “Veterana” talk, highlights the work of one of our senior members along with two additional up-and-coming researchers. This year we are honoring Dr. Patricia Molina for her lifetime achievements. Dr. Molina will present her work on the interaction of alcohol with HIV disease from a translational and interdisciplinary approach along with two up-and-coming speakers that will co-present with her on the future of the field. Dr. Albert Avila, Director of the Office of Diversity and Health Disparities (ODHD), National Institute on Drug Abuse, will be leading the grant writing session by sharing key insights regarding strategies for successful NIH funding.

As always, the successful academic trajectory of our early career members is at the heart of our organizational mission and conference. To this end, our program includes career development activities for early career scientists such as an Early Career Investigator Panel, poster session, Peer-Onsite-Distance (POD) mentoring initiative, and an evening social networking event. Additional breakout sessions will provide space to share and discuss scientific research in neuroscience, the risk of substance use disorders after a pain diagnosis, surviving the peer-review journal process, and bridging research and policy.

The planning committee co-chairs depend on a network of individuals who volunteer their time and energy to the NHSN. We would like to give a special thanks to the conference planning committee: Drs. Ahluwalia, Alegria, Arroyo, Bacio, Bolanos-Guzman, Cepeda, Cepeda-Benito, Gonzalez, Iniguez, Marsiglia, Mendez, Mogro Wilson, Natividad, Nowotny, O’Dell, and Souza-Smith. A special thanks as well to all those members who volunteered their time to review abstracts for the breakout sessions and poster session. We want to give special recognition to Betsy Giaimo, Melissa Prestwood and Chloe Ball who provided support and guidance to the conference chairs and committee. We also say goodbye to Betsy Giaimo who has retired this year after providing the NHSN Conference Planning Committee with significant support for the past 10 years. She will be missed. Finally, it is with pleasure that we acknowledge our funders: National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse and National Eye Institute, in addition to Louisiana State University and University of Southern California,

We look forward to an exciting and intellectually invigorating meeting!

Conference Chairs:

Nalini Negi, Ph.D., 2018 NHSN Scientific Conference Co-Chair
Associate Professor, University of Maryland, School of Social Work (nnegi@ssw.umaryland.edu)

Arturo Zavala, Ph.D., 2018 NHSN Scientific Conference Co-Chair
Associate Professor, Department of Psychology, California State University Long Beach (arturo.zavala@csulb.edu)

Wednesday October 3, 2018

12:00 PM–12:15 PM WELCOMING REMARKS (Roosevelt/Madison Room)

Nalini Negi, Ph.D., 2018 NHSN Scientific Conference Co-Chair
Associate Professor, University of Maryland, School of Social Work (nnegi@ssw.umaryland.edu)

Arturo Zavala, Ph.D., 2018 NHSN Scientific Conference Co-Chair
Associate Professor, Department of Psychology, California State University Long Beach
(arturo.zavala@csulb.edu)

12:15 PM–1:45 PM

COMMUNITY SESSION

IMMIGRATION POLICY AND THE HEALTH AND WELL-BEING OF IMMIGRANTS AND THEIR FAMILIES (Roosevelt/Madison Room) (Abstracts p.18)

Chairs: **Nalini Negi, Ph.D.**, Associate Professor, University of Maryland, School of Social Work (nnegi@ssw.umaryland.edu) and **Guadalupe Bacio, Ph.D.**, Assistant Professor, Departments of Psychology and Intercollegiate Chicana/o-Latina/o Studies, Pomona College (Lupe.Bacio@pomona.edu)

PRESENTERS

EPIDEMIOLOGY OF THE SOCIAL DETERMINANTS OF IMMIGRANT MENTAL HEALTH

Andrea Senteno, JD, Legislative Staff Attorney, Mexican American Legal Defense and Education Fund (MALDEF) (asenteno@maldef.org)

Dawnya Underwood, M.S.W., Director, Children's Services, Lutheran Immigration and Refugee Service (dunderwood@lirs.org)

Margarita Alegria, Ph.D., Director, Disparities Research Unit, Department of Medicine, Massachusetts General Hospital, Harvard Medical School (malegria@mgh.harvard.edu)

1:45 PM - 2:00 PM TRANSITION

2:00 PM–3:30 PM

SCIENTIFIC SESSION 1

LEVERAGING ADVANCES IN ALCOHOL RESEARCH TO INFORM EDUCATION POLICY (Roosevelt/Madison Room) (Abstract p.18)

CHAIR: **Judith Arroyo, Ph.D.**, Minority Health and Health Disparities Coordinator, Office of the Director, National Institute of Alcohol Abuse and Alcoholism (NIAAA)/NIH (jarroyo@mail.nih.gov)

PRESENTERS

2:00 PM VALIDATION OF AN ALCOHOL USE SCREENER FOR UNDERAGE YOUTH: IMPLICATIONS FOR SELECTED PREVENTION EFFORTS TO IMPROVE ADOLESCENT HEALTH OUTCOMES

Jonathan Tubman, Ph.D., Professor, Department of Psychology, Vice Provost for Research at American University (jtubman@american.edu)

2:20 PM UTILIZING FMRI-BASED FUNCTIONAL NETWORK CONNECTIVITY TO DEVELOP NOVEL APPROACHES FOR THE DIAGNOSIS OF FETAL ALCOHOL SPECTRUM DISORDER

Carlos Rodriguez, Ph.D., Post-Doctoral Fellow, Vulnerability Issues in Drug Abuse: Career and Transdisciplinary Training Program, The University of Texas at El Paso (ciodri@unm.edu)

2:40 PM DEVELOPMENT OF A CULTURALLY RESPONSIVE ALCOHOL AND HEALTH RISK PREVENTIVE INTERVENTION FOR LATINO EMERGING ADULTS AND THEIR PARENTS

Seth Schwartz, Ph.D., Professor, Public Health Sciences, University of Miami Leonard M. Miller School of Medicine (SSchwartz@med.miami.edu)

3:00 PM SUMMATION: EDUCATIONAL POLICY ISSUES

Charles Martinez, Ph.D., Philip H. Knight Professor, Department of Educational Methodology, Policy, and Leadership, University of Oregon (charlesm@uoregon.edu)

3:30 PM -3:45 PM TRANSITION



3:45 PM–4:45 PM

PLENARY

LATINO HEALTH PARADOX AND DISPARITIES: WHAT IS OUR FUTURE? (Roosevelt/Madison)
Eliseo J. Pérez-Stable, M.D., *Director, National Institute on Minority Health and Health Disparities*

5:00 PM–7:00 PM POSTER SESSION (Potomac Room) (Abstracts p 26-36)

7:00 PM EARLY CAREER MIXER (Offsite)

Thursday October 4, 2018

8:15 AM- 9:45 AM NEW INVESTIGATORS IN DRUG ABUSE RESEARCH (Roosevelt/Madison Room) (Abstracts p.19-20)
 Co-CHAIRS: **Marisela Agudelo, Ph.D.**, *Assistant Professor, Department of Immunology, Florida International University (magudelo@fiu.edu)* and **Eden Robles, Ph.D., M.S.W., BSW**, *Research Assistant Professor, Department of Psychology, The University of Texas at El Paso (erobles9@utep.edu)*

8:20 AM UNDERSTANDING BARRIERS TO SPECIALTY SUBSTANCE TREATMENT AMONG LATINOS
Miguel Pinedo, Ph.D., MPH, *Assistant Professor, Department of Kinesiology and Health Education, University of Texas at Austin (mpinedo@austin.utexas.edu)*

8:40 AM *ME DEJARON BOTADO*: VICTIMIZATION AND DESESPERACIÓN AMONG LATINO DAY LABORERS
Jennifer Siegel, M.S.W., *Graduate Student, School of Social Work, University of Maryland (Jennifer.siegel@ssw.umaryland.edu)*

9:00 AM SEX DIFFERENCES IN GABAERGIC TRANSMISSION IN THE INTERPEDUNCULAR NUCLEUS DURING NICOTINE WITHDRAWAL
Luis M. Carcoba, Ph.D., *Research Assistant Professor, Department of Psychology, University of Texas at El Paso (lmcarcoba@utep.edu)*

9:20 AM CHRONIC INTERMITTENT ETHANOL EXPOSURE IN RATS PRODUCES CHANGES IN MOTIVATION WITHOUT AFFECTING EFFORT-BASED CHOICE WHEN TESTED IN PROLONGED WITHDRAWAL
Claudia G. Aguirre, *Graduate Student, Department of Psychology, University of California at Los Angeles (cgaguirre@ucla.edu)*

9:45 AM–10:00 AM TRANSITION

10:00 AM -11:30 AM

SCIENTIFIC SESSION 2

DENTRO DEL HUMO (INSIDE THE SMOKE): A TRANSLATIONAL PERSPECTIVE ON THE ISSUE OF CANNABIS REFORM (Roosevelt/Madison Room) (Abstract p.20)
 CHAIR: **Luis Natividad, Ph.D.**, *Senior Research Associate, Department of Neuroscience, Scripps Research Institute (lnatividad@scripps.edu)*

10:05 AM INTERACTIVE EFFECTS OF CANNABIDIOL AND Δ^9 -TETRAHYDROCANNABINOL (THC) IN ANIMAL MODELS.
Michael A. Taffe, Ph.D., *Associate Professor, Department of Neuroscience, The Scripps Research Institute (mtaffe@scripps.edu)*

10:30 AM IMPACT OF SEX ON THE ADVERSE AND THERAPEUTIC EFFECTS OF CANNABIS
Ziva D. Cooper, Ph.D., *Associate Professor, Department of Psychiatry, Columbia University Medical Center Division on Substance Abuse, New York State Psychiatric Institute (zc2160@cumc.columbia.edu)*

10:55 AM THE LEGAL LANDSCAPE OF LEGALIZATION AND THE LATINX IMPACT
Lynne Lyman, M.P.A., *California Justice Advocate and Drug Policy Reformer (lynnelyman@gmail.com)*

11:30 AM–12:45 PM MEMBERSHIP LUNCHEON (Roosevelt/Madison Room)

12:45 PM–1:00 PM TRANSITION

1:00 PM -2:30 PM

SCIENTIFIC SESSION 3

THE END OF THE SMOKING EPIDEMIC (Roosevelt/Madison Room) (Abstract p. 21)

CHAIR: **Jasjit S. Ahluwalia, M.D., MPH, M.S.**, Professor, Behavioral and Social Sciences, and Professor, Medicine, Center for Alcohol and Addiction Studies, Brown University School of Public Health and Alpert School of Medicine (jasjit_ahluwalia@brown.edu) and **Antonio Cepeda-Benito, Ph.D.**, Professor of Psychology, The University of Vermont, Burlington (antonio.cepeda-benito@uvm.edu)

1:00 PM

CONSIDERATION OF FACTORS ALTERING THE ABUSE LIABILITY OF NICOTINE

Rick Bevins, Ph.D., Willa Cather Professor & Chair, Department of Psychology, University of Nebraska-Lincoln (rbevins1@unl.edu)

1:30 PM

REDUCING NICOTINE IN CIGARETTES AS A CENTRAL FOCUS OF FDA'S COMPREHENSIVE NICOTINE STRATEGY

Eric Donny, Ph.D., Professor, Department of Physiology & Pharmacology, Director, Tobacco Control Center of Excellence, Wake Forest Health (edonny@wakehealth.edu)

1:55 PM

ACTIONS NEEDED TO ACCELERATE AN END TO SMOKING

Ehsan Latif, M.D., Program Director, Foundation for a Smoke-Free World (ehsan.latif@smoke-free-world.org)

2:30 PM-2:45 PM

TRANSITION

2:45 PM-3:45 PM

BREAKOUT SESSION A**SESSION A1**

INTERNATIONAL LATINO RESEARCH PARTNERSHIP (Regency Room) (Abstract p. 21-22)

CHAIR: **Margarita Alegria, Ph.D.**, Director, Disparities Research Unit, Department of Medicine, Massachusetts General Hospital, Harvard Medical School (malegria@mgh.harvard.edu)

PRESENTERS

IDENTIFYING THE RISK OF SUBSTANCE USE DISORDERS SUBSEQUENT TO PAIN DISORDER DIAGNOSIS

Sheri Markle, Associate Director, Massachusetts General Hospital (smarkle@mgh.harvard.edu)

PREDICTORS OF ADHERENCE TO TREATMENT IN A CULTURALLY CENTERED BEHAVIORAL THERAPY FOR LATINO MIGRANTS: THE IMPORTANCE OF TRUST

Mario Cruz Gonzalez, Ph.D., Research Fellow, Massachusetts General Hospital (macruzgonzalez@mgh.harvard.edu)

SLEEP DISTURBANCE AS A PREDICTOR OF TIME TO DRUG AND ALCOHOL USE TREATMENT IN PRIMARY CARE

Lisa R. Fortuna, M.D. MPH, Assistant Professor, Director, Child and Adolescent Psychiatry Boston University Medical School, Boston Medical Center (lisa.fortuna@bmc.org)

A MULTISITE RANDOMIZED TRIAL OF IIDEA FOR MIGRANT LATINOS WITH COMORBID SUBSTANCE MISUSE AND MENTAL HEALTH PROBLEMS

Margarita Alegria, Ph.D., Director, Disparities Research Unit, Department of Medicine, Massachusetts General Hospital, Harvard Medical School (malegria@mgh.harvard.edu)

SESSION A2

UNDERSTANDING AND SURVIVING THE PEER-REVIEW JOURNAL PROCESS: A Q & A SESSION (Democracy Room) (Abstract p. 22)

CHAIRS: **Virmarie Correa-Fernández, Ph.D.**, Assistant Professor, University of Houston (vcorrea@central.uh.edu) and **Mayra E. Vargas Rivera, M.D.**, Florida International University (mvargasr@fiu.edu)

PRESENTERS

Felipe Gonzalez Castro, Ph.D., M.S.W., Professor, College of Nursing & Health Innovation, Arizona State University (felipe.castro@asu.edu)

Alicia Izquierdo, Ph.D. Associate Professor, Department of Psychology, University of California, Los Angeles (aizquie@psych.ucla.edu)

3:45 PM-4:00 PM

TRANSITION



4:00 PM - 5:00 PM

BREAKOUT SESSION B**SESSION B1**

NEUROSCIENCE DATA BLITZ (Regency Room) (Abstract p.23)

CHAIRS: **Federico Sanabria, Ph.D.**, Associate Professor, Department of Psychology, Arizona State University (Federico.Sanabria@asu.edu) and **Sergio Iñiguez, Ph.D.**, Associate Professor of Psychology, The University of Texas at El Paso (sdiniguez@utep.edu)

PRESENTERS

SEX DIFFERENCES IN INTERMITTENT ACCESS TO VOLUNTARY ALCOHOL CONSUMPTION AND PROBABILISTIC REVERSAL LEARNING

Claudia G. Aguirre, Graduate Student, Department of Psychology, University of California Los Angeles (cgaguirre@ucla.edu)

THE EFFECT OF ZOLMITRIPTAN ON METHAMPHETAMINE CONDITIONED PLACE PREFERENCE

Ryan Cabrera, Undergraduate Student, California State University Long Beach (rcabrera2119@gmail.com)

THE POTENTIAL SIDE EFFECTS OF NOVEL ANTIDEPRESSANT KETAMINE

Daniela Franco, Graduate Student, Department of Psychology, California State University Long Beach (dnlfranco12@gmail.com)

JUVENILE KETAMINE EXPOSURE ALTERS SENSITIVITY TO COCAINE IN A SEX-DEPENDENT MANNER IN ADULTHOOD

Israel Garcia-Carachure, Graduate Student, Department of Psychology, University of Texas at El Paso (igarciar@miners.utep.edu)

FLUOXETINE EXPOSURE DURING ADOLESCENCE DECREASES PREFERENCE FOR COCAINE AND SUCROSE IN FEMALE MICE

Francisco Flores-Ramirez, Graduate Student, University of Texas at El Paso (ffloresram@miners.utep.edu)

RESPONSE INHIBITION CAPACITY IN SHR AND WISTAR RATS: ACQUISITION OF FIXED MINIMUM INTERVAL (FMI) PERFORMANCE AND RESPONSIVENESS TO D-AMPHETAMINE

Federico Sanabria, Ph.D., Associate Professor, Department of Psychology, Arizona State University (federico.sanabria@asu.edu)

SESSION B2

POLICY BREAKOUT (Democracy Room)

CHAIR: **Kathryn Nowotny, Ph.D.**, Assistant Professor, Department of Sociology, University of Miami (kathryn.nowotny@miami.edu)

PRESENTERS

POLICY AND COMMUNITY ENGAGEMENT: PRESENTING SCIENTIFIC FINDINGS IN MEANINGFUL WAYS (Abstract p. 23)

Alexandrea Hatcher, L.M.S.W., Research Associate, Office of Academic Engagement, Drug Policy Alliance (ahatcher@drugpolicy.org)

5:15 PM–6:15 PM

PLENARY

WHAT SCIENCE CAN TELL US ABOUT THE DIAGNOSIS, PREVENTION AND TREATMENT OF ALCOHOL USE DISORDERS (Roosevelt/Madison Room) (Abstract p.23)

George F. Koob, Ph.D., Director, National Institute of Alcohol Abuse and Alcoholism (george.koob@nih.gov)

7:00 PM–10:30 PM DINNER DANCE - (Potomac Room)

Friday October 5, 2018

8:00 AM–9:20 AM

SCIENTIFIC SESSION 4

THE OPIOID EPIDEMIC: ADDRESSING A PUBLIC HEALTH CRISIS THROUGH RESEARCH AND POLICY (Roosevelt/Madison Room) (Abstract p.23-24)

CHAIRS: **Cristina Wilson, Ph.D., M.S.W.**, Associate Professor, University of Connecticut, School of Social Work (cristina.wilson@uconn.edu), **Alice Cepeda, Ph.D., M.S.**, Associate Professor, University of Southern California, School of Social work (alicecep@usc.edu), and **Avelardo Valdez, Ph.D.**, Professor,

University of Southern California, School of Social Work (avelardv@usc.edu)

PRESENTERS

8:05 AM SOCIAL SCIENCE ASPECTS OF THE OPIOID OUTBREAK AND OF OPIOID USE: TOWARDS A RESEARCH AGENDA

Samuel R Friedman, Ph.D., Director, Institute of Infectious Disease Research, National Development and Research Institutes (friedman@ndri.org)

8:30 AM OPIOIDS: WHY WE LOVE AND HATE THEM

Jermaine Jones, Ph.D., Assistant Professor, Psychiatry, Columbia University (Jermaine.Jones@nyspi.columbia.edu)

8:55 AM COMBATING THE OPIOID EPIDEMIC IN BALTIMORE CITY

José A. Rodriguez, Director of Opioid Overdose Prevention, Baltimore City Health Department (Jose.Rodriguez@Baltimorecity.gov)

9:20 AM–9:30 AM TRANSITION

9:30 AM–10:30 AM PERSISTENCE AND GRIT; A MUST IN ORDER TO SECURE NIH FUNDING (Roosevelt/Madison Room) (Abstract p. 24)

PRESENTERS

Albert Avila, Ph.D., Director of the National Institute on Drug Abuse (NIDA) Office of Diversity and Health Disparities (ODHD) (aavila@nida.nih.gov) and **Lynn Morin**, Office of the Director, NIAAA (lynn.morin@nih.gov)

10:30 AM–11:30 AM PEER-ONSITE-DISTANCE (PODS) (Potomac Room)

ORGANIZER:: **Cristina Wilson, Ph.D., M.S.W.**, Associate Professor, University of Connecticut, School of Social Work (cristina.wilson@uconn.edu)

11:30 PM–12:30 PM MENTORING LUNCHEON (Potomac Room)

PRESENTER

James Anthony, Ph.D., Professor, Department of Epidemiology and Biostatistics, Michigan State University (janthony@msu.edu)

12:30 PM–12:45 PM TRANSITION

12:45 PM–1:45 PM

PLENARY

SCIENCE AS A SOLUTION: IMPLICATIONS FOR HEALTH DISPARITIES (Roosevelt/Madison Room) (Abstract p. 24-25)

Wilson Compton, M.D., M.P.E., Deputy Director of the National Institute on Drug Abuse (NIDA), National Institutes of Health

1:45 PM–3:15 PM

SCIENTIFIC SESSION 5

A HISTORICAL PERSPECTIVE OF DRUG ABUSE RESEARCH FROM A VETERANA TO THE NEXT GENERATION OF SCIENTISTS (Roosevelt/Madison Room) (Abstract p.24-25)

CHAIRS: **Nalini Negi, Ph.D.**, Associate Professor, University of Maryland, School of Social Work (nnegi@ssw.umaryland.edu) and **Arturo Zavala, Ph.D.**, Associate Professor, Department of Psychology, California State University Long Beach (arturo.zavala@csulb.edu)

PRESENTERS

1:50 PM ALCOHOL INTERACTION WITH HIV DISEASE: TRANSLATIONAL APPROACH TO UNDERSTANDING MECHANISM & COMORBIDITIES

Patricia Molina, M.D., Ph.D., Rlrichard Ashman Professor & Head, Department of Physiology; Director, Alcohol & Drug Abuse Center, Louisiana State University Health Sciences Center (pmolin@lsuhsc.edu)

2:20 PM DIFFERENTIAL EFFECTS OF ALCOHOL AND SYNTHETIC CANNABINOIDS ON EXTRACELLULAR HISTONE RELEASE AND INFLAMMATION

Marisela Agudelo, Ph.D., Assistant Professor, Florida International University, Department of Immunology (magudelo@fiu.edu)

2:50 PM ALCOHOL-INDUCED ADIPOSE IMMUNOMETABOLIC DYSREGULATION

Flavia Souza Smith, Ph.D., Assistant Professor, Louisiana State University Health Sciences Center, Department of Physiology (fsouz1@lsuhsc.edu)

3:15 PM Conference Closing

Notes

Speaker Biographies



Nalini Negi, Ph.D.

2018 NHSN Scientific Conference Co-Chair

Nalini Negi is an associate professor at the School of Social Work (SSW) in the University of Maryland, Baltimore (UMB). Dr. Negi's research has emphasized the social etiology and mechanisms that confer risk of psychological distress and substance abuse among migrant populations such as Latino transmigrants (migrants who move back and forth between borders) and day laborers and has been funded by the National Institute of Health among others. She has published extensively in scientific journals as well as edited two books, one on social work practice with Latinos by Lyceum Press and one on social work practice with transnational migrants by Columbia University Press. In 2012, Dr. Negi received the National Award for Excellence in Research by a New Investigator from the National Hispanic Science Network. She was also awarded the 2012-2013 Exemplary Faculty of the Year Award for her outstanding teaching by the Student Government Association of the SSW UMB and in 2017 was named the Social Work Educator of the Year by the National Association of Social Workers, Maryland. Dr. Negi received her doctoral degree in social work from the University of Texas at Austin in August 2008. Her dissertation work examined the risk

and protective factors of psychological well-being and substance use among Latino day laborers and received the top honor for a dissertation by the Society for Social Work and Research (SSWR), the largest scientific organization representing social work in the United States. Dr. Negi speaks five languages and has lived in seven countries in five continents.



Arturo Zavala, Ph.D.

2018 NHSN Scientific Conference Co-Chair

Dr. Arturo Zavala is an Associate Professor in the Department of Psychology at California State University, Long Beach. He received his Ph.D. in Behavioral Neuroscience from Arizona State University. Dr. Zavala's research program focuses on the functional consequences of early exposure to psychoactive drugs and later susceptibility to drugs of abuse, as well as the role of serotonin in modulating the effects of drugs of abuse. His laboratory combines neurochemical, molecular, and pharmacological approaches with animal behavioral models to understand the neural basis of addiction. Dr. Zavala has published several research articles examining the neuronal circuitry of addiction in peer reviewed journals and has presented his work at several national and international scientific conferences. Dr. Zavala is also Co-Director of the Building Infrastructure Leading to Diversity (BUILD) program, which aims to increase the number of underrepresented students entering biomedical and health-related research careers. Dr. Zavala has mentored 42 undergraduate and 9 graduate students, of which 18 students have gone on to pursue their Ph.D. in biomedical-related fields.



Margarita Alegria, Ph.D.

Since 2004, Alegria has been a Professor in the Department of Psychiatry at Harvard Medical School, obtaining a dual appointment in the Department of Medicine in 2016. For 14 years prior, Alegria served as a Professor in the Graduate School of Public Health and as the Director of the Center for Evaluation and Sociomedical Research at the University of Puerto Rico. In the summer of 2015, she became the Chief of the Disparities Research Unit at the Massachusetts General Hospital (formerly the Center for Multicultural Mental Health Research at Cambridge Health Alliance, 2002-2015). Alegria's research focuses on the improvement of health care services delivery for diverse racial and ethnic populations, conceptual and methodological issues with multicultural populations, and ways to bring the community's perspective into the design and implementation of health services. In October 2011, she was elected as a member of the National Academy of Medicine in acknowledgement of her scientific contributions to her field. She has also been a recipient of notable awards, such as the Mental Health Section Award by the American Public Health Association (2003), the Health Disparities Innovation Award by the National Institutes of Minority Health (2008), and the Simone Bolivar Award by the American Psychiatry Association (2009). Alegria obtained her B.A. in Psychology from Georgetown University in 1978 and her Ph.D. from Temple University in 1989.



Andrea Senteno

Andrea Senteno is a Legislative Staff Attorney with MALDEF’s Washington, DC office. She is responsible for the organization’s legislative and regulatory portfolios on immigration and voting rights, and assists with litigation in the Southeast Region. She is responsible for MALDEF’s federal immigration policy work which includes issues related to enforcement, immigrant detention, administrative relief, and legislative proposals. She also works to advance a legislative fix to the Voting Rights Act of 1965 following the Supreme Court’s decision in *Shelby County v. Holder*, among other election reform efforts to protect Latino voting rights. Prior to joining MALDEF, Andrea spent time at LatinoJustice PRLDEF, working on voting rights, employment, and immigration issues. She previously worked on immigration litigation while working with the Office of Immigration Litigation within the Department of Justice. She has had a long commitment to public interest work, as well as social and racial justice issues. Prior to attending law school, Andrea advocated for government transparency and accountability in New York, focusing on election reform issues. She received her J.D. from American University Washington College of Law and B.A. from Pitzer College.



Dawnya Underwood

Dawnya Underwood is a visionary leader and expert in child welfare for migrant and refugee children, with over fifteen years’ experience working in child welfare with vulnerable populations. Currently, she serves as the Director for Children and Family Services at Lutheran Immigration and Refugee Service (LIRS), the nation’s second largest refugee resettlement agency. In this role, she works to improve LIRS’s programs for children, identify new areas for programmatic impact, and helps to build LIRS’s position as a thought leader with regard to U. S. policy and program responses to refugee and migrant children. For the past eight years, she has partnered with the federal government, child welfare organizations, and state and local governments to ensure unaccompanied and separated children and families are protected, embraced, and empowered by just and welcoming practices and communities. Dawnya is a respected researcher and co-author of numerous scholarly articles and has been a sought after speaker and presenter on panels and national conferences on unaccompanied children and other vulnerable populations for over a decade.

Dawnya has also traveled extensively to learn and share knowledge. She joined a social work delegation trip to China and also consulted with the Government of Ethiopia to assist them in improving their work around gender equality. She also teaches as an adjunct professor and guest lecturer at several universities including Chicago State University, Boston College , University of Maryland - School of Social Work and University of Maryland Baltimore County.



Jonathan Tubman, Ph.D.

Jonathan G. Tubman, Ph.D. is a Professor of Psychology and Vice Provost for Research at American University in Washington DC. He obtained his doctorate in Human Development and Family Studies in 1990 from Penn State University. His research in Applied Developmental Psychology has focused for several decades on topics at the intersection of adolescent health risk behaviors, mental health, substance use risk reduction and risk for STI/HIV exposure. Much of his collaborative research has focused on health outcomes among adolescents from underserved minority communities, the tailoring of selected interventions to address their unique needs and life challenges, as well as risk reduction strategies for multi-problem youth populations.



Carlos Rodriguez, Ph.D.

Carlos Rodriguez is currently a post-doctoral fellow in the Vulnerability Issues in Drug Abuse: Career and Trans-disciplinary Training Program at the University of Texas, El Paso. In his post-doctoral position he plans to examine the consequence of adolescent anti-depressant exposure on behaviors associated with drug addiction. Before starting the post-doctoral fellowship, he conducted graduate research at the University of New Mexico to characterize the effects of pre-natal alcohol exposure on functional network connectivity in alcohol exposed animals and humans diagnosed with fetal alcohol spectrum disorder (FASD).



Seth Schwartz, Ph.D.

Seth J. Schwartz is Professor of Public Health Sciences at the University of Miami Leonard M. Miller School of Medicine. He is Past President of the Society for the Study of Emerging Adulthood and Director of the University of Miami Ph.D. program in prevention science and community health. Dr. Schwartz has a master's degree in family and child sciences and a Ph.D. in developmental psychology. His research interests are in identity, immigration, acculturation, cultural stressors, alcohol and drug use, and well-being in adolescence and emerging adulthood.



Charles R. Martinez, Jr., Ph.D.

Dr. Charles R. Martinez, Jr. is a clinical psychologist and Philip H. Knight Professor in the Department of Educational Methodology, Policy, and Leadership at the University of Oregon, where he also serves as the founding director of the Center for Equity Promotion. He served as the University of Oregon Vice President for Institutional Equity and Diversity from 2005 to 2011, where he led institutional efforts to develop and implement the first-ever equity and inclusion plan for the University. Dr. Martinez also served as a senior scientist at the non-profit Oregon Social Learning Center where he founded and directed the center's Latino Research Team beginning in 1999. He has served as a publicly elected member of the Eugene, District 4J School Board, and is currently serving as a Governor appointed member and current chair of the Oregon State Board of Education representing Oregon's 4th congressional district. His substantive interests, funded by grants from NIH, Institute of Education Sciences and other funders, center on identifying malleable factors within education and social systems that promote healthy adjustment for families and children, especially those from culturally diverse populations who frequently experience disparities in access and outcomes in these settings.



Eliseo Pérez-Stable, M.D.

Eliseo J. Pérez-Stable, M.D., is Director of the National Institute on Minority Health and Health Disparities (NIMHD) at the National Institutes of Health (NIH). He oversees the Institute's \$289 million budget to advance the science of minority health and health disparities. Under this framework, the Institute conducts and supports research programs to advance knowledge and understanding of mechanisms to improve minority health, identifies and understands health disparities and develops effective interventions to reduce these disparities in community and clinical settings. NIMHD is the lead organization at NIH for planning, reviewing, coordinating, and evaluating minority health and health disparities research activities conducted by NIH Institutes and Centers. NIMHD also promotes diversity in the biomedical workforce, supports research capacity at institutions serving disparity populations, and promotes information dissemination through regular electronic communications, public education outreach, and scientific presentations. Dr. Pérez-Stable's expertise spans a broad range of health disparities disciplines. His research interests have centered on improving the health of racial and ethnic minorities and underserved populations, advancing patient-centered care, improving cross-cultural communication skills among health care professionals, and

promoting diversity in the biomedical research workforce. Recognized as a leader in Latino health care and disparities research, Dr. Pérez-Stable has spent more than 30 years leading research on smoking cessation and tobacco control policy in Latino populations in the United States and Latin America. His collaborations with researchers and public health advocates in Argentina have helped to put tobacco use on the country's public health agenda, raising awareness of tobacco use as a critical public health problem, building capacity for tobacco control policy, and creating opportunities for prevention and treatment measures through physician education and smoking cessation programs. Prior to becoming NIMHD Director, Dr. Pérez-Stable built a career at the University of California, San Francisco (UCSF), where he was a professor of medicine, chief of the Division of General Internal Medicine, and director of the Center for Aging in Diverse Communities (CADC), which is funded by NIH's National Institute on Aging (NIA). Through the CADC, he continued his commitment to developing a diverse workforce in clinical and population science research by mentoring and collaborating with many minority fellows and junior faculty from a variety of disciplines. Dr. Pérez-Stable was also Director of the UCSF Medical Effectiveness Research Center for Diverse Populations, which addresses issues for African Americans, Asians, and Latinos in the areas of cancer, cardiovascular disease, aging, and reproductive health. As a co-principal investigator of the Redes En Acción National Latino Cancer Control Research and Education Network funded by the National Cancer Institute (NCI), Dr. Pérez-Stable spearheaded the development of a research agenda on tobacco control for minority populations in the United States. In addition, he was an NCI-funded Staff Investigator and Assistant Director for Health Care Disparities at the UCSF Comprehensive Cancer Center as well as a member of the NCI and Legacy Foundation's Tobacco Disparities Research Network (TReND).



Miguel Pinedo, Ph.D.

Dr. Pinedo has an invested interest in better understanding the intersection between migration and health. Though migrant health has become an important facet of health research, migration has rarely been examined as a social determinant of health. Dr. Pinedo's work addresses this critical area by focusing on how different migration experiences contribute to health disparities, particularly among Latino populations. Specifically, his work investigates how social- and structural-level factors associated with migration to the US; voluntary and forced migration (e.g., deportation); domestic migration within Mexico; and migration to high-risk environments (e.g., settings with increased availability of alcohol and drugs) relate to the epidemiology of substance abuse, HIV risk, and related harms. A large proportion of his work has focused on Mexican migrants residing on both sides of the US-Mexico border, a high-risk region for alcohol and drug abuse and HIV. Overall, his research underscores the importance of migration-related factors in shaping health behaviors, risk practices, and health outcomes. Prior to joining UT, Dr. Pinedo received his Ph.D. in Global Health from the UC San Diego and completed his postdoctoral training at UC Berkeley. He also previously earned his Master in Public Health from UC Berkeley.



Jenny Siegel, MsW

Jennifer Siegel is a Ph.D. student at the University of Maryland School of Social Work. Her primary research interest is focused on immigrant and refugee integration in communities. She is currently engaged in research examining the psychological well-being and substance use patterns of Latino immigrant day laborers in a new immigrant settlement city. Formerly she served as Refugee Child Protection Coordinator at the U.S. Conference of Catholic Bishops (USCCB) where she monitored national programming for attached and unaccompanied refugee children. Her interest in international social work with migrant populations led Jennifer to the Meheba Refugee Settlement in Zambia, where she was deployed with RefugePoint working as a child protection officer conducting Best Interest Determination (BID) assessments for vulnerable children. She has also served at an AIDS hospice in South Africa, working with children whose caregivers were HIV positive, and at an orphanage in Mexico with orphaned and abandoned children. She holds a Bachelor's and Master's degree in Social Work and is committed to creating just and welcoming communities.



Luis M. Carcoba, M.D.

Luis graduated from the University of San Luis Potosi, Mexico with an M.D. degree. After years of clinical work with substance abuse users in Ciudad Juarez Mexico, and interested in the neurobiological mechanisms mediating pain in opiate users and in the impact of stress on relapse among heroin users, he earned a Ph.D. degree in Pathobiology at the University of Texas at El Paso in 2005. Afterward, he completed a postdoctoral training position with emphasis in Behavioral Neurosciences at Texas A&M University in College Station, TX. Currently, he is a Research Assistant Professor at UTEP and collaborates with Dr. Laura O'Dell in her Neural Basis of Addiction Laboratory. Interested in the neurochemical mechanisms mediating sex differences to nicotine, he expects to extend this line of study, using his previous clinical experience, to understand sex differences among opiate users.



Claudia G. Aguirre

Claudia Aguirre is a Ph.D. student at the University of California- Los Angeles. Her primary research focuses on using animal models with high predictive and face validity to human addiction, specifically Alcohol Use Disorder (AUD). Her research interest is to understand the neural pathways are altered and disrupted by chronic alcohol use and ameliorate or reverse such effects through the use of pharmacotherapies. Prior to her graduate studies she spent several years conducting nicotine and tobacco research in clinical populations at the University of Southern California. There, she led a clinical trial evaluating the potential efficacy of intranasal oxytocin as a smoking cessation treatment, ultimately shaping her interests in the development and testing of pharmacotherapies. She is currently working under the guidance and mentorship of Dr. Alicia Izquierdo and Dr. Lara Ray to investigate the effects of a voluntary consumption alcohol model in rodents on cognitive flexibility using a probabilistic reversal learning paradigm, as well as looking at potential sex differences, and designing comparable human studies in individuals with AUD. Her goal is to use a translational approach by integrating preclinical and clinical models as a more holistic approach to understanding drug addiction.



Michael A. Taffe, Ph.D.

Dr. Michael A. Taffe is Associate Professor at The Scripps Research Institute in the Department of Neuroscience. He obtained his bachelor's degree from The Colorado College in 1990 and went on to complete doctoral studies in Experimental Psychology at the University of California, San Diego in 1995. The work of Dr. Taffe's laboratory is focused on outlining the potential harms and health risks that attend both acute and chronic exposure to popular recreational drugs including M.D.M.A. ("Ecstasy"), alcohol, Δ^9 -tetrahydrocannabinol and, most recently, the designer psychostimulants often called "bath salts". The laboratory is also investigating neurobiological alterations associated with prescription opioid abuse and potential new treatment strategies for Oxycontin dependence. The therapeutic development work extends to evaluating anti-drug vaccines for potential use against methamphetamine and "bath salts" abuse and dependence.



Ziva Cooper, Ph.D.

Dr. Ziva Cooper's primary research focus is translational studies investigating the effects of abused drugs and how these effects differ between males and females. For nearly a decade, she has been building on her training in preclinical models of drug dependence and developing an expertise in human laboratory studies on cannabis, cannabinoids, opioids, and cocaine while maintaining research projects in animal models of substance use. Her current research investigates the direct neurobiological effects of emerging drugs of abuse, including synthetic cannabinoids (i.e., K2, Spice) in laboratory animals and the direct physiological and behavioral effects of cannabinoids as they pertain to both their abuse potential and potential therapeutic effects in double-blind, placebo controlled human laboratory studies.



Lynne Lyman, M.P.A.

Lynne Lyman was one of the central figures responsible for cannabis legalization in California, named in the top 100 most influential people in cannabis nationwide, as well as in the top 5 in Los Angeles. Having spent over five years as the California State Director for the Drug Policy Alliance, Lynne's vision, strategy and exceptional organizing skills helped propel the state to gain critical mass throughout 2016 resulting with 57% of Californians voting Yes on Proposition 64, the Adult Use of Marijuana Act, permanently changing the landscape for cannabis in the sixth largest economy in the world, while reducing or eliminating most cannabis crimes, including retroactively. Lynne's work at Drug Policy Alliance did not start or stop with cannabis. Among other major drug policy reforms secured in her 5 year tenure, Lynne led the successful 2014 effort to equalize the penalties for crack and powder cocaine under California law. Lynne continues her work to advance criminal justice reform and cannabis equity as a consultant in Los Angeles. A native of Los Angeles, Lynne has always stayed close to her passion of being a champion for justice and equality in government systems. She has worked with civil rights organizations, faith-based organizations, universities, as well as government entities addressing social problems confronting inner city communities,

particularly issues relating to racial justice, youth violence and criminal justice system reform. Lynne also has held positions with local, state and federal governments in California and Massachusetts, in addition to managing over a dozen political campaigns for candidates in California, Massachusetts, and Colorado. Ms. Lyman, who is fluent in Spanish, has worked on political campaigns in Central America and addressed the Mexican Congress on cannabis policy. Lynne received her M.P.A. from the Harvard Kennedy School of Government in 2001, where her graduate work focused on the criminal justice system and leadership. She earned her B.A. in Political Science from UC Berkeley in 1996.



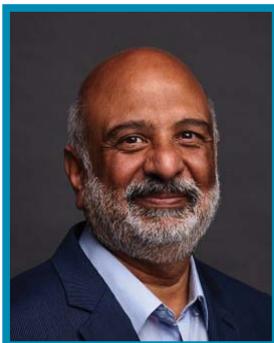
Rick Bevins, Ph.D.

Rick Bevins' research program bridges areas of neuroscience, pharmacology, animal learning and cognition, and psychology. His research team uses preclinical animal models to elucidate the behavioral, neural, and pharmacological factors involved in the etiology of drug abuse. One arm of this research program investigates how behavioral and neuropharmacological processes involved in the perceptibility of a drug stimulus and the behavior it controls changes with learning history. For nicotine, recent research implicates $\alpha\beta_2$ -containing nicotinic acetylcholine receptors and the dorsal medial striatum in acquired appetitive behaviors controlled by the nicotine stimulus. Other empirical efforts focus on novel immune- and pharmacotherapy approaches for nicotine and methamphetamine addiction, understanding the reward-enhancing effects of drugs using behavioral economics, and development of more translationally relevant animal models of addiction. The Bevins' lab is also extending these arms of the research program to include sex differences and nicotine-alcohol interaction.



Eric Donny, Ph.D

Eric Donny, Ph.D. is Professor of Physiology & Pharmacology and Social Sciences & Health Policy at Wake Forest School of Medicine. Dr. Donny's expertise spans from animal and human behavioral pharmacology to the regulatory science of tobacco control. His recent work focuses on understanding the role of nicotine in tobacco use and dependence. Dr. Donny directs the NIDA-funded Center for the Evaluation of Nicotine in Cigarettes (CENIC), which aims to assess the potential impact of regulated reduction of the nicotine content of cigarettes as a means of improving the public health.



Ehsan Latif, M.D.

As program director, Dr. Ehsan Latif is responsible for overseeing the strategy and execution of global initiatives that support smoking cessation and harm reduction.

Dr. Latif has more than 20 years of experience managing the development and implementation of cohesive strategies to achieve public health gains by linking global health priorities to the needs on the ground. Previously, he served as senior adviser for non-communicable diseases and director of tobacco control at the International Union Against Tuberculosis and Lung Disease, managing global teams across India, China, Singapore, Mexico, Bangladesh, Philippines, Vietnam, Pakistan, Brazil and Chad. His work entailed providing leadership for planning, organizing and prioritizing focused interventions for tobacco control to ensure delivery of strategic goals through collaboration.

In his early career, he was responsible for the development of the National Health Policy for Pakistan and served as a main contributor of the non-communicable diseases debate in the early 2000s. His work has since involved capacity building and provision of grants to governments, civil society organizations, universities and researchers. He recently led and managed US\$10M program to support policy development

for tobacco control in low- and middle-income countries faced with highest burden of disease caused by tobacco use.

Dr. Latif has served on the boards of several public health entities, including The Framework Convention Alliance, the Non-Communicable Disease Alliance, and the Global Smoke Free Partnership. He is also a member of various international groups working on lung health and tobacco control setup under the Framework Convention on Tobacco Control secretariat and the World Health Organization.

Dr. Latif is originally from Pakistan and now resides in Scotland. He holds an M.D. from Punjab Medical College and an MPH from London School of Hygiene and Tropical Medicine.

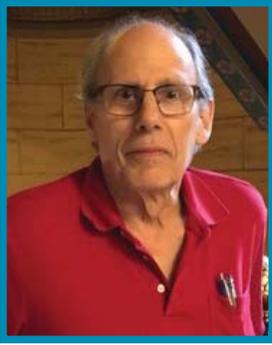


George F. Koob, Ph.D

George F. Koob, is Director of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) as of January 27, 2014. As NIAAA Director, Dr. Koob oversees a wide range of alcohol-related research, including genetics, neuroscience, epidemiology, prevention, and treatment.

As an authority on alcoholism, drug addiction and stress, he has contributed to our understanding of the neurocircuitry associated with the acute reinforcing effects of alcohol and drugs of abuse and the neuroadaptations of the reward and stress circuits associated with the transition to dependence. Dr. Koob has published over 700 peer reviewed papers and several books including the "Neurobiology of Addiction," a comprehensive treatise on emerging research in the field, and a textbook for upper division undergraduates and graduate students called "Drugs, Addiction and the Brain." He has mentored 11 Ph. D students and over 80 post-doctoral fellows.

He received his Ph.D. in Behavioral Physiology from Johns Hopkins University in 1972. He spent much of his early career at the Scripps Research Institute as the Director of the Alcohol Research Center, and as Professor and Chair of the Scripps' Committee on the Neurobiology of Addictive Disorders. He has also served as a researcher in the Department of Neurophysiology at the Walter Reed Army Institute of Research and the Arthur Vining Davis Center for Behavioral Neurobiology at the Salk Institute for Biological Studies. Dr. Koob is the recipient of many honors, including membership in the National Academy of Medicine and award of the Legion of Honor (France).



Samuel R. Friedman, Ph.D.

Samuel R. Friedman, Ph.D is the Director of the Institute for Infectious Disease Research at the National Development and Research Institutes in New York, NY, as well as the Associate Director of the Infectious Disease, Epidemiology and Theory Core (and Senior Theorist) at the Center for Drug Use and HIV Research. He has authored of over 500 publications on HIV, STI, and drug use epidemiology and prevention. His honors include the International Rolleston Award of the International Harm Reduction Association (2009), a NIDA Avant Garde Award, the first Sociology AIDS Network Award for Career Contributions to the Sociology of HIV/AIDS (2007), and a Lifetime Contribution Award, Association of Black Sociologists (2005). He is a widely published poet.



Jermaine Jones, Ph.D.

Jermaine Jones is a Research Scientist and Assistant Professor with the Division on Substance Use Disorders at the New York State Psychiatric Institute and Columbia University Medical Center. He completed his Ph.D. with the Psychopharmacology Laboratory at American University investigating the abuse of cocaine and alcohol in rodent models. As a post-doctoral fellow, he joined Columbia's Division on Substance Use Disorders. In this time, his work with the Opioid Research Laboratory focused on testing of novel medications for opioid abuse and dependence and understanding the complex interplay of factors that mediate and modulate the abuse potential of opioid drugs. As an associate professor, he seeks to incorporate genetic techniques into traditional human laboratory methodologies, in order to improve our understanding of genetic involvement in substance use disorders. His current research also focuses of novel harm reduction strategies to combat opioid overdose.



José A. Rodriguez

José A. Rodriguez is the Director of Opioid Overdose Prevention at the Baltimore City Health Department. In this capacity, he manages, and coordinates all overdose-related work including that performed by the Community Risk Reduction Services, Overdose Fatality Review, the Fentanyl Task Force, and other staff who may work in the field of overdose prevention and response. José has a consistent record of coalition building and working on legislative issues with ten years of combined experience in a health professional association, and at the federal and state level. Prior to joining the Health Department, he was the Manger of Governmental Affairs at the American Dental Hygienists' Association, Special Assistant to U.S. Secretary of Labor Hilda L. Solis, and Legislative Assistant to Congressman Ed Perlmutter (CO-7) in the U.S. House of Representatives. Originally a North Carolina native, José received his bachelor's in liberal arts with a concentration in public advocacy from DePaul University.



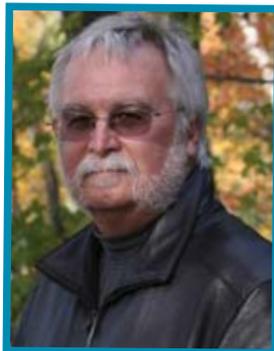
Albert Avila, Ph.D.

Dr. Albert Avila is the Director of the Office of Diversity and Health Disparities (ODHD) within the National Institute on Drug Abuse (NIDA). There, he leads and develops the diversity and health disparities capacity building efforts for NIDA and provides guidance to the NIDA Director on related initiatives. His primary goal for the NIDA ODHD is to enhance the number of underrepresented scientists conducting drug abuse research and receiving independent grant support. In addition, he works across NIDA on health disparities research initiatives. Dr. Avila received his doctorate in pharmacology from Georgetown University during which he investigated the effects of cocaine, withdrawal, and stress on the neuroimmune response. Following his postdoctoral training in pain neurotransmission at the National Institute of Dental and Craniofacial Research (NIDCR), he became an Intramural Training Director, leading programs for pre and post-doctoral trainees, and subsequently a Health Scientist Administrator at NIDCR managing extramural research training and career development programs. He joined NIDA in 2008, where he served as a Program Official for five years in the Division of Neuroscience and Behavior and managed a grant portfolio in the areas of neuroimmunology, psychopharmacology, HIV and research training as they relate to drug abuse.



Lynn Morin, M.A.

Lynn Morin, M.A. began her National Institutes of Health (NIH) career in 2000 as a Program Analyst for the National Institute on Neurological Disorders and Stroke (NINDS) in the combined Cognitive Neuroscience and Channels, Synapses and Circuits clusters. She joined the National Institute on Alcohol Abuse and Alcoholism in 2011 assisting in the minority health and health disparities efforts, and currently functions as the Training and Diversity Programs Coordinator, managing training, education and outreach. Her responsibilities focus on providing research investigators at various levels with information on navigating the NIH's complex world of grant submission and review. She also assists the Institute in their efforts related to increasing diversity in the biomedical research workforce, managing many diversity programs such as diversity supplements; as well as aids in numerous trans-NIH committees on the issue. Lynn graduated from George Mason University with a B.S. in Industrial/Organizational Psychology where she worked in a laboratory investigating leadership characteristics, risk taking behavior and violence in the workplace. Her graduate program at George Mason was spent working and running a laboratory investigating an animal model of substance abuse. Her dissertation work looked at prenatal alcohol exposure and later cocaine self-administration assessing both behavioral learning models as well as hippocampal changes in neuronal connectivity.



James Anthony, Ph.D., MSc

Dr. James C. (Jim) Anthony is currently a Professor of Epidemiology and Biostatistics in the College of Human Medicine at Michigan State University. He earned his Ph.D. (1977) from the University of Minnesota Graduate School. His research accomplishments appear in more than 300 published articles and books, and have been recognized in awards and honors, including designation as a "highly influential" contributor to the research literature of "psychology/psychiatry" and "general social sciences" based on epidemiology studies of neuropsychiatric and other behavioral disturbances. Dr. Anthony is an NIH Senior Scientist awardee, with a K05 Senior Scientist award to support his research and mentorship activities, as well as continuous NIH R01 award support since the early 1980s. He has also been the founding director for NIDA-funded drug dependence epidemiology training programs for US citizens and residents at Johns Hopkins University and at Michigan State University, an NIH-funded research training program for new investigators from Latin America (in collaboration with Universidad Peruana Cayetano Heredia in Lima, Peru), and an NIH-funded National Hispanic Science Network mentoring program for early career stage investigators.



Wilson Compton, M.D., M.P.E.

Wilson M. Compton, M.D., M.P.E. is Deputy Director of the National Institute on Drug Abuse (NIDA) of the National Institutes of Health. NIDA supports most of the world's research on health aspects of drug abuse and addiction related to preventing drug abuse, treating addiction and addressing serious health consequences of drug abuse, including related HIV/AIDS and other conditions. Dr. Compton received his undergraduate education at Amherst College and his medical education at Washington University in St. Louis. Over his 25 year career, Dr. Compton has achieved multiple scientific accomplishments. He is author of more than 150 articles, including widely cited papers on the opioid crisis; is an invited speaker at multiple high-impact venues, and is the leader or collaborator on multiple high-impact projects. Of note, he was a member of the DSM-5 Revision Task Force and member of the DSM5 Substance Related Disorder workgroup, and he led the development of the Population Assessment of Tobacco and Health (PATH) study, a large scale longitudinal population study with 45,971 study subjects ages 12 and older that assesses the impact of tobacco regulations in the United States. Over his career, Dr. Compton has received multiple awards, including the American Psychiatric Association's Senior Scholar Health Services

Research Award in 2008, the Health and Human Services Secretary's Awards for Meritorious Service in 2013 and Distinguished Service in 2014, an FDA Cross-Cutting Award in 2017, and the National Association of Addiction Treatment Providers James W. West M.D. Quality Improvement Award in 2018.



Patricia Molina, M.D., Ph.D.

Dr. Molina completed her M.D. training at the Universidad Francisco Marroquin in Guatemala, Central America. Thereafter, she pursued a Ph.D. in Physiology at LSUHSC and subsequent postdoctoral work at Vanderbilt University. She progressed through the academic ranks initially as an Assistant Professor of Surgery and Physiology at the State University of New York, Stony Brook and subsequently as Director of Surgical Research at North Shore University Hospital. Since becoming a faculty member at LSUHSC, Dr. Molina has obtained tenure and promotion to the rank of Professor, and has been named the Richard Ashman, Ph.D. Professor in Physiology. On September 2008, she was appointed Department Head for Physiology. Dr. Molina's research has been funded continuously since completing her Ph.D. degree. Dr. Molina is the Co-Chair for the National Hispanic Science Network and Past President of the American Physiological Society. She is the PI of the LSUHSC Comprehensive Alcohol Research Center and NIAAA-funded T32. Research in her laboratory focuses on the impact of alcohol and drug abuse on the behavioral, metabolic, and immune consequences of HIV/AIDS. Dr. Molina was featured by the New Orleans Magazine as one of the 2015 New Orleans Top Female Achievers. Her dedication to mentoring has been recognized by the Outstanding Mentor Award from the NHSN and the Clifford Barger Award for Mentoring of Underrepresented Minorities from APS.



Marisela Agudelo, Ph.D.

Dr. Agudelo is an early career investigator who completed her graduate dissertation in cannabinoid research and immunology fields under the mentorship of Dr. Thomas Klein in the Morsani College of Medicine at the University of South Florida. Her graduate studies focused on analyzing the effects of cannabinoids on immunoglobulin class switching in B lymphocytes. In 2009, she joined the Department of Immunology at the Herbert Wertheim College of Medicine at Florida International University (FIU) as a postdoctoral fellow under the mentorship of Dr. Madhavan Nair. In 2012, she competed successfully for external funding and secured K99/R00 project from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to study the epigenetic mechanisms underlying alcohol effects on human dendritic cells. She continued her academic career at FIU and she is currently a tenure-track Assistant Professor in the Department of Immunology and Nano-Medicine. Current research initiatives in her laboratory focus on studying the impact of alcohol and synthetic cannabinoids on the human immune system using several immunological techniques including single cell imaging flow cytometry. She has been an active member of NHSN since 2013 and she is a strong supporter of several programs for underrepresented minorities at FIU including the MARC U*STAR, QBIC, RISE, McNair, and FSTAR. Her laboratory serves for the training and mentoring of students from different career levels and diverse backgrounds. Currently, work in her laboratory is funded by NIAAA, Department of Immunology, Herbert Wertheim College of Medicine, Office of Research and Economic Development at FIU, and pilot funds from Dr. Wertheim and Nicole Family Foundation.



Flavia Souza-Smith, Ph.D.

Flavia Souza-Smith received a bachelor's in Physical and Respiratory Therapies from EMESCAM University in Brazil. She received her master's and Ph.D. in Physiological Sciences from the Federal University of Espirito Santo, Brazil, but performed her Ph.D. research in the Department of Pharmacology at LSUHSC. In 2009, she joined the Department of Physiology at LSUHSC as a postdoctoral fellow. After completing her fellowship, she was hired as an instructor of physiology and has since been promoted to the rank of assistant professor. Flavia's Ph.D. research focused on vascular remodeling in diabetes and her postdoctoral studies focused on alcohol effects on lymphatic myogenic response and measurements of isolated lymphatic cytosolic calcium. As an instructor, her focus was lymphatic vessel hyperpermeability following alcohol intoxication, as well as the metabolic consequences of the interaction between mesenteric lymphatic vessel leakage and perilymphatic adipose tissue. Currently, she has two lines of research: 1) the immunometabolic consequences of alcohol-induced lymphatic leakage into perilymphatic adipose tissue, funded by NIAAA and 2) the mechanisms of gonadal hormone loss and high fat diet on lymphatic leakage and the metabolic consequences, funded by an intramural pilot grant.

Abstracts for Oral Presentations Wednesday 3 October 2018

12:15 PM - 1:45 PM

COMMUNITY PANEL: IMMIGRATION POLICY AND THE HEALTH AND WELL-BEING OF IMMIGRANTS AND THEIR FAMILIES

Nalini Negi and Guadalupe Bacio

Leaders in the areas of policy, community, and academic research (Dawnya Underwood, M.S.W., Lutheran Immigrant and Refugee Services; Andrea Senteno, JD, MALDEF; and Margarita Alegria, Ph.D., Harvard Medical School) will discuss immigrant well-being and health. Panelists will address how recent changes in immigration policy and practice have impacted the health of immigrants and their families. This panel will also explore best approaches in research and practices to improve health and well-being among this under-served and vulnerable population.

2:00 PM - 3:30 PM

LEVERAGING ADVANCES IN ALCOHOL RESEARCH TO INFORM EDUCATION POLICY

Judith Arroyo

This panel will highlight the educational policy implications of alcohol research. Dr. Jonathan Tubman will present for his group on longitudinal data collected among adolescents in Miami and suburban DC using a two-item screening tool designed specifically to be employed in a youthful population by NIAAA and the American Academy of Pediatrics. The screener performed better than other screeners developed with other populations in mind; scores were correlated with other measures of substance use, DUI behaviors, externalizing behaviors and some forms of sexual risk behaviors. Dr. Carlos Rodriguez will present his innovative research on a laboratory based method of generating animals with prenatal alcohol exposure. This research holds promise for the development of novel, non-invasive, MRI-based diagnostic methods for Fetal Alcohol Spectrum Disorder (FASD), the number one cause of preventable cognitive intellectual disability. Finally, Dr. Seth Schwartz will present on the development and early piloting of a multi-component drinking and risky health behavior prevention intervention. This program, with includes culturally specific assets, will be administered in urban and rural Latino populations in Florida and Oregon. The educational policy issues of this diverse alcohol research will be elucidated by Dr. Charles Martinez, who is the current Chairperson of the Oregon State Board of Education, after the three papers have been delivered.

VALIDATION OF AN ALCOHOL USE SCREENER FOR UNDERAGE YOUTH: IMPLICATIONS FOR SELECTED PREVENTION EFFORTS TO IMPROVE ADOLESCENT HEALTH OUTCOMES - Jonathan Tubman

In this presentation, we review cross-sectional and longitudinal data supporting the validity of a brief two-item screener for underage alcohol use developed by National Institute on Alcohol Abuse and Alcoholism and the American Academy of Pediatrics. This multi-site evaluation study included a predominantly Hispanic/Latino and African-American sample of 757 6th, 8th, and 10th graders (43% female; Mage = 13.73 years, SD=1.59 at baseline), recruited from middle and high schools in Miami and suburban Washington DC. Cross-sectional data, modeled via SEM, demonstrated that adolescents classified into higher risk groups based on their own or peers' underage alcohol use reported progressively greater alcohol use and misuse during the last 90 days. Screener items outperformed other widely used screeners examined (Meca et al., 2017). Screener scores were also significantly correlated with other measures of substance use, DUI behaviors, externalizing behaviors and some forms of sexual risk behaviors (Tubman et al., 2018). Longitudinal analyses focus on establishing the predictive validity of the two-item screener for clinically significant alcohol use problems, negative consequences of alcohol use and use of other substances. Discussion will focus on increasing the use of the NIAAA/AAP brief alcohol screener in school, health care and community settings in underserved communities, as

well as how the screener can be utilized in selected prevention efforts to improve adolescent health outcomes.

UTILIZING FMRI-BASED FUNCTIONAL NETWORK CONNECTIVITY TO DEVELOP NOVEL APPROACHES FOR THE DIAGNOSIS OF FETAL ALCOHOL SPECTRUM DISORDER

Carlos Rodriguez

Fetal Alcohol Spectrum Disorder (FASD), a range of morphological and neurobehavioral conditions due to prenatal alcohol exposure, is the number one cause of preventable intellectual disability. To make matters worse, FASD is lifelong, has no cure, and treatment options are limited. Human subjects FASD research is complicated by several confounding variables that include a mothers' age, nutrition, stress, socio-economic status, and co-exposure to additional substances of abuse. This has led investigators to develop animal models of prenatal alcohol exposure that overcome these challenges. In this presentation, a method of generating animals with prenatal alcohol exposure will be described. Next, the results of a study that examined functional network connectivity by applying independent components analysis to resting-state fMRI data will be presented. Finally, preliminary data demonstrating the accuracy, sensitivity, and specificity rates of a support vector machine classifier's ability to discriminate alcohol-exposed patterns of functional network connectivity from healthy controls will be discussed. This research holds promise for the development of novel, non-invasive, MRI-based diagnostic methods for FASD.

DEVELOPMENT OF A CULTURALLY RESPONSIVE ALCOHOL AND HEALTH RISK PREVENTIVE INTERVENTION FOR LATINO EMERGING ADULTS AND THEIR PARENTS - Charles R. Martinez, Jr., Seth J. Schwartz,

The early emerging adulthood period (between ages 18-20) is a time of great transition and experimentation in terms of personal identity development, social relationships, and behavior. Few interventions exist that are designed to support positive development and healthy outcomes among this age group and that consider the influence of family and cultural context. In this presentation, we will describe the development and initial piloting of a multi-component intervention designed to prevent underage binge drinking and related health risk behaviors among Latino emerging adults. The program is unique in terms of its focus on the risk-buffering potential of positive cultural identity development and the integration of a parent component that harnesses family cultural assets in promoting healthy adjustment for emerging adults. The unique design includes developing, refining, and pilot testing the intervention across two very different contexts (urban versus rural) and Latino subgroups (primarily Cuban, Nicaraguan, Venezuelan, and Colombian in Florida versus primarily Mexican in Oregon). Our design permits examination of the extent to which the intervention has the potential to be efficacious across a range of contexts and Latino subgroups. The presentation will focus on: (1) the process of developing the intervention involving both emerging adults and their parents, (2) the unique ways in which culturally specific assets are integrated into the intervention, and (3) the potential prevention policy implications in terms of how systems. (e.g., higher education) might better address health risk behavior from an assets policy framework.

3:45 PM - 4:30 PM

PLENARY LATINO HEALTH PARADOX AND DISPARITIES: WHAT IS OUR FUTURE?

Eliseo Perez-Stable

Thursday 4 October 2018

8:15 AM – 9:45 AM

NEW INVESTIGATORS IN DRUG ABUSE RESEARCH

Marisela Agudelo and Eden Robles

UNDERSTANDING BARRIERS TO SPECIALTY SUBSTANCE TREATMENT AMONG LATINOS - Miguel

Pinedo (1), S. Zemoré (2), R. De Guzman (2), S. Rogers, (1) University of Texas at Austin, (2) Alcohol Research Group (mpinedo@austin.utexas.edu)

National studies have documented that Latinos are less likely to use specialty substance abuse treatment (e.g., rehabilitation programs, in/out-patient services) than other racial/ethnic groups. Researchers have largely assumed, and widely accepted, that Latinos face greater barriers to treatment than Whites. However, few national studies have explicitly examined barriers to treatment by race/ethnicity, and current results are inconclusive. The purpose of this study was to gain a better understanding of barriers to specialty substance abuse treatment among Latinos. In 2017, in-depth qualitative interviews were conducted with 36 White, Black, and Latino participants who met eligibility criteria for a recent substance use disorder. Participants were recruited via online ads and screened for eligibility through an online survey. Participants were purposively sampled based on race/ethnicity, gender, past treatment history, and substance use severity. Interview questions were grounded in the Theory of Planned Behavior (TPB): Participants were asked about treatment-related barriers in the domains of attitudes, subjective norms, and perceived control. Interviews were transcribed verbatim and coded by two independent coders. Barriers were compared across all interviews and by race/ethnicity. Results suggested that Latinos experience important barriers in the areas of attitudes and subjective norms. that have been documented little or not at all. Compared to other racial/ethnic groups, Latinos were more likely to describe cultural barriers (e.g., "treatment is something that is not accepted in my culture," "providers do not understand my cultural background") as reasons for avoiding treatment. Other emergent barriers in Latinos' narratives included treatment stigma (e.g., "treatment is for people that have 'hit rock bottom'"), concerns about treatment's focus on abstinence (e.g., "I didn't want to be judged for not wanting to stop completely"), and lack of perceived family support (e.g., "I was afraid that my family would judge me"). Specialty substance abuse treatment services have been found to be effective regardless of race/ethnicity. Understanding why Latinos use specialty treatment at low rates is key to reducing existing racial/ethnic disparities related to substance abuse. Findings point to several malleable factors that can be used to inform interventions aimed at increasing treatment utilization among Latinos.

ME DEJARON BOTADO: VICTIMIZATION AND DESESPERACIÓN AMONG LATINO DAY LABORERS

Jenny Siegel, Nalini Negi, Marilyn Calderon, Emilie Thomas, Gabriel Fiallos, University of Maryland (Jennifer.siegel@ssw.umaryland.edu)

Latino immigrant men employed as day laborers in the informal market are often employed in dangerous work that is often outside of the protection of labor standards. The social vulnerability of Latino day laborers (LDLs) is exacerbated by their undocumented immigrant status which renders them vulnerable to unscrupulous employers who exploit this population's distrust and fear of the police and other authorities. While there is an emergent body of quantitative research indicating high levels of victimization among Latino immigrants using national data sets, there is little understanding regarding how LDLs themselves describe and experience victimization. To this end, this study aims to provide an in-depth qualitative exploration of the different types of victimization experienced by LDLs as well as describe associated consequences on their health and well-being. Ethnographic methods with adaptive

sampling methodology, field intensive outreach and targeted snowball sampling were used in the parent study of the drug use behaviors of LDLs in Baltimore. In-depth interviews were conducted lasting 60-90 minutes, which were audio recorded and transcribed verbatim in Spanish. For this current study, data from non-drug users (no drug use in the last year; n=25) was used to analyze victimization experiences and associated health and well-being consequences. Thematic analysis with elements of Consensual Qualitative Research (Hill, 1997) was used to analyze findings. A vast majority of the sample consisted of single, undocumented immigrant men from Mexico and Central America. Many reported experiencing feelings of discrimination and social isolation due to long periods of separation from family in country of origin as well as lack of stable attachments in the US. Approximately 87% of the sample reported experiencing wage theft or theft of wages for work rendered. Others reported victimization from police, merchants, and others in the community. Yet, glaringly, 70% of the LDLs in the sample did not know where to report these types of abuses or where they could find assistance. Such a lack of information and/or fear of reporting crime to police was largely contextualized by the lack of Spanish language services and outreach workers in the new immigrant settlement of Baltimore. Without access to social safety net programs or social and health services, many participants relayed that these high levels of victimization and stress led to feelings of desesperación or psychological distress. Findings highlight the importance of city-wide and non-profit street level outreach to build trust with this population as well as engage in workers' rights education to minimize continued victimization. Findings further underscore the critical role of undocumented immigration status as an important risk factor heightening social vulnerability.

SEX DIFFERENCES IN GABAERGIC TRANSMISSION IN THE INTERPEDUNCULAR NUCLEUS DURING NICOTINE WITHDRAWAL

Luis M. Carcoba, V. L. Correa, R.J. Flores, M. García-Arreguín, L.E. O'Dell, Dept. of Psychology, University of Texas at El Paso (lmcarcoba@utep.edu)

This study compared sex differences in GABAergic markers of nicotine withdrawal in the interpeduncular nucleus (IPN). Changes in GABAergic systems were compared using in vivo microdialysis to assess GABA release, and RT-qPCR methods to compare changes in gene expression of GABA-A and B receptor subunits. The study included male and female rats that were exposed to nicotine for 14 days. In the dialysis study, rats were implanted with a microdialysis probe in the IPN, and the next day GABA levels were assessed following administration of a nicotine receptor antagonist to precipitate withdrawal. In the gene expression study, the IPN was dissected and GABA-A2 and B1 subunit mRNA levels were assessed one hour after precipitated nicotine withdrawal. The results revealed that GABA systems were altered in the IPN of females during withdrawal but not males. Specifically, females displayed a profound increase in GABA-B expression but not in males. Females and males displayed an increase in GABA-A receptor mRNA levels in the IPN during withdrawal. These data suggest that GABAergic systems in the IPN play a role in promoting the behavioral effects of nicotine withdrawal in female rats.

CHRONIC INTERMITTENT ETHANOL EXPOSURE IN RATS PRODUCES CHANGES IN MOTIVATION WITHOUT AFFECTING EFFORT-BASED CHOICE WHEN TESTED IN PROLONGED WITHDRAWAL

Claudia G. Aguirre (1), Y. Segura (1), S. Kolli (1), V. Marty (2), I. Spigelman (2), A. Izquierdo (1), (1)Department of Psychology, UCLA, (2)School of Dentistry, UCLA (cgaguirre@ucla.edu)

Preclinical studies show that chronic exposure to alcohol produces changes ranging from deficits in spatial discrimination and reversal learning (Fernandez et al. 2016, 2017). To our

knowledge there has been limited investigation of alcohol withdrawal on effort-based choice in animals (Cocker et al., 2012). Indeed, while much is known about the effects of drug experience on responding to delay costs (i.e. delay discounting), there have been relatively fewer investigations of the effects of alcohol experience on effort costs (i.e. effort discounting). Rats that underwent withdrawal from weeks of chronic intermittent ethanol exposure that were later tested for motivation and effort-based choice. One group of rats was placed into alcohol vapor chambers allowing for intermittent delivery of vaporized alcohol 12 hours daily for 6 weeks (n=16). Control rats were air-exposed in the same room (AIR, n=16). Blood alcohol levels (BALs) were measured in the EtOH group (142.3 ± 20.5 mg/dl). After 1 week, they were then tested on progressive ratio (PR) responding for sucrose pellets, and after reaching stable responding, allowed to freely select between a high effort, preferred option (PR lever pressing for sucrose pellets) versus a low effort, less preferred option (freely-available lab chow). We found EtOH rats took significantly longer to reach stable performance on PR (sessions to criterion: 7.1 ± 0.7 , EtOH; 4.4 ± 0.7 , AIR), indicative of increased variability in day-to-day motivation to work. The number of sessions to reach criterion was correlated with BAL ($r=0.387$, $p<0.05$). However, when EtOH rats were presented with a choice, they selected among options comparably to the AIR group. Taken together, these results suggest a more specific effect of chronic intermittent EtOH exposure on destabilizing motivation levels, but not on the evaluation of cost in effort-based decision-making. Ongoing studies employ a voluntary alcohol consumption model. In addition, we are studying if there are sex differences in alcohol consumption and subsequent performance on behavioral tasks since most investigations have been conducted mostly in male, not female animals.

10:00 AM - 11:30 AM

SCIENTIFIC SESSION 2

DENTRO DEL HUMO (INSIDE THE SMOKE): A TRANSLATIONAL PERSPECTIVE ON THE ISSUE OF CANNABIS REFORM - Luis A. Natividad

We are entering a defining period in cannabis research, given the recent shift towards state-legal access to medicinal and recreational marijuana. At the same time, there is much confusion surrounding the dynamics of state and federal regulation of marijuana use, as well as debate on the medicinal and addictive properties of the major cannabis constituent, delta-9-tetrahydrocannabinol. The question of whether findings in the laboratory inform public policy is pervasive in addiction research; however, as we stand at the cusp of nationwide cannabis reform, it is perhaps of critical importance that we understand where these fine lines are drawn, and what challenges legalization may bring to the U.S. society. The goal of this panel will be to sweep broadly across scientific platforms: in both animals and humans, emphasizing the novel approaches being used to generate timely information on the long-term effects of cannabis use. Given what we are learning in the laboratory, we will then discuss what may be filtering into legislative and law enforcement practices so early into the legalization process. First, Dr. Michael Taffe (Associate Professor, The Scripps Research Institute) will present his research in animal models evaluating an important constituent of cannabis (i.e., cannabidiol) that has been shown to contain therapeutic properties. To offer a clinical perspective on the ongoing debate of cannabis' abuse liability, Dr. Ziva Cooper (Associate Professor, Columbia University) will present her work exploring sex differences in the clinic using placebo-controlled, double-blind studies. Finally, Lynne Lyman (former California State Director, Drug Policy Alliance) will broaden the biomedical perspective with an evaluation of the changing legal landscape of cannabis reform, focusing on socio-economic and political factors that are driving legislative decision-making, as well as evidence of harm reduction in Latinx populations.

INTERACTIVE EFFECTS OF CANNABIDIOL AND Δ 9-TETRAHYDROCANNABINOL (THC) IN ANIMAL MODELS. - Michael A. Taffe

Human studies have suggested that cannabis strains with appreciable cannabidiol (CBD) content may produce less memory impairment than do strains without CBD. Self-selection in such studies means it is impossible to rule out pre-existing subject differences in memory performance that may have resulted in an appearance of a CBD effect. Controlled laboratory studies which involve repeated-measures comparisons of drug effects in the same subjects can better determine if CBD attenuates THC-induced effects. To better determine the cognitive interactions, adult male monkeys were assessed on visuo-spatial Paired-Associates Learning and self-ordered spatial search memory tasks following challenge with THC (0.2, 0.5 mg/kg, i.m.) in the presence or absence of CBD (0.5, 1.0 mg/kg, i.m.). The results show that CBD can attenuate or ameliorate the memory impairing effects of THC. Pharmacokinetic evidence showed that this was not likely due to any alteration in the metabolism of THC in the presence of CBD. These effects are contrasted with the outcome in rats in which CBD increases the magnitude of hypothermia produced by THC via either inhalation (using a novel e-cigarette procedure) or injected routes of administration. The data from the monkey studies confirm that there is likely a protective effect of CBD which ameliorates memory impairing effects of THC. This may have regulatory implications for the growing legalization of recreational cannabis markets.

IMPACT OF SEX ON THE ADVERSE AND THERAPEUTIC EFFECTS OF CANNABIS - Ziva D. Cooper

Preclinical laboratory studies have shown that female rodents are more sensitive to both the reinforcing and antinociceptive (analgesic) effects of cannabinoid receptor 1 (CBR1) agonists, like delta-9-tetrahydrocannabinol (THC), the primary psychoactive component of cannabis. These findings have particular public health relevance given recent epidemiological reports suggesting parallel sensitivities in women relative to men: 1) women transition from first cannabis use to cannabis use disorder (CUD) at a faster rate than men and 2) women are a growing demographic of patients who use medical cannabis for pain. To translate preclinical findings to humans, the abuse liability and analgesic effects of cannabis were assessed as a function of sex under double-blind, placebo-controlled conditions. Male and female non-treatment seeking cannabis users participated in outpatient studies investigating abuse-related subjective responses, self-administration, and analgesic effects of active cannabis (3 – 6% THC) relative to placebo cannabis (0% THC). To control for potential tolerance to cannabis's effects, men and women were matched for frequency of cannabis use (days / week) and amount of cannabis smoked per day (joints / day). Relative to men, women exhibited larger abuse-related responses to active cannabis for both positive subjective drug responses and self-administration endpoints. However, active cannabis elicited greater analgesia in men compared to women. These findings bridge preclinical reports to epidemiological findings pointing to sex as a risk factor in the development of CUD while also underscoring the importance of investigating differences between men and women when considering the therapeutic potential of cannabis and cannabinoids.

THE LEGAL LANDSCAPE OF LEGALIZATION AND THE LATINX IMPACT - Lynne Lyman

Lynne Lyman will give an overview of the legal landscape of marijuana law reforms in the U.S., unpacking the differences between federal, state and local cannabis laws, and how they impact the criminal legal system, immigration policy, research, and economic and public health arenas. M.S. Lyman will then provide a snapshot into Latinx and marijuana legalization in California, covering opinions, drug treatment, criminal data, voter statistics, and cannabis social equity regulations.

1:00 PM - 2:30 PM
SCIENTIFIC SESSION 3

THE END OF THE SMOKING EPIDEMIC

Jasjit S Ahluwalia and Antonio Cepeda-Benito

Cigarette smoking kills more than all other abused drugs, AIDS, road accidents, murder, and suicide combined. To motivate smokers to either quit or switch to safer forms of nicotine consumption, the U.S. Food and Drug Administration (FDA) is considering cutting nicotine in cigarettes to nonaddictive levels while allowing for the development and commercialization of alternative nicotine delivery methods. The merits of this new FDA strategy will be examined from the lenses of three world renowned authorities in nicotine and tobacco use. Dr. Rick Bevins, Willa Cather Professor and Chair of Psychology at the University of Nebraska will present behavioral economics and conditioning research in animal models showing that nicotine's addictive and abuse liability is partly acquired and partly due to nicotine's reinforcement enhancement of other addictive substances. Dr. Eric Donny, Professor of Physiology & Pharmacology and Social Sciences & Health Policy at Wake Forest School of Medicine, will present his promising findings from randomized clinical trials that assess the impact of reducing the nicotine content of cigarettes. Dr. Derek Yach, former WHO cabinet director and executive director for noncommunicable diseases and mental health, and current President of the Foundation for a Smoke-Free World will complement the scientific talks with his "global" vision of what's needed to reduce the smoking epidemic worldwide.

CONSIDERATION OF FACTORS ALTERING THE ABUSE LIABILITY OF NICOTINE - Rick Bevins

According to the World Health Organization, "No other consumer product is as dangerous, or kills as many people. Tobacco kills more than AIDS, legal drugs, illegal drugs, road accidents, murder, and suicide combined" (The Tobacco Atlas [p.36]). Nicotine is the primary addictive constituent in tobacco products. Although nicotine does have primary reinforcing effects that contribute importantly to smoking and nicotine dependence, convergent evidence suggests that such effects cannot fully explain the tenacity of this addiction. This observation has led researchers to investigate other possible factors contributing to the abuse liability of nicotine. In this talk, I will briefly describe two such factors that my lab has been investigating – reinforcer enhancement and acquired reinforcement value. In the former, we have employed a behavioral economic approach with rats to examine how nicotine increases the value of other reinforcers in the environment. This research has explored sex differences using sensory reinforcers and, more recently, alcohol. Another factor altering the abuse liability of nicotine is interoceptive conditioning. In this research, nicotine serves as an internal stimulus that is paired with other reinforcing events (e.g., sucrose in our preclinical model). Our initial studies merging nicotine interoceptive conditioning with intravenous self-administration indicate that an excitatory conditioning history with nicotine increases later intake of nicotine. In light of these findings, as the United States Food and Drug Administration considers reducing nicotine in tobacco products below a dose that does not purportedly support dependence, alternative factors beyond the primary reinforcing effects of nicotine should be taken into account.

REDUCING NICOTINE IN CIGARETTES AS A CENTRAL FOCUS OF FDA'S COMPREHENSIVE NICOTINE STRATEGY - Eric Donny

Nicotine is the primary addictive constituent in cigarettes, motivating the chronic use of a highly toxic product by millions of Americans that results in more than 480,000 deaths per year. Recently, the U.S. Food and Drug Administration announced their intention to pursue a comprehensive nicotine policy that would both reduce the amount of nicotine in cigarettes to render them less addictive and allow for the continued use and further development of less harmful nicotine products (both medicinal and recreational) for those adults who want to use nicotine. This presentation will focus primarily on randomized clinical trials in which participants are provided investigational cigarettes with varying levels of nicotine and followed over weeks

to months to assess the potential benefits and risks of regulated reductions in nicotine. These studies indicate that reducing the nicotine content of cigarettes by approximately 85% or more leads to fewer cigarettes smoked per day, reduced nicotine exposure and/or reduced nicotine dependence with little evidence of compensatory smoking or other unintended consequences. The findings will be discussed within the context of the rapidly changing landscape of nicotine/tobacco products and how the FDA's approach could reshape how Americans use nicotine.

ACTIONS NEEDED TO ACCELERATE AN END TO SMOKING - Ehsan Latif

With a billion smokers in the world, we need to raise our level of ambition and science to cut the future death toll from smoking more rapidly. I outline the rationale for creating a Foundation to do that; indicate where we believe research is needed to unblock impediments to change; and highlight the need to build human and institutional capacity to meet severe gaps within most developing and emerging economies, including across Latin America.

2:45 PM–3:45 PM
BREAKOUT SESSION A

SESSION A1

A SOCIO-ECOLOGICAL APPROACH TO IMMIGRANT MENTAL HEALTH

Margarita Alegria

Immigrants face many challenges during their resettlement, including higher rates of poverty; greater food and housing hardship, and higher rates of linguistic isolation. Despite these challenges, immigrants generally tend to exhibit better mental health than their US-born counterparts. The current presentation will 1) describe recent findings of the prevalence of mental health disorders in immigrant populations; 2) highlight the underlying mechanisms that contribute or protect against the development of these disorders; 3) illustrate the challenges that are encountered when treating immigrant populations, including the need to address social determinants such as housing and food security; and 3) discuss potential approaches to mitigate the negative impacts of social determinants on mental health outcomes. The presentation will conclude with recommendations on how to best address social determinants in treatment in order to improve the quality of care for immigrant populations.

IDENTIFYING THE RISK OF SUBSTANCE USE DISORDERS SUBSEQUENT TO PAIN DISORDER DIAGNOSIS - Sheri Markle

Pain affects between 10 and 40% of the adult population worldwide, with illicit drug use prevalence rates among chronic pain patients ranging from 3 to 48%. An increased risk for dependence also exists for patients prescribed opioids for acute and post-surgical pain. We aim to better understand whether pain serves as a predictor of substance use disorder and determine the probability of progression from pain-related conditions to substance use disorders. Using 2013-2015 Electronic Health Record (EHR) data from a Boston area hospital (n = 88,621), we identified patients with pain-related conditions (n = 42,820) to prospectively examine hazards for substance use disorders over a 32-month time-period. Among primary care patients with a pain-related condition, 17.5% of patients were subsequently diagnosed with a substance use disorder, compared to 9.8% of those without a pain-related condition (p < 0.01). These significant differences persisted after adjustment for covariates and allowance for different patient time-periods at risk. Patients with a pain-related condition had a greater hazard of receiving a SUD diagnostic (HR = 1.20; 95% CI 1.14- 1.27) after adjustment for socio-demographics, mental health conditions, and chronic physical



illness. The findings suggest that patients experiencing pain have a significantly greater hazard of subsequent substance use disorder. Primary care providers should closely monitor patients with pain to refer them to services before the occurrence of substance addictions.

PREDICTORS OF ADHERENCE TO TREATMENT IN A CULTURALLY CENTERED BEHAVIORAL THERAPY FOR LATINO MIGRANTS: THE IMPORTANCE OF TRUST -Mario Cruz Gonzalez

A complex array of sociocultural, clinical, and sociodemographic factors, including perceived barriers to care, influence an individual's entry and retention in mental health services. Thus, developing effective strategies for participation in care is a critical task for clinicians and administrators, especially for ethnic minority populations. In this study, we assess whether these factors predict prospective adherence to a culturally tailored integrative therapy for Latino migrants with co-occurring mental health and substance abuse problems. This is a prospective analysis nested within a randomized control trial of an integrated, cultural tailored psychotherapy intervention for Latino migrants based on cognitive-behavioral therapy, psychoeducation and mindfulness. Eligible participants were recruited in clinics and Latino-serving community organizations, ages 18-70 years and screened positive for mental health and substance abuse problems. Clinical factors included symptoms of depression, anxiety, post-traumatic stress disorder, smoking, drug and alcohol use. Sociocultural factors included measures of family conflict, ethnic identity, health literacy, sense of belonging and perceived discrimination. Socio-demographic variables were also included. Adherence to treatment was categorized into: a non-initiated group (0 sessions); attrition group (1-5 sessions), and completion group (6 or more sessions). Multinomial logistic regressions examined potential barriers reported at baseline that could be predictors of adherence to treatment in addition to socio-demographics, clinical, and sociocultural factors. Mistrust in behavioral treatments was the reported barrier at baseline that was significantly associated with completion of the IIDEA program, with those expressing mistrusts showing higher rates of completion as compared to those that did not report this barrier. Level of education and perceived discrimination were found to be predictors for completing the IIDEA program. Intensive, specific, evidence-based and culturally-tailored interventions provided by ethnically matched providers may overcome cultural mistrust and increase adherence to behavioral treatment among Latinos. Exploring barriers to treatment and perceived discrimination before initiating an intervention allows the clinician to predict retention in treatment and address individual perceptions that may impact treatment retention.

SLEEP DISTURBANCE AS A PREDICTOR OF TIME TO DRUG AND ALCOHOL USE TREATMENT IN PRIMARY CARE - Lisa R. Fortuna

Sleep Disturbances (SDs) are a symptom common to mental health disorders (MHD) and substance use disorders (SUD). We aimed to identify the value of SD as a predictor for subsequent treatment of illicit drug and alcohol use disorders (SUDs) in primary care and relative to the predictive value of mental health disorders (MHDs). We used electronic health records data from ambulatory primary care in a safety net Boston area healthcare system from 2013-2015 (n=83,920). SUD (separated into illicit drug use disorder and alcohol use disorder) and MHD were identified through ICD-9 codes and medical record documentation. We estimated Cox proportional hazard models to examine the risk of SUD across four comparison groups (SD only, SD and MHD, MHD only, and neither SD nor MHD). Compared to patients with no sleep or MHD, patients with SD had a greater risk for subsequent SUD treatment. Approximately one-fifth of patients with SD were treated for an illicit drug use disorder and approximately 12%

were treated for alcohol use disorder. Risk for SUD treatment, estimated at over 30% by the end of the study, was greatest for patients with a MHD, either alone or comorbid with SD. Risk was greater for older patients and men, and lower for minority patients. SD and MHD, individually and comorbid, significantly predict subsequent treatment of illicit drug and alcohol use disorder in primary care. Screening and evaluation for SD should be a routine practice in primary care to help with identifying SUD risk.

A MULTISITE RANDOMIZED TRIAL OF IIDEA FOR MIGRANT LATINOS WITH COMORBID SUBSTANCE MISUSE AND MENTAL HEALTH PROBLEM.S. -Margarita Alegria

Substance use disorders often co-occur with mental illness, but few evidence-based treatments are available for Latinos in the U.S. and Europe. This study evaluated the effectiveness of the "Integrated Intervention for Dual Problems. and Early Action," (IIDEA) for Latinos in Boston, Barcelona, and Madrid. 341 adults screened positive for mental health and substance use problems. from primary care clinics, emergency departments, community organizations, and patient referrals. Participants were randomized to IIDEA (cognitive-behavioral therapy and mindfulness treatment) or enhanced usual care (EUC). We assessed changes in depression, anxiety, posttraumatic stress disorder symptomatology, drug and alcohol use (using the Addiction Severity Index - Lite), and administered urine tests for drug metabolites at 2, 4, 6 and 12-months post-baseline. Intent-to-treat analyses assessed IIDEA's effectiveness, and multiple regression models examined whether results varied by symptom severity or treatment dosage. At 6-month follow up, participants who received IIDEA had significantly lower depressive symptoms ($b=-1.10$, $se=0.44$ $p<0.05$; Cohen's $d=0.19$) and overall mental health symptoms ($b=-0.18$, $se=0.07$, $p<0.05$, Cohen's $d=0.22$) compared to EUC. IIDEA and EUC participants did not differ in substance misuse at 6 months. However, IIDEA significantly lowered substance use symptoms. at 6-months among those with moderate to severe substance use (in contrast to mild) or those receiving 4+sessions (compared to less than 4). IIDEA reduced mental health symptomatology among Latinos with co-occurring disorders. This suggests the importance of engaging patients in a minimum intervention dosage and assessing whether treatments should be limited to moderate to severe substance misuse.

SESSION A2 UNDERSTANDING AND SURVIVING THE PEER-REVIEW JOURNAL PROCESS: A Q & A SESSION

Virmarie Correa-Fernández & Mayra E. Vargas Rivera

The frequent and quality dissemination of research procedures and findings through academic journals is an expected activity of scholars at different stages throughout their entire academic career: from graduate school to tenure professorship. For many, the publication of their work oftentimes feels like a puzzle and an event subject to luck. Additionally, few formal opportunities exist to obtain relevant and useful in-depth insights of the peer-reviewed process from the perspective of the journal editors, those individuals who initially determine an article "fit" with the journal's mission and who ultimately make decisions related to manuscript acceptance. As such, this breakout session aims. to gather a group of panelists who had served as editors of scientific journals, who will provide relevant information and advice regarding the different stages of the editorial process of peer-reviewed articles. Through an exchange of questions and answers between the audience and panelists, this session will address the most common issues and concerns faced by authors regarding the challenging decision-making process when submitting and revising a manuscript for publication. The session will also focus on considerations when submitting articles to journals targeting Latino/Hispanic health and/or drug abuse.

4:00 PM - 5:00 PM
BREAKOUT SESSION B
SESSION B1

NEUROSCIENCE DATABLITZ

Federico Sanabria and Sergio Iniquez

This breakout session will offer basic scientists the opportunity to share their exciting discoveries in the field neuroscience that expand our understanding of the brain, and of drug abuse and addiction. The goals of this breakout session are to highlight the latest work of basic scientists with the NHSN community; to provide an opportunity for discussion with other scientist with similar interests; and to facilitate the development of collaborations among NHSN members.

SESSION B2 POLICY BREAKOUT

POLICY AND COMMUNITY ENGAGEMENT: PRESENTING SCIENTIFIC FINDINGS IN MEANINGFUL WAYS -Kathryn Nowotny

This breakout session will focus on ways to translate and present scientific findings in meaningful ways to policy audiences and the community. The featured speaker is Alexandria Hatcher from the Drug Policy Alliance (DPA). The DPA envisions a society where the use and regulation of drugs are grounded in science, compassion, health, and human rights. This breakout session will provide scholars the tools to be more effective advocates and spokespeople as well as identify opportunities to influence drug policy.

5:15 PM–6:15 PM PLENARY

WHAT SCIENCE CAN TELL US ABOUT THE PREVENTION, DIAGNOSIS AND TREATMENT OF ALCOHOL USE DISORDER - George Koob

Alcohol use disorders cause an enormous amount of human suffering, loss of productivity and cost to our medical care system and the nation's economy. Advances in the science of alcohol use disorders can lead the way to better diagnosis, treatment and prevention of this significant public health problem. Understanding developmental trajectories provides fundamental knowledge of vulnerability to alcohol pathology across the lifespan. Conceptualizing alcohol use disorder from a heuristic framework a binge/intoxication stage, a withdrawal/negative affect stage, and a pre-occupation/anticipation (craving) stage representing the domains of incentive salience, negative emotional states and executive function has allowed identification of key neurocircuits that underlie addiction to alcohol. Basic mechanisms of organ pathology has similarly advanced our knowledge of vulnerability and resilience to organ damage. Such a knowledge base provides the heuristic framework for the development of novel, science-based approaches to diagnosis, prevention and treatment of alcohol use disorders, including medication development, and will facilitate the implementation evidence-based practice in primary care, mental health, and other health care settings.

Friday October 5, 2018

8:00 AM–9:20 AM
SCIENTIFIC SESSION 4

THE OPIOID EPIDEMIC: ADDRESSING A PUBLIC HEALTH CRISIS THROUGH RESEARCH AND POLICY

Cristina Wilson, Alice Cepeda, Avelardo Valdez

The misuse and addiction to opioids, including prescription pain relievers, heroin, and synthetic opioids such as fentanyl, is a national crisis affecting public health and the social and economic welfare of our most marginalized communities. From 2014 to 2016 the CDC noted that opioid overdose deaths among Hispanics increased 53 percent compared to 46 percent for whites and 84 percent for African Americans.

There is a general lack of understanding about why overdose deaths are rising faster among Blacks and Hispanics and the pathophysiology of opioid use, as well as the implications for how to assure a policy wide response. In this regard, Dr. Samuel R Friedman (Director, Institute for Infectious Disease Research, National Development and Research Institutes, Inc., New York, NY) will discuss the social, political and cultural etiology of the opioid epidemic and the disparate response to racial/ethnic minorities. Dr. Jermaine Jones (Assistant Professor of Clinical Neurobiology in Psychiatry at Columbia University) will continue the discussion by including the neurobiology of opioid drugs and novel treatment approaches that are under development. José A. Rodriguez (Director of Opioid Overdose Prevention at the Baltimore City Health Department) will situate the crisis in the local community by providing background information on the opioid crisis in Baltimore and the three-pillar strategy to combating the opioid epidemic; saving lives with naloxone, increasing access to treatment, and reducing stigma.

SOCIAL SCIENCE ASPECTS OF THE OPIOID OUTBREAK AND OF OPIOID USE: TOWARDS A RESEARCH AGENDA - Sam Friedman

Although social science has studied the cycles that drug outbreaks go through, much less is known about how and why they arise. Given the culture of American society, much attention has been given to “naming and blaming the perpetrators,” with pharmaceutical pain medicine companies and distributor taking the most blame and the individual opioid users taking the rest. This approach misses many issues, all of which should become research foci: 1.) What socioeconomic and political situations, and possibly-consequent social anxieties and traumas, have made so many young people willing to use opioids? 2.) What sources of physical and psychosocial pain (eg, workplace accidents and conditions) made people use pain killers? And what were the upstream causes of those pains? 3.) What changes in social relationships are associated with starting to use opioids? With overdose? 4.) Opioid use is associated in some studies with risky sexual behaviors and relationship patterns. We need to know more about that. 5.) Opioid use outbreaks among whites receive very different political, social and cultural responses than opioid use among blacks and Hispanics—and extremely differently from the reception of the outbreak of crack use among blacks and Hispanics. How can we extend the less harsh responses to racial and ethnic minorities? If we have to destroy racism to do this, how do we do that? 6.) What research can make medically-assisted treatment more available, less stigmatized and available to those who want it? What research is needed to make providers less stigmatizing and more welcoming? 7.) What research designs are needed to study these issues? Many of them will NOT be at the individual level.

OPIOIDS: WHY WE LOVE AND HATE THEM - Jermaine Jones

According to the World Drug Report, approximately 33 million individuals globally use opioids for nonmedical purposes. Opioids top the list of drugs that cause the greatest burden of disease and drug-related deaths worldwide. This presentation will explore the basic neurobiology of opioid drugs as it relates to their medicinal properties, abuse potential, and physiological dependence. Lastly, we will cover current pharmacotherapies for opioid use disorder and novel treatment approaches that are under development. This presentation should help the audience better understand the pathophysiology of opioid use disorder as it relates to the antecedents of the most recent rise in opioid abuse and overdose.

COMBATING THE OPIOID EPIDEMIC IN BALTIMORE CITY - Jose Rodriguez

The epidemic of opioid addiction is being seen in each corner of our country. Opioid addiction is a public health emergency that is claiming the lives and livelihoods of our everyday citizens. It affects the entire life course, and touches upon every aspect of our communities, from public safety to the workforce to children and families. Baltimore City must be a leader in addressing opioid addiction and overdose. More than 25,000 of our residents suffer from opioid addiction. In 2015, 393 people died of overdose. In 2016, that number was 694—a jump of 77 percent. Each year, more Americans are dying of overdose than have ever been killed from car accidents, guns, or HIV/AIDS. Drug addiction affects our entire community and ties into nearly every issue facing our city, including crime, unemployment, poverty, and poor health. It claims lives every day and affects those closest to us—our neighbors, our friends, and our family. This presentation will explore Baltimore's three-pillar approach, from a policy framework, to addressing opioid addiction. Our work in Baltimore is built on three pillars: First, we have to prevent deaths from overdose and save the lives of people suffering from addiction. Second, we must increase access to quality and effective on-demand treatment and provide long-term recovery support. Third, we need to increase education and awareness in order to reduce stigma and encourage prevention and treatment.

9:30 AM - 10:30 AM

GRANT WRITING

PERSISTENCE AND GRIT; A MUST IN ORDER TO SECURE NIH FUNDING - Albert Avila and Lynn Morin

Securing funding is critical for scientists to sustain a successful and independent research career, however, navigating the NIH grant process can lead to crossroads, confusion, and for some, a grinding halt. The road to grant success and your first R01 may not take the traditional route, but you are not alone. This presentation will highlight how persistence and grit, as well as handling setbacks effectively, are part of the winning formula for grant success for early-stage investigators. Funding disparities among underrepresented populations will be presented before exploring paths and opportunities leading to that first grant Notice of Award and beyond. This presentation is ideal for pre-doctoral students, post-doctoral researchers, and junior faculty, who are pursuing an independent research career and have a general understanding of the NIH NRSA Fellowship and Career Development Award Programs.

10:30 AM 1 11:30 AM

PEER-ONSITE-DISTANCE (PODS)- Cristina Wilson

The POD mentorship model is based on a multilevel mentoring structure, which includes early, mid, and senior career level scientists to promote guidance regarding career navigation from all levels in the academic trajectory. Each conference registrant has been assigned a POD which is demarcated by a colored sticker on the name tag that you received during registration.

12:45 PM–1:45 PM

PLENARY SESSION

SCIENCE AS A SOLUTION: IMPLICATIONS FOR HEALTH DISPARITIES - Wilson Compton

The misuse and abuse of opioids in the United States continues to be a significant public health concern as drug overdose remains the leading cause of accidental death among adults 1-3 from diverse cultural backgrounds. Though it remains unclear whether there are significant racial and ethnic differences in the prevalence of opioid use disorders, it is clear from the literature that racial and ethnic disparities exist with regard to access to and utilization of opioid treatment⁴. The focus of this presentation will be to discuss (1) the current state of the U.S. opioid crisis; (2) variation based on race/ethnicity (3) potential science based solutions.

1:45 PM - 3:15 PM

SCIENTIFIC SESSION 5

A HISTORICAL PERSPECTIVE OF DRUG ABUSE RESEARCH FROM A VETERANA TO THE NEXT GENERATION OF SCIENTISTS -

Nalini Negi and Arturo Zavala

In keeping with last year's conference during which Dr. Hortensia Amaro spoke about the state of Latino drug abuse science from a historical, current and future perspective, this year we will again honor a "veterana" scientists in the field who has contributed to the success of the organization and who is a nationally and internationally recognized drug abuse scientist. This "veterana" scientist will provide a framework for understanding some of the pioneering work in the field and how far we have come to understand addiction from a multidisciplinary perspective. The other two panelists represent the future of Latino drug abuse research. The panelists will present findings from their own research that reflects new, cutting edge and scientifically innovative science. This will provide insight into "what's next" for the field and how can we go beyond what we already know from the previous generations of science and scientists.

ALCOHOL INTERACTION WITH HIV DISEASE: TRANSLATIONAL APPROACH TO UNDERSTANDING Mechanisms. & COMORBIDITIES - Patricia Molina

Chronic risky alcohol consumption is the most common and costly form of drug abuse in the United States. Alcohol permeates virtually all tissues in the body, resulting in significant multi-systemic pathophysiological consequences. Approximately 3.4% of global non-communicable disease-related burden of deaths, 5% of net years of life lost, and 2.4% of net disability-adjusted life years can be attributed to alcohol abuse. Alcohol abuse is a major contributing factor to many disease categories, including cardiovascular disease, liver cirrhosis, traumatic injury, diabetes mellitus, pneumonia, and fetal alcohol syndrome. Thus, the study of the biomedical consequences of AUD requires extensive understanding of basic physiological mechanisms, perturbed by alcohol directly or indirectly. Alcohol use disorders (AUDs) are common in people living with HIV/AIDS (PLWHA). Increased survival resulting from antiretroviral therapy (ART), has elevated the risk for comorbid conditions, arising from both chronic alcohol consumption and HIV infection, including myopathy, insulin resistance, prediabetes, and lipodystrophy. Our studies have used a longitudinal integrated physiological approach to examine how chronic binge alcohol (CBA) consumption affects disease progression; response to ART, and end organ pathophysiology in simian immunodeficiency virus (SIV) infected macaques. We have shown that CBA/SIV infected macaques have a decreased time to end-stage, greater viral load at set point, and greater viral replication in reservoirs. The accelerated time to end stage is associated with decreased and dysfunctional skeletal muscle (SKM) mass. Among the mechanisms, underlying these pathophysiological changes are accentuated SKM inflammation, profound depletion of antioxidant capacity, increased proteasome activity, and decreased myoblast differentiation potential. Current studies are focused on translating our findings from the macaque studies to our local outpatient population of persons living with HIV/AIDS in care at our outpatient HIV clinic. Dr. Molina will provide an overview of the preclinical and clinical studies conducted by her interdisciplinary team at the LSUHSC Comprehensive Alcohol-HIV/AIDS Research Center.

DIFFERENTIAL EFFECTS ON ALCOHOL AND SYNTHETIC CANNABINOIDS ON EXTRACELLULAR HISTONE RELEASE AND INFLAMMATION - Marisela Agudelo

Scientific studies using natural and synthetic cannabinoids have led to the therapeutic use of cannabinoids and most recently, a new medication that contains cannabidiol has been

approved by the Food and Drug Administration. However, besides the medical benefits endowed to these cannabinoid compounds, recreational use and abuse of synthetic cannabinoids has emerged in recent years. Moreover, marijuana remains to be the most commonly used illicit drug in the United States. In addition, the combination of alcohol and marijuana abuse is very popular among teenagers and young adults making polysubstance use disorders a major public health concern. Therefore, studying the epigenetic and immunological consequences of cannabinoids and alcohol abuse is relevant to the research field since their therapeutic or detrimental effects still remain to be elucidated. In the current project, we are focusing on studying the effects of alcohol and synthetic cannabinoids on histone release and inflammation. Histones are the key proteins in nuclear chromatin and epigenetic modifications of histones play a major role in the regulation of gene transcription; however, extracellular release of histones elicit toxic and neuro-inflammatory effects. Nevertheless, whether these histone proteins are released into the periphery during polysubstance abuse and whether they play a major role during polysubstance-induced inflammation has not been elucidated yet. Therefore, our lab has developed a novel method using single cell imaging flow cytometry to detect post-translational modifications in human monocyte-derived dendritic cells (M.D.DCs) and to elucidate the role of histone modifications during abuse of substances such as alcohol and synthetic cannabinoids. We have evidence of the effect of alcohol drinking on the release of extracellular histones in human plasma and our results confirm the presence of circulating histones in plasma from alcohol users, and surprisingly, a significant increase of circulating histones in female drinkers when compared to male drinkers. Additional experiments analyzing the effects of several synthetic cannabinoid compounds (JWH-015, JWH-018, and AM-630) in dendritic cell cultures have demonstrated these compounds also modulate the release of histones, regulation of histone modifications, and inflammatory cytokines. Our findings, for the first time, demonstrate the presence of extracellular histone proteins in human plasma from alcohol drinkers and the ability of synthetic cannabinoids to induce histone release and a different inflammatory profile compared to alcohol. In summary, the detection of post-translational modifications and extracellular histones may serve as a promising tool to measure the inflammatory consequences of polysubstance abuse and even serve as a biomarker for substance abuse disorders.

This work was partially supported by the National Institute on Alcohol Abuse and Alcoholism, award R00AA021264, startup funds from the Department of Immunology, Herbert Wertheim College of Medicine, Office of Research and Economic Development at FIU, and pilot funds from Dr. Wertheim and Nicole Family Foundation, award # 9134.

ALCOHOL-INDUCED ADIPOSE IMMUNOMETABOLIC DYSREGULATION - Flavia Souza-Smith

Acute and chronic alcohol impact innate and adaptive immune cells, impairing host defense against numerous infections. Efficient activity of mucosal immune system relies on effective traffic of dendritic cells (DCs) to the mesenteric lymph nodes (MLN) ensuring intestinal antigen homeostasis. Infection-induced sustained mesenteric lymphatic hyperpermeability leads to DCs leakage into mesenteric perilymphatic adipose tissue (PLAT), dramatically decreasing the number of DCs in the MLN. There is a distinct population of visceral adipose tissue (fTregs) and its expansion is known to be stimulated by DCs. Increased fTregs in visceral adipose tissue is the adipose-immune driver of age-associated insulin resistance (IR). We have demonstrated that alcohol induce mesenteric lymphatic hyperpermeability, PLAT inflammatory milieu and impairs insulin signaling. Whether these alterations are a consequence of immune cell leakage from lymphatic vessels into PLAT, deviating from their physiological route (gut-MLN), is unknown.

We hypothesized that alcohol-induced immunometabolic dysfunction is a consequence of a persistent interruption of the immune dialog in between gut and MLN through lymphatic leakage into PLAT. To test this hypothesis, male Fisher 344 rats received Lieber-DeCarli liquid diet containing 36% of calories from alcohol for 10 weeks. Control groups were pair-fed. PLAT, MLN, and peripheral blood lymphocytes (PBL) were isolated for flow cytometry analyzes. PLAT explants were incubated with insulin for 2-deoxy-D-glucose uptake measurement and co-cultured with DCs for migration assay. MLN from alcohol treated animals presented a decreased CD4/CD8 ratio. PLAT fTregs were significantly increased in the alcohol treated animals while glucose uptake was decreased in the PLAT of these animals. Tregs were decreased in PBLs of alcohol treated animals. PLAT from alcohol treated animals attracted more dendritic cells than controls. Collectively, our data suggest that alcohol-induced lymphatic leakage might be leading to DC deviation into PLAT for 3 reasons: 1) an appropriate immune response is not being generated in MLN leading to decreased circulating Tregs; 2) DC stimulates fTreg expansion in PLAT; and 3) alcohol increases DCs attraction into PLAT. Overall, alcohol-induced deviation of DC into the adipose tissue can chronically disable the induction of mucosal immunity and lead to immunometabolic dysregulation.

Poster Abstracts

Wednesday October 3, 2018

5:00 PM - 7:00 PM POSTER SESSION/EARLY CAREER MIXER

1. Marisela Agudelo, G. Figueroa, T. Parira, M. Nair, Herbert Wertheim College of Medicine, Florida International University, Miami, FL (magudelo@fiu.edu)

CORRELATION OF EXTRACELLULAR RELEASE OF HISTONES WITH HIGHER AUDIT SCORES IN ALCOHOL DRINKERS FROM SOUTH FLORIDA

Histones are the key proteins in chromatin and epigenetic modifications of histones exert a major role in the regulation of gene transcription while extracellular release of histones might have an opposing effect and play a pathogenic role during inflammation. Recently, our lab has developed a novel method using imaging flow cytometry to detect post-translational modifications in human dendritic cells and demonstrated that alcohol induces an increase in histone quantity. However, whether histone are release into the periphery during alcohol abuse and whether they play a major role during alcohol-induced inflammation has not been elucidated yet. Therefore, in the current study, we investigated the effect of alcohol drinking on the presence of extracellular histone 3 (H3) levels in human plasma using a well-established enzyme-linked immunosorbent assay (ELISA)-based technique for quantification and implementing imaging flow cytometry for ex vivo visualization of histones. Our findings, for the first time, demonstrate the presence of circulating H3 in human plasma with significantly higher levels in the alcohol users and a correlation with higher AUDIT scores. In addition, H3 levels were significantly higher in female drinkers when compared to non-drinking control females. In summary, these findings provide new insights on the effects of alcohol drinking on the release of extracellular histones and suggests a gender-specific effect. Targeting circulating histones might provide a novel therapeutic approach to the treatment of AUDs. However, further studies will be required to clarify the mechanism. S. that mediate the functional role of histone release during alcohol-induced inflammation and organ injury. This research was partially supported by the National Institute on Alcohol Abuse and Alcoholism, award R00AA021264. Financial support as part of startup package has been received from the Department of Immunology, Institute of Neuroimmune Pharmacology, Herbert Wertheim College of Medicine, and FIU Office of Research and Economic Development. Tiyash Parira is supported by FIU Presidential Fellowship and HWCOM Biomedical Science Program.

2. Marvyn Arévalo Avalos, Marsiglia (1), Ayers (1), Cutrín (2), Kulis (1). (1)Arizona State University, (2) Universidade de Santiago de Compostela, Spain (mareval4@asu.edu)

A MIXED METHODS EXAMINATION ON THE CROSSROADS OF VIOLENCE AND SUBSTANCE USE AMONG MEXICAN ADOLESCENTS.

Among adolescents, substance use and violence often co-occur and place adolescents in danger of contending with and engaging in risky situations. However, little is known about how Mexican adolescents experience and perceive the intersection between substance use and violence in their communities. The purpose of this concurrent mixed methods study is to examine the intersection between violence and substance use among Mexican adolescents. Self-reported psychosocial, experiences with violence, and substance use quantitative data were collected from 7th to 9th grade students (N=4479) across 17 schools living in Guadalajara, Monterey, and Mexico City. A multivariate regression analysis was used to examine the associations between age, gender, peer influence, parent-child relationship, and violence (perpetrating or experiencing) on lifetime and 30-day substance use indicators. Qualitative

data were collected via focus groups in four schools from 7th and 9th grade students (N=103) living in Guadalajara, Monterrey, and Mexico City. Participants represented a diverse segment of the student body. Separated by gender and grade level, the 13 different focus groups were conducted in Spanish by trained researchers from local universities. After verbatim transcription by the research team, the data were analyzed utilizing thematic analysis. The multivariate regression analyses showed that susceptibility to negative peer pressure and witnessing acts of violence were significant predictors of alcohol, marijuana, and hard drugs lifetime use, as well as 30-day alcohol and marijuana use. Being a victim of violence was associated with lifetime alcohol and hard drug use, and 30-day marijuana use. There were statistically significant results on age and gender, such that being older and male was associated with greater lifetime alcohol and marijuana use, and 30-day marijuana use. Finally, positive parent-child relationship was negatively related to lifetime hard drug use and 30-day alcohol use. Four themes emerged from the qualitative data: A) Community risk factors related to violence and substance use; B) Psychological, legal, and or violence-related consequences stemming from substance use; C) Personal use of violence as a strategy to refuse substance use; and D) Experiencing or witnessing violence as a method of forcing youth to engage in substance use. The results suggest that Mexican youth perceive the issues of substance use and violence as inextricably interrelated, where violence is an outcome and precursor of substance abuse and vice versa. These issues - risk of engaging, witnessing, or being targets of violence and substance use - have the potential to negatively impact youth psychosocial development and integration into their families and communities. Substance use prevention programs designed for Mexico should take into account the intersections of violence and substance use, as well as consider the role of protective factors.

3. Jaime Arredondo, Division of Global Public Health, San Diego State University (jarredon@ucsd.edu)

DRUG USE, POLICE, & PUBLIC HEALTH: A PILOT DIVERSION PROGRAM FOR VULNERABLE LOW-LEVEL DRUG OFFENDERS

Public health interventions must improve how street-level police officers and the judicial system apply public safety practices to support the health of people who inject drugs (PWID). Pre-booking diversion and referral programs in the US (LEAD) are being used to direct low-level drug offenders to treatment and other community-based services, instead of prosecution or incarceration, with promising results. In collaboration with the Tijuana Police and local judicial system we will seek to integrate a public health focus into current policing and booking practices among PWID in the neighborhood "Delegacion Centro" of Tijuana. Using qualitative data from an ongoing police cohort in the city established in 2016 (project ESCUDO) and a set of key holder interviews, we seek to identify barriers and acceptability for the implementation and adaptation of a model of pre-booking diversion program for low-level drug offenders to a low-resourced setting designed to refer PWID to existing life-stabilizing social services in lieu of arrest and incarceration. We expect that two years after the implementation of project ESCUDO, police officers will express positive attitudes toward referral of PWID to social services, and would be supportive on establishing a reward and tracking mechanism. Key stakeholders interviews will help to identify the incentives to increase police referrals of PWID to HIV prevention services, including harm reduction program. S.. The cyclical nature of arrest, incarceration, and recidivism among PWID exacerbates structural and behavioral drivers of infectious disease and related disparities in this vulnerable population. Pre booking programs evaluations have showed a statistically significant reduction in recidivism between the intervention and control group. Data and lessons learned through this project aim to inform the design and a

larger scale evaluation of the intervention in a Mexican setting, and contribute to broader global health solutions.

4. Nawal Boukli, M. Rivera, S.N. López, E. Álvarez, C. De León, M. Rodríguez, Microbiology and Immunology Department, Universidad Central del Caribe, School of Medicine (nawal.boukli@uccaribe.edu)

A β Os INCREASE NEUROCOGNITIVE IMPAIRMENT IN HIV+ POLYDRUG USERS WHILE DJ-1 AND GRP78 INDUCES PBMC SURVIVAL.

Drug use account for the majority of AIDS cases in Puerto Rico and it is well established by now that up to half of people living with HIV experience HIV-associated neurocognitive disorders (HAND), a neurological manifestation of HIV-1 infection. Based on these observations, we hypothesize that the combination of HIV and drug abuse leads to cognitive decline in HIV infected individuals endorsing regular stimulant use as compared to those with no stimulant use and specific molecular alterations in T-lymphocyte Endoplasmic Reticulum (ER) stress, neuroprotective proteins and pro-inflammatory cytokine expression from HIV+/HIV-PDUs. To test this hypothesis, we will 1) identify neurocognitive impairment (NCI) in HIV+ participants with and without polydrug addiction, 2) analyze the cytokine profiling and protein expression in HIV+/HIV-PDU. NCI was measured by psychological and homocysteine analysis in HIV-/HIV+ PDUs. Alterations on protein expression were detected through a proteomic approach and cytokine profiling was achieved by means of flow cytometry. The sample population distribution was: 10 HIV+PDU+ and 10 HIV-PDU+. HIV-PDU+ participants had higher NCI and expression of proinflammatory cytokines as compared to HIV+PDU+. Furthermore, immunoproteomics analysis revealed the overexpression of ER stress marker: GRP78, in HIV+ PDUs with NCI as compared to HIV- PDUs with no NCI. The overexpression of Amyloid Oligomers (A β Os) correlated with NCI in HIV+PDU+, while the upregulation of neuroprotective protein DJ-1 was associated with PBMC survival in non polydrug users. Moreover, the expression of IL-8, IL-6 and IL-12 proinflammatory cytokines correlated with the severity of NCI in HIV+PDU+. Our findings showed that polydrug use contributes negatively to NCI in HIV infected participants, highlighting the identification of ER stress and neuroprotective protein signatures that may serve as effective biomarkers for NCI prediction in HIV+ PDUs. Taken together our finding provide new insights into the molecular events governing drug abuse-HIV interactions.

5. Roberto Cancio, R. Loyola Marymount University, Psychology Applied Research Center (roberto.cancio@lmu.edu)
COMPARING STRUCTURAL PATHWAYS ON THE EFFECTS OF DEPLOYMENT TYPE ON MENTAL AND PHYSICAL HEALTH

Research to assess the mental and physical health impact of wartime military service has often been conducted years or decades after the return home (Jordan et al., 1991; Kang, et al., 2003; Prigerson, et al., 2002). While previous research (Cancio, 2017/2018; Xue, et al., 2015; Rodin, et al., 2017; Hoge et al., 2014; Taylor & Sayer, 2014) conducted after military conflicts has shown that combat exposure results in increased risk of PTSD, depression, substance abuse, functional impairment in social settings, and the increased use of health care services, the narrative around deployment remains scarce. For example, researchers have treated deployments as single dichotomous measures and only focusing on a respondents' participation in a deployment, while not considering the mission of that deployment. To date, no studies focus on deployment returnees' health impact from different exposures (e.g., witness violence) and deployment types (e.g., peacekeeping, humanitarian, and combat). This presentation serves to address the impact of deployment types on the mental and physical health of active duty military service members. Using structural equation modeling (SEM) as a novel approach, this study considers variations of self-reported health to test the impact of several

life events and demographic factors on the overall effect on health and wellness from three military deployment types, with particular attention to substance use as a result of different deployment typologies. The study sample contains information about 21,449 active duty service members from the Army Study to Assess Risk and Resilience in Service Members: All Army Study (2015). Respondents' race/ethnicity, age, deployment duration, and deployment type were modeled using SEM procedures to determine the effects on returnees' health. Particular attention focused on the differences among the frequency of certain substances. Study findings indicate that unique exposures from varying types of deployments change not only the degree of deployment-related stress but more importantly, the overall effect on health. Service members who were exposed to more violent deployment saw a decline in their mental health. Different degrees of violent exposures and military operational directives from mission-specific deployments affect the mental and physical health for military service members. In particular, nuances rose for ethnic and racial groups and between men and woman.

6. Astrid Cardona, Department of Psychological and Brain Sciences and Program in Neuroscience, Texas A&M University, College Station, TX (astrid@tamu.edu)

LASTING NEUROBIOLOGICAL CONSEQUENCES OF ALPRAZOLAM EXPOSURE IN ADOLESCENT C57BL/6J MICE.

Benzodiazepines are prescribed widely as anxiolytics, hypnotics, muscle relaxants, and anticonvulsants. However, their utility is limited by unwanted side effects such as abuse liability and the potential for dependence. Benzodiazepine-related emergency room visits have increased in the US within the past two decades and despite concerns surrounding their use, there has been a substantial increase in benzodiazepine's prescription rate. Benzodiazepines are commonly abused concurrently with opioids, resulting in greater psychopathology and increased comorbidity. There is evidence of increased use and abuse of benzodiazepines during adolescence, yet most available evidence has been based on studies using adult organisms.. This study was designed to investigate whether exposure to alprazolam during developmental periods prior to adulthood also potentiates the behavioral and biochemical effects of opiates such as morphine. Adolescent C57BL/6J male mice were treated with alprazolam (0.25, 0.5 and 1.0 mg/kg) or saline, once daily from postnatal days 35-49. Changes in behavioral responsiveness to morphine (0.5, 1.0 and 5.0 mg/kg), using the conditioned place preference paradigm (CPP), and gene expression changes within the ventral tegmental area (VTA), using qPCR, were assessed both 24 h and one-month after the end of drug treatment. Our results show that pretreatment with alprazolam during adolescence potentiates the effects of morphine as measured in the CPP paradigm: the alprazolam pre-treated mice developed strong preference to the compartment paired with a threshold dose of morphine (0.5 mg/kg), and this effect was still present a month after alprazolam exposure. We then measured whether extracellular signal-regulated kinase 1/2 (ERK)-signaling would be affected by alprazolam pretreatment, given ERK's role in mediating drug-induced behaviors. Preliminary results show an increase in ERK expression when compared to controls at 24 h after alprazolam treatment. Ongoing studies are currently assessing expression of other transcription factors such as CREB, BDNF cFos, and zif268. Overall, these findings suggest that exposure to alprazolam during adolescence potentiates the rewarding effects of opiates such as morphine, and that alprazolam exposure during this period result in persistent changes of ERK-signaling within the VTA, a brain region implicated in both drug-reward and mood-related disorders, in adulthood.

7. Juliana Cardoso Smith, R. Gonzales, E. Landrau-Cribbs, C. Field, Latino Alcohol Health Disparities Research, University of Texas at El Paso (jdcardoso@miners.utep.edu)

AN ANALYSIS OF HIV RISK BEHAVIORS AND HIV RISK PERCEPTIONS AMONG COLLEGE STUDENTS IN THE U.S./ MEXICO BORDER

Even though Hispanics/Latinos accounted for an estimated 17% of the total U.S. population (Pew Research Center, 2012), Hispanics/Latinos accounted for 24% of new HIV infections in the US (Centers for Disease Control and Prevention [CDC], 2014) with a rate of new HIV infections approximately 3 times greater than that of non-Hispanic whites (CDC, 2012). If current rates persist, an estimated 1 in 48 Latino men, 1 in 227 Latino women, and 1 in 4 Latinos will be diagnosed with HIV during their lifetime (CDC, 2017). The objective of the study was to identify whether there are gender differences in HIV risk perception and HIV knowledge among a predominantly Hispanic/ Latino sample of college students in the U.S./ Mexico border. Participants (n= 156) completed several questionnaires, including the Perceived Risk of HIV Scale (Napper, 2012) and the HIV Risk Taking Behavior Scale (HRBS; Ward et al., 1990). For HIV risk perception, there was not a significant difference in the PRHS scores for males (M= 19.23, SD= 3.71) and females (M=18.19, SD= 3.78); $t(149) = 1.62, p = .107$. For HIV knowledge, there was not a significant difference in HRBS scores between males (M= 16.46, SD= 6.04) and females (M=17.37, SD= 6.58); $t(148) = -.756, p = .451$. A regression was conducted to assess whether demographic variables significantly predicted HIV knowledge; age was found to significantly predict HIV knowledge ($\beta = .384, p < .01$). Findings from this study may inform HIV prevention programs and educational materials for college students.

8. Antonio Cepeda-Benito, Department of Psychological Science, University of Vermont, Doogan, NJ. Center of Excellence in Regulatory Tobacco Science, College of Public Health, The Ohio State University, Vermont Center on Behavioral Health, Department of Psychiatry, University of Vermont (acepeda@uvm.edu)

SMOKING TRENDS IN RURAL AMERICA: A GENDER-BASED DISPARITY

Smoking prevalence is declining at a slower rate in rural than urban settings in the United States (U.S.), and known predictors of smoking do not readily account for this trend difference. Given that socioeconomic and psychosocial determinants of health disparities accumulate in rural settings and that life-course disadvantages are often greater in women than men, we examined whether smoking trends are different for rural and urban men and women. We used yearly cross-sectional data (n = 303,311) from the U.S. National Survey on Drug Use and Health (NSDUH) from 2007 through 2014 to compare cigarette smoking trends in men and women across rural and urban areas. Current smoking status was modelled using logistic regression controlling for confounding risk factors. Regression derived graphs predicting unadjusted prevalence estimates and 95% confidence bands revealed that whereas the smoking trends of rural men, urban men, and urban women significantly declined from 2007 to 2014, the trend for rural women was flat. Controlling for demographic, socioeconomic and psychosocial predictors of smoking did not explain rural women's significantly different trend from those of the other three groups. Rural women lag behind rural men, urban men and urban women in decreasing smoking, a health disparity finding that supports the need for tobacco control and regulatory policies and interventions that are more effective in reducing smoking among rural women.

9. Alberto Cifuentes, Jr., C. Mogro-Wilson, University of Connecticut, School of Social Work (jr_alberto.cifuentes@uconn.edu)

THE INFLUENCE OF CULTURE ON PARENTING STYLES OF HISPANIC FATHERS WHO ARE PROBLEM DRINKERS

Few studies have focused on the impact of cultural values (familismo, simpatia, personalismo, machismo, and caballerismo) on the parenting styles of Hispanic fathers and the effects of problem drinking on parenting. This study investigated three prominent parenting styles: Authoritative, permissive, and authoritarian. Authoritative parenting is regarded as the most effective style to promote healthy child outcomes. This study collected data from 309 Hispanic fathers who participated in a web-based questionnaire administered by Qualtrics. Utilizing the four-item CAGE instrument, fathers with a score of two or greater were considered to have clinically significant problem drinking (no problem drinking, n=196; problem drinking, n=113). Model comparison using multiple regression was used to assess the ability of five Hispanic cultural constructs to understand the parenting styles after controlling for the father's age, education, income, level of acculturation, and child's age for both problem drinking fathers and non-problem drinking fathers ($p < .001$). Results include differences between non-problem drinking fathers having higher levels of personalismo and lower levels of machismo, compared to problem drinkers who had higher levels of personalismo, predicting authoritative parenting ($p < .001$). Fathers without problem drinking behaviors had higher levels of simpatia and machismo and lower levels of caballerismo, compared to problem drinkers who had higher levels of simpatia and caballerismo and lower levels of machismo, predicting authoritarian parenting ($p < .001$). Fathers without problem drinking behaviors had higher levels of familismo, simpatia, and machismo and lower levels of caballerismo, compared to problem drinkers who had higher levels of simpatia, personalismo and caballerismo and lower levels of machismo, predicting permissive parenting ($p < .001$). Problem drinking behaviors correlate with all three primary parenting styles; however, cultural values that predict these parenting styles are moderated by the level of the father's problem drinking behavior. The positive impact of higher levels of personalismo and caballerismo in Hispanic fathers suggest that more attention should be placed on cultivating these values. Increased cultural content challenging the emphasis on simpatia and machismo would benefit Hispanic fathers' parenting styles and better inform culturally competent parenting interventions.

10. Bryan Cruz, L.M. Carcoba, R.J. Flores, A. Nazarian, L.E. O'Dell, The University of Texas at El Paso, Department of Psychology (bcruz2@miners.utep.edu)

THE SUPPRESSION OF DOPAMINE TRANSMISSION IS NORMALIZED TO CONTROL LEVELS FOLLOWING INSULIN SUPPLEMENTATION IN DIABETIC RATS

The neurochemical mechanisms that modulate the strong rewarding effects of nicotine observed in diabetic rats are unclear. Prior work in our laboratory has revealed that nicotine produces an increase in dopamine levels in the nucleus accumbens (NAc) that is blunted in diabetic rats versus healthy controls. The goal of the present study was to examine whether insulin supplementation in diabetic rats normalizes NAc dopamine release in response to nicotine administration. Rats first received vehicle or streptozotocin (STZ; 45 mg/kg), a drug that is toxic to pancreatic insulin-producing cells and produces elevated glucose levels. STZ-treated rats were then implanted with an insulin pellet or received a sham surgery. Two-weeks later, microdialysis probes were implanted in the NAc to measure dopamine release in this region. Dialysate samples were collected during baseline and following systemic injections of nicotine using an escalating dose regimen (0.3, 0.6, 0.9 mg/kg). Our results revealed that control rats displayed

an increase in NAc dopamine levels that was blunted in STZ-treated rats. Interestingly, the suppression of dopamine release was normalized to control levels in STZ-treated rats that also received insulin supplementation. These data suggest that insulin systems play an essential role in modulating the strong rewarding effects of nicotine in diabetic rats.

11. Miguel A Cruz-Feliciano (1), I.S. Carrión-González (1), K. Pabón-Cruz(2); M. Vargas-Bernal(2), (1)Universidad Central del Caribe, IRESA; (2)Puerto Rico Department of Health (miguel.cruz@ucaribe.edu)

EVALUATION OF A CULTURALLY-BASED SEXUALLY RISK REDUCTION PREVENTION PROGRAM FOR ADOLESCENTS IN PUERTO RICO

Despite reduction of teen birth rates, the teen pregnancy and sexually risky behaviors among Hispanic adolescents still experiencing higher rates in comparison to other racial and ethnic groups. Under uncontrolled community and school settings, the evidence-based practice ¡Cuidate! was implemented for helping Puerto Rican youth reduce sexual risk behaviors in high risk communities. A prospective assessment was conducted among 185 adolescents randomly selected that participated in the intervention. Comparisons were made between participants that completed and not completed the intervention in terms of intent to have sex, sexual encounters, contraceptive methods, teen pregnancy, and improvement in life coping skills. After participation, adolescents completing the intervention were more likely to ask sexual partner or use any birth control or condom than non-completers. Completers reported 75% less probability of reporting sex ever than those non-completers after controlling for age and gender. Adolescents completing the intervention were more likely to indicate higher intentions to have sex. Among those adolescents that indicated not having sex before starting the intervention, 12.0% had sex and from those that had sex after the intervention, 1.2% reported being pregnant or gotten someone pregnant. The investigation found that an impact in knowledge and attitudes were experienced, despite teen pregnancy prevention did not reached statistical significance. Nevertheless, ¡Cuidate! resulted effective in changing the perception towards abstinence, condom utilization, and in delaying age of first sexual encounter. In comparison to national figures, adolescents participating in the program reported lower incidence of teen pregnancy and older age at sexual initiation.

12. Mario Dominguez, C. Fleiz, J. Villatoro, Medina Mora, E. Zafra and F. Vázquez. Ramón de la Fuente Muñiz National Institute of Psychiatry (mariodom@imp.edu.mx)

PICADEROS, YONGOS Y TAPIAS: THE CONTEXTS OF HEROIN USE ON THE MEXICO-UNITED STATES BORDER

Background The prevalence of heroin use is relatively low in Mexico. According to the National Survey on Drugs, Alcohol and Tobacco Use (ENCODAT) 2016-2017 (Villatoro et al, 2017), heroin use in Mexico is less than 0.1%. The states of Chihuahua and Baja California have higher prevalence than the national average. The health problems associated with heroin use include fatal and non-fatal overdoses and infections such as HIV, HCV and other STIs, due to the exchange and inappropriate use of syringes, the quantity and combination of drugs and the administration route (Wilkerson et al, 2016; Rudd, 2016). **Objective.** To document the contexts of heroin use in Tijuana, Ciudad Juárez and San Luis Río Colorado. **Methodology.** Ethnographic-cross-sectional field study through the rapid assessment method (Rhodes et al, 2000), which seeks to generate information through methodological triangulation: epidemiological, ethnographic and a systematic literature search. Application of 380 in-depth interviews at drug-use sites: picaderos, yongos (place where heroin is injected), streets and tapias (wasteland), and 600 questionnaires at treatment centers. The study included a serological component for HIV and HCV screening in participants and ethical

considerations such as voluntary participation and signed consent. Results. Ninety-seven per cent use heroin daily, and an average of five times a day; the main route of administration being intravenous, while 32.9% use heroin with crystal and 5.4% heroin with cocaine (speedball). A total of 37% lend their syringes; 51% utilize paraphernalia used by others and 60% fail to clean their syringes with chlorine. Users live in their parents' houses or apartments (53.4%); shooting galleries, junkyards or walls (43.7%), streets or bridges (34.6%), sluices (9.1%), and graveyards (9.1%), in places that are usually shooting galleries. Conclusions Risky practices are common. Ciudad Juárez had the highest prevalence of HCV in drug use sites (91.7%). The worst conditions of the user population are in Tijuana. There are contexts of violence in the three cities, mainly due to police operations and the dispute over the sale of drugs. In these circumstances, binational work it is essential to strengthen and expand harm reduction programs..

13. Rodolfo Flores Garcia, K. Uribe, B. Cruz, V. Correa, L.M. Carcoba, L.E. O'Dell. Department of Psychology, The University of Texas at El Paso (rjfloresgarcia@miners.utep.edu)

HORMONE FLUCTUATIONS ACROSS THE ESTROUS CYCLE INFLUENCE THE INTENSITY OF THE NICOTINE WITHDRAWAL SYNDROME IN FEMALE RATS

Clinical reports suggest that the negative affective states elicited during smoking abstinence are more intense in women than men. However, the influence of ovarian hormones on the magnitude of stress produced by withdrawal remains unclear. To assess this issue, the present study compared the physical signs and anxiety-like behavior produced by nicotine withdrawal during different phases of the 4-day estrous cycle in female rats. Female rats received an osmotic pump that delivered nicotine for 14 days. On the test day, the rats received an injection of vehicle or the non-selective nicotinic receptor antagonist, mecamylamine to precipitate withdrawal. Rats were then tested in a series of behavioral tests that included the physical signs of withdrawal and two tests of anxiety-like behavior (elevated plus maze and light/dark transfer test). Immediately after testing, blood plasma was collected and analyzed for the stress hormone, corticosterone. Female rats received vaginal lavage procedures to assess the phase of estrous the rats were tested in. Nicotine withdrawal produced a similar dose-dependent increase in the physical signs of withdrawal across the 4 stages of estrous. However, nicotine withdrawal produced an increase in anxiety-like behavior and corticosterone release that was greater in rats that were tested in the metestrus and diestrus phases, as compared to rats that were tested during proestrus or estrus. Since progesterone levels peak during metestrus and diestrus, our data suggest that high levels of progesterone may enhance the degree of stress produced by nicotine withdrawal in female rats. **Conclusions:** These data suggest that hormone fluctuations across estrous influences the affective, but not physical, aspects of nicotine withdrawal in females. Importantly, these data also imply that quitting smoking during phases of the menstrual cycle when progesterone levels are the highest may contribute to more intense negative affective states produced by withdrawal.

14. Francisco J. Flores Ramirez, Sergio D. Iniguez, The University of Texas at El Paso (ffloresram@miners.utep.edu)

FLUOXETINE EXPOSURE IN ADOLESCENT AND ADULT C57BL/6 MICE DECREASES COCAINE AND SUCROSE PREFERENCE LATER IN LIFE

Preclinical evidence indicates that exposure to psychotropic medications, during early development, results in long-lasting altered responses to stress- and reward-related stimuli. However, these animal studies have been conducted, primarily, using male subjects. This is surprising, given that clinical data suggests that females have a higher likelihood, than their male counterparts, to be diagnosed with mood-related illnesses, and thus, be prescribed with psychotropic medications, mostly antidepressants. Therefore, to examine whether

enduring reward-related alterations are exhibited as a result of antidepressant exposure, in female subjects specifically, we exposed C57BL/6 female mice to fluoxetine (FLX; 250 mg/l in their drinking water). Specifically, separate groups of mice were exposed to FLX for 15 consecutive days, either during adolescence (postnatal day [PD] 35-49) or adulthood (PD70-84). Twenty-one days later, the mice were examined on their behavioral reactivity to cocaine (0, 2.5, 5, 7.5 mg/kg) using the condition place preference paradigm, or assessed on the 2-bottle choice sucrose (1%) test. Our results indicate that, regardless of age of antidepressant exposure, female mice pre-exposed to FLX displayed reliable conditioning to the cocaine-paired compartment in a dose-dependent manner. However, when compared to respective age-matched controls, antidepressant pre-exposure decreased the magnitude of conditioning at the 5 and 7.5 mg/kg cocaine doses. Furthermore, FLX pre-exposure reduced sucrose preference, without altering total liquid intake. Collectively, the data suggest that pre-exposure to FLX, during adolescence or adulthood, results in a prolonged decrease in sensitivity to the rewarding properties of both natural and drug rewards, in female C67BL/6 mice.

15. Israel Garcia-Carachure, S.A. Castillo, F. Flores-Ramirez, M.A. Arenivar, S.D. Iñiguez, The University of Texas at El Paso (igarciaicar@miners.utep.edu)

PROPHYLACTIC EFFECTS OF KETAMINE IN A JUVENILE MODEL OF DEPRESSION

Approximately 10% of children and adolescents are diagnosed with major depressive disorder (M.D.D). Unfortunately, close to 50% of depressed youth are unresponsive to traditional pharmaceutical treatments, such as fluoxetine (Prozac), which reflects the need to identify alternative compounds for the management of juvenile M.D.D. In adult populations, ketamine, an N-methyl-D-aspartate receptor antagonist, has recently shown the capacity for rapid-acting antidepressant efficacy in both preclinical and clinical studies. To examine ketamines potential as a rapid and effective antidepressant therapeutic agent for juvenile M.D.D, ketamine was administered to adolescent male C57BL/6 mice while undergoing social defeat stress for 10 consecutive days (postnatal days [PD] 35-44) a stress regimen that results in depression-like behaviors in mice under normal conditions. Specifically, separate groups of stressed (defeated) and non-stressed (control) mice were administered with ketamine (20 mg/kg) either immediately after each daily episode of defeat (chronic; 10 exposures), or following the last day of stress (acute; single exposure). Twenty-four hours later (PD45), all mice were tested for depression-like behavior, as inferred from the social interaction/avoidance test. As expected, defeated adolescent mice administered with saline (chronic or acute) exhibited a depressive-like response (i.e., increased social avoidance). Conversely, exposure to ketamine (chronic or acute) prevented the development of the stress-induced avoidance phenotype. Together, these findings indicate that ketamine may be a potential novel agent for the treatment of juvenile M.D.D.

16. Rubi Gonzales, J. Cardoso Smith, E. Landrau-Cribbs, University of Texas at El Paso (rgonzales6@miners.utep.edu)
HIV KNOWLEDGE, STI KNOWLEDGE, AND ACCULTURATION AMONG COLLEGE STUDENTS IN TWO TEXAS PUBLIC UNIVERSITIES

Approximately 1.1 million people in the US have HIV (CDC, 2017). More importantly, 1 out of 7 people do not know they are HIV positive and 80% of the new diagnoses in 2015 were between the ages of 20-24 (CDC, 2017). Additionally, 19 million new STI cases occur each year between the ages of 15-24 (CDC, 2017). It is important to detect and treat STI's early on due to the complications it can lead to, such as, infertility and deterioration of general health. Moreover, it is important to get tested regularly given that many symptoms are asymptomatic. The present study conducted an anonymous online survey at the University of Texas at El Paso (UTEP) (N=512) and at

the University of Houston (UH) (N=491). Participants mean age from UTEP was 20.98 (SD=4.73) and the mean age of participants from UH was 22.41 (SD=5.35). Participants were asked various questions, such as demographics, the Abbreviated Multidimensional Acculturation Scale (AMAS) (Zea, Asner-Self, Birman, & Buki, 2003), HIV Knowledge Questionnaire, and the STD Knowledge Questionnaire (STD-KQ) (Jaworski & Carey, 2007). T-tests were conducted and there was a significant difference in the total HIV knowledge score for UTEP (M= 14.10, SD= 3.10) and UH (M=14.61, SD= 3.30); $t(965) -2.67, p=.01$. However, there was not significant difference in the total STD knowledge score between UTEP (M= 3.40, SD= .46) and UH (M= 3.43, SD= .40); $t(958) -1.55, p=.121$. The AMAS consists of two domains, culture of origin and American. There was no significant difference in acculturation (culture of origin) levels between UTEP (M=3.04, SD= .60) and UH (M= 3.1, SD= .63); $t(957) -.403, p=.687$ and no significant difference in acculturation (American) levels between UTEP (M= 3.40, SD= .50) and UH (M= 3.43, SD= .40); $t(958) -1.55, p=.004$. A chi-square was conducted and there was a difference between sites and getting tested for HIV/AIDS, such that UH students were more likely to get tested for HIV/AIDS, $\chi^2(1,465)=9.97, p=.002$. Two important limitations to note is that the present research was cross sectional and generation status and migration status was not asked. There are a few implications from the present study. First, STI and HIV testing should be available as a routine screening, this would help to reduce stigma and promptly detecting STI and HIV diagnoses. Second, sexual health information should be available to students in nontraditional settings, due to the stigma that is associated seeking information on STI and HIV.

17. Mariano Kanamori (1), M De La Ros a(2), S. Diez (2), J. Weissman (2), M.J. Trepka (2), P. Rojas, (1) University of Miami Miller School of Medicine, (2) Florida International University (mkanamori@med.miami.edu)

CULTURALLY TAILORING THE VOICES INTERVENTION TO INCREASE HIV KNOWLEDGE, CONDOM USE SELF-EFFICACY AND ADEQUATE CONDOM USE AMONG UNDERSERVED LATINAS

The development, implementation, and evaluation of HIV preventive interventions for Latinas lag behind efforts implemented in other communities. We implemented a two-group randomized-design program with a culturally-tailored intervention, Progreso en Salud (Progreso), as the test condition and a standard health promotion intervention as the control. Progreso included a Latino soap opera; condom negotiation simulations using dolls; conversations about HIV prevention inside friendship social networks; presenting various condom brands; practicing correct condom placement; and condom distribution. Our aim was to test if Progreso was superior to the control in increasing HIV knowledge, condom use self-efficacy and adequate condom use. Detailed descriptions of the cultural adaption and the use of socio-centric networks will be presented. The program was implemented from June 2015 to February 2017 in South Florida. We recruited 261 participants grouped in 20 socio-centric networks. They were interviewed at baseline (B), 6-month (6M) and 12-month (12M) follow-up. Analyses included repeated measures general linear models including within-subject variables for the three assessments and a between-subject factor for the two interventions. There was a significant increase in HIV knowledge ($p<0.001$) for both groups between B and 6M & between B and 12M. There was a significant increase in adequate condom use scores ($p<0.001$) for both groups. In Progreso, scores significantly increased between B and 6M & B and 12M. In the control group, scores significantly increased between B and 12M. Condom use self-efficacy scores increased in Progreso between B and 6M. There was a significant increase in HIV knowledge ($p<0.001$) for both groups between B and 6M and between B and 12M. There was a significant increase in adequate condom use scores ($p<0.001$) for both groups. In Progreso, scores

significantly increased between B and 6M and between B and 12M. In the control group, scores significantly increased between B and 12M. Condom use self-efficacy scores only increased in the Progreso between B and 6M. This study demonstrated a culturally-tailored VOICES intervention for underserved Latinas incorporating socio-centric networks, resulted in positive effects on HIV preventive knowledge, condom use self-efficacy and adequate condom use, and these effects were sustained 12-months after implementation of the intervention.

18. Erica Landrau, J. Cardoso-Smith, R. Gonzales, J. Lechuga, University of Texas at El Paso (elandrauc@utep.edu)

TESTING A CULTURALLY-TAILORED INTERVENTION TO PROMOTE HPV-RELATED INTENTIONS IN LATINA YOUNG ADULTS

The human papillomavirus (HPV) is the most common sexually transmitted infection in the United States and a known risk factor for cervical cancer. Several HPV vaccines have been approved as a primary prevention option and are recommended for individuals 11 to 12 years old. Catch-up vaccination is also recommended for young adults 18-26 years old who have not initiated or completed the HPV vaccine 3-shot series. Despite recommendations to vaccinate, and a disproportionately high rate of cervical cancer among Latinas, rates of vaccination initiation and completion remain low among this population. Vaccination initiation and completion rates are particularly low among Latina young adults and adolescents, respectively. Importantly, few culturally tailored interventions to promote HPV vaccination have been developed for Latina young adults. The purpose of this study was to test a culturally-tailored fotonovela in order to promote HPV vaccine intentions among Latina young adults. Participants were 145 Mexican-American, female young adults (Mean = 19.99, SD = 1.84) between 18 to 26 years of age who have not received more than 2 shots of the HPV vaccine. Participants were randomized to receive either the culturally-tailored fotonovela (n = 78) or the CDC fact sheet (N = 67). HPV and HPV vaccine knowledge, attitudes, intentions, and constructs of the Health Belief Model (e.g., perceived benefits, barriers, severity, susceptibility, and self-efficacy to vaccinate against HPV) were assessed at pre- and post-test. Results revealed significantly greater gains in intentions to receive the HPV vaccine in the next month and perceived severity of contracting HPV among participants who were provided the culturally-tailored fotonovela compared to participants provided with a CDC fact sheet. However, a significant greater gain in HPV-related knowledge was found among participants who received the CDC fact sheet compared to participants who received the culturally-tailored fotonovela. Detailed qualitative information was obtained to guide the refinement of both the culturally-tailored fotonovela intervention and the CDC fact sheet to meet the needs of Latina young adults. Although participants conveyed greater intentions to obtain the HPV vaccine in the next month as a result of the fotonovela, the CDC fact sheet also contributed to increases in knowledge and general intentions to obtain the vaccine. The fotonovela was informed by preliminary research which indicated that lack of communication with members of the social network and providers about sexual health negatively hinders their adoption of sexual and reproductive health behaviors and modeled appropriate communication which may have increased intervention effectiveness.

19. Vena Kay Martinez, J.J. Sun, R.S. Ray, Baylor College of Medicine (Vena.Martinez@BCM.edu)

FUNCTIONAL AND ANATOMICAL MAPPING OF NA AMYGDALAR CIRCUITRY IN BREATHING AND ANXIETY

The most commonly reported symptom of panic attacks is respiratory dysfunction, such as hyperventilation. It has been shown that subsets of patients with anxiety disorders show a lower threshold for carbon dioxide level imbalances,

and exposure to high levels of carbon dioxide (hypercapnia) can induce anxiety-like behavior, such as panic attacks. The false suffocation alarm hypothesis posits that inappropriate activation of respiratory chemoreceptors, sensors of carbon dioxide levels, in response to benign indices triggers an alarm of suffocation danger and may contribute to anxiety and panic disorders. Two potential candidates that may link anxiogenic and respiratory circuitry are the central noradrenergic (NA) system and the amygdala, both of which have been shown to play roles in both breathing and anxiety. Therefore, we hypothesize that projections from the brainstem NA nuclei to the amygdala play a functional role in modulating the hypercapnic ventilatory response and anxiety-like behavior in mice. To test this hypothesis, we targeted NA projections to the amygdala by using a Cre-expressing retrograde virus applied to the amygdala of our intersectional DBH-p2a-FLPo; RR5, multicolor reporter line to conduct projection mapping of NA neurons to the amygdala and DBH-p2a-FLPo; RR1 and RR2 DREADD mice to specifically inhibit or stimulate NA neurons that project to the amygdala. In these mice, we measured respiratory output using whole-body plethysmography and anxiety-like behavior using open field, light dark and elevated plus maze. Upon stimulation of the NA projections to the amygdala, there was a decreased hypercapnic ventilatory response. Conversely, upon inhibition of the NA projections to the amygdala, there was an enhanced hypercapnic ventilatory response. Our preliminary results suggest that NA neurons that project to the amygdala may play a role in the hypercapnic ventilatory response. Future direction will include the analysis of anxiety-like behavior upon perturbation of NA projections to the amygdala, and anxiety-like behavior under hypercapnic conditions upon perturbation of NA projections to the amygdala.

20. Pablo Montero-Zamora, M. Kanamori, C.H. Shrader, Division of Prevention Science and Community Health, University of Miami, Miller School of Medicine (pxm527@miami.edu)

ALCOHOL AND DRUG USE AS RISK FACTORS FOR ADOLESCENT GUN-RELATED SELF AND INTERPERSONAL VIOLENCE. A COMPARISON BETWEEN THE US, MEXICO AND CANADA

Over 3,000 adolescents die worldwide daily (~1.2 million deaths per year). The three main causes of adolescent mortality are road traffic injuries, self-harm, and interpersonal violence. Risk factors for these causes are alcohol and drug use (ADU). We aim to compare: 1) adolescent mortality rates for gun-related (GunR) self-harm and GunR interpersonal violence attributable to ADU in the US, Mexico and Canada; and, 2) the attributable burden of ADU for GunR self-harm and GunR interpersonal violence among adolescents in these countries. We used data from the 2016 Global Burden of Disease Study for adolescents aged 10-19 years. We analyzed attributable mortality rates and attributable disability-adjusted life-years (DALYs), stratified by gender. Death rates and DALYs were analyzed for alcohol and drug use as a risk factor and one outcome at a time (GunR self-harm or GunR interpersonal violence). Adolescent attributable mortality rate for GunR self-harm was higher in the US than Canada and Mexico for both males (2.13 vs. 0.64 vs. 0.14 deaths per 100,000 people, respectively) and females (0.20 vs. 0.04 vs. 0.01 deaths per 100,000 people, respectively). Adolescent attributable mortality rate for GunR interpersonal violence was higher in Mexico and the US than Canada for males (1.60 vs. 1.55 vs. 0.22 deaths per 100,000 people) and higher in the US than Mexico and Canada for females (0.16 vs. 0.07 vs. 0.04 deaths per 100,000 people). In terms of DALYs, in 2016, North America lost 37,962 years of healthy life due to ADU as the risk factor for GunR self-harm and interpersonal violence (US = 29,640; Mexico = 7,577; Canada = 745). In the US, 31.79% of DALYs due to GunR self-harm and 14.96% of DALYs due to GunR interpersonal violence were attributed to ADU. In Canada, 27.06% of DALYs due to GunR self-harm and 16.87% of DALYs due to GunR interpersonal violence were

attributed to ADU. In Mexico, 11.70% of DALYs due to GunR self-harm and 9.55% of DALYs due to GunR interpersonal violence were attributed to ADU. There is a notable burden of GunR self-harm and GunR interpersonal violence associated with ADU among adolescents in North America. Our results suggest that US male adolescents face the greatest risk from this burden in this region. In 2016, 21 % of US male and female years of healthy life lost due GunR violence (self-harm and interpersonal) could have been prevented by eliminating the exposure to alcohol and drug use.

21. Kathryn M. Nowotny (1), Jessica Frankeberger (2), Alice Cepeda (2), Avelardo Valdez (2), (1) University of Miami, (2) University of Southern California (Kathryn.Nowotny@Miami.edu)

TRAJECTORIES OF HEROIN USE: LONGITUDINAL MODELS BASED ON A 15-YEAR FOLLOW-UP STUDY OF MEXICAN AMERICAN MEN

Heroin use remains a public health concern in the United States with notable long-term health and social consequences associated with heroin use including poorer physical health, psychological distress, depression, negative coping strategies, and criminal justice involvement. Although research has documented the early correlates that may lead to heroin initiation, less is understood about the long-term outcomes associated with distinct heroin use trajectories. This study aims to document the distinct heroin use trajectories for a group of young adult Mexican-American men living in a disadvantaged community. We use retrospective (15-year) life history data collected from 275 Mexican-American men to calculate a measure of the number of months (0 to 12) that a respondent used heroin in a given year. We applied growth mixture modeling analysis to identify groups with distinctive trajectory patterns. Because the outcome is a count of months of heroin use per year, we estimated a Poisson model. A latent-class variable indicated the number of distinctive groups among participants. To examine the outcomes associated with the groups of distinctive trajectories of heroin use, we conducted ANOVA or χ^2 tests to test for group differences. The growth mixture modeling identified four distinct heroin trajectory groups: a non/low use group (38.7%), a late accelerating group (13.2%), a decelerating/ early age out group (17.1%), and a stably high group (31.0%). Among the men in the three active heroin use trajectory groups, 50.6% of heroin users are in the stably high group. Of note, 12.3% of the non/low use group had injected heroin at least once in their lifetime. The four groups are significantly different with respect to current (past year) demographic outcomes (e.g., marital status, employment, housing), behavioral risk (e.g., criminal activity, adult gang membership, being shot at with a gun), current health (e.g., self-rated health, tested HCV infection, skin abscesses), and mental health symptomatology (e.g., depression, anxiety, hostility, psychoticism). This study demonstrates the heterogeneity of heroin use careers among Mexican-American men and the subsequent adverse consequences for users engaging in late accelerating and stably high-patterns of use. Using longitudinal research designs to examine the heroin careers of the largest U.S. race/ethnic minority group is crucial for curtailing health disparities.

22. Sandra Oviedo Ramirez, M. J. Alvarez, M. A. Zárate, University of Texas at El Paso, Department of Psychology (sloviadoramirez@miners.utep.edu)

THE BITTERSWEET TASTE OF HOME: NATIONAL NOSTALGIA AS A PREDICTOR OF HEALTH OUTCOMES FOR LATINX IMMIGRANTS

The present research adopts the Cultural Inertia Model of Change to investigate the relationships between nostalgia, acculturation, and perceived barriers to health care among LatinX immigrants residing in the US-Mexico border. Cultural inertia is defined as the desire to avoid cultural change, or conversely, desire cultural change once change is already

occurring. Under this model, individuals who experience nostalgia towards their country of origin are more likely to express resistance towards adapting to a new environment. The proposed research seeks to understand how nostalgia for country of origin can impede or promote integration to a new country, and in turn, affect positive health outcomes among Latinx immigrants. Group-based nostalgia, like national nostalgia, is an impersonal form of nostalgia that leads people to “harken back” to a day when “things were better.” This type of nostalgia often ignores improvements in society and represents an idealized version of history. Using the Cultural Inertia framework, we hypothesized that national nostalgia may be indicative of individuals resisting to acculturative changes. Consequently, this may result in negative health outcomes for Latinx immigrants. Approximately 225 Latinx immigrants are being recruited from community centers in El Paso, Texas. Participants are being asked to complete a survey containing measures related to nostalgia, engagement in American and Latinx culture, healthcare questions, and demographic information. Data collection is ongoing. To date, a total of 165 participants have been recruited. Findings from this study will provide a further examination of the model of Cultural Inertia as it applies to health research. Moreover, utilizing this framework may help health researchers understand the role of cultural change and its implications in health outcomes for underserved populations such as refugees and immigrants.

23. Robert L. Peralta, J. Carter, J. Xi, The University of Akron (rp32@uakron.edu)

DOES A STRONG SENSE OF ETHNIC IDENTITY REDUCE THE LIKELIHOOD OF PRESCRIPTION DRUG MISUSE? FINDINGS FROM A MIDWESTERN COLLEGE SAMPLE

Non-medical prescription drug (NMPD) misuse remains a public health concern in the general population and among college students in particular. Framed by Ethnic Identity Theory (a component of Social Learning Theory), this study examines NMPD use among a sample of Midwestern college students. We propose that a stronger sense of ethnic identity may reduce the likelihood of NMPD use among college students due to ethnic identity's ties to self-esteem and self efficacy. We further propose that the protective power of ethnic identity may vary according to one's own ethno-racial identity. Data for this study were collected from a survey of undergraduate students at a single Midwest University (N=544). Ethnic identity was measured using the Multigroup Ethnic Identity Measure. Prescription drug use was measured using standardized prescription drug use measures. Poisson regression analysis were employed to test the relationship between ethnic identity and NMPD use. Findings indicate that a stronger sense of ethnic identity was associated with a reduced frequency of prescription drug abuse among college students. Results also indicate that the relationship between ethnic identity and prescription drug abuse is moderated by race. Ethnic identity was found to be a protective factor for nonwhite participants only. This study suggests that a sense of ethnic belonging may act as a protective factor against the misuse of prescription drugs among young adults. These findings build upon our understanding of ethnic identity and substance use and abuse. Suggestions for intervention and prevention strategies and future research conclude the study.

24. Esmeralda Ramirez, J. Frankeberger, A. Cepeda, A. Valdez, University of Southern California (esmerami@usc.edu)

DRUG USE, OVERDOSE, AND DRUG TREATMENT AMONG A LONGITUDINAL SAMPLE OF MEXICAN AMERICAN WOMEN IN A DISADVANTAGED COMMUNITY
As gang activity in the U.S. continues to increase, adolescents and young adults living in economically disadvantaged communities are at disproportionate risk for developing harmful drug use behaviors and related health risks. While research on gangs has generally focused on males, we know less about the females in these contexts and their vulnerability

to long-term drug use behaviors. The current study aims to present a substance use profile from the ongoing San Antonio Latina Trajectory Outcomes study (Proyecto SALTO), a NIDA-funded 15-year longitudinal study examining the long-term health outcomes among a cohort of Mexican American women who were affiliated with male gang members as adolescents. Data was collected on demographics, self-reported current and lifetime drug use and behaviors, overdose experiences, and drug treatment. Drug urinalysis detected the presence of amphetamines, barbiturates, benzodiazepines, cocaine, methamphetamine, opiates, and THC. A bivariate analysis examined current drug use and sociodemographic factors. Preliminary findings indicate high rates of current drug use throughout the sample (n=156), including marijuana (20.4%), opiates (20.4%), methamphetamine (15.8%), benzodiazepines (11.8%), and cocaine (9.2%). Additionally, 26.3% of the sample have injected drugs in their lifetime, while 9.1% have injected in the last month. Sixteen women reported overdosing on heroin at least once with an average of 2.9 overdoses. Thirty percent of women reported ever receiving drug treatment with an average 3.3 times. Twelve percent of the sample was currently receiving drug treatment, with 89.5% of those on methadone maintenance. Bivariate analysis showed that current cocaine use was associated with an older age (35 vs. 32 years, $p < .001$). Unemployment was associated with current methamphetamine ($p < .001$), opiate ($p = .009$), and benzodiazepine use ($p = .016$). Methamphetamine use was also associated with higher residential instability ($p = .002$). High rates of drug use and low rates of drug treatment are important in characterizing the risk profile among this sample of marginalized Mexican American women. Given the overall high drug use, future research should explore patterns of polydrug use and salient health consequences that have gone underrepresented in existing drug research.

25. Dean Rivera (1), H. Amaro (1), S. Dworak (2), (1) University of Southern California, (2) Peck School of Social Work (drrivera@usc.edu)

MANDATED STATUS, PERCEIVED STRESS AND PARENTING RESPONSIBILITIES: RISK OR PROTECTIVE FACTORS IN WOMEN'S SUD TREATMENT RETENTION?

Mandated treatment (MT) is a substance use disorder (SUD) treatment engagement and retention strategy used by the criminal justice (CJ) and child protective service (CPS) system. Yet, studies report mixed effects of MT and findings may not be generalizable to women due to largely male samples. Women's more complex clinical and parenting-related needs, suggest gender-specific factors need to be considered. Aims: Assess differences in women's SUD treatment retention between (1) mandated vs non-mandated, and (2) referral source (CJ mandated, CPS mandated, and non-mandated); while considering gender-relevant factors. Data were from a parent study (N=245 women) in a gender-specific SUD treatment residential program. Participants were young (M= 32.21), Hispanic (57.55%), mothers (89.9%) and had co-occurring mental health disorders (57.74%). Average days in treatment was 120.6 (SD=74.6). Model 1: multiple linear regression examined the association between independent variable MT (yes/no) and dependent variable days in treatment (log transformed). Model 2: same approach examined distinctions between referral sources as predictors of treatment days. Models included covariates: perceived stress, mental health diagnosis, and children in mother's care. We found differences in stress scores by MT status ($p < .003$) and referral source ($p < .0001$), having custody of a child and referral source ($p < .0004$), and no demographic differences. Model 1: Mandated status (yes/no) was a statistically significant predictor of SUD treatment days ($p < .017$) - representing a 13.17% increase in retention for mandated versus non-mandated after controlling for covariates. Model 2: CJ or CPS mandated women stayed longer in treatment ($p < .046$ and $p < .013$, respectively) than non-mandated, resulting in

similar increases in days of treatment (11.15% and 15.95%, respectively) after controlling for covariates. In both models, lower stress sum scores, having a mental health diagnosis, and not having children were significantly associated with more treatment days. Mandated treatment had significant modest positive effects on treatment days - a predictor of outcomes. Gender-relevant factors, such as greater stress and parenting responsibilities seem to pose challenges for treatment continuation. Future research should investigate independent and interactive effects of gender-specific risk factors on treatment length among women mandated to SUD treatment.

26. Eduardo Romano (1), M. Sánchez (2), M. de la Rosa (2), (1) Pacific Institute for Research and Evaluation, Calverton, Maryland, (2) Florida International University, Miami, Florida (romano@pire.org)

DWI, DWID, AND RWID AMONG RECENT LATINO IMMIGRANTS TO MIAMI (FL)

While Latinos do not drink and drive more often than their White counterparts, they have higher rates driving-while-intoxicated (DWI) arrests and alcohol-related fatal crashes. Research is limited on how Latino immigrants perceive the risks of driving impaired and how this may translate into actual DWI. The current study examined pre- and post-immigration factors as predictors of DWI and riding with an impaired driver (RWID) among recent Latino immigrants to Florida. This study took advantage of a 5-year longitudinal assessment of pre- and post-immigration factors that influence alcohol and drug use of recent Latino immigrants to Florida (aged 18-34). Respondent-driven sampling (RDS) was the primary recruitment strategy. Descriptive and regression techniques were applied to data analyses. Compared with permanent residents, undocumented drivers are more likely to binge drink, and less likely to understand DWI laws and perceive risks associated with DWI. However, undocumented immigrants showed low DWI rates, partly due to their limited amount of driving. Contrary to what was predicted, acculturative stress was not associated with DWI risk perceptions (largely because participants had been residing in the U.S. for over 6 years at the time of assessment). Immigrants who utilized negative religious coping more often were less likely to view DWI as a risk. Post-immigration rates of DWI (and drug driving- DWID) were strongly influenced by pre-immigration DWID and DWI. Of concern was the prevalence of RWID. Differences in risk perceptions and DWI between Latino immigrants of different residency statuses suggest the possibility of early interventions to reduce DWI among Latino immigrants. Importantly, because it is not affected by driving limitations, RWID for these Latino immigrants is perhaps a more immediate risk than DWI. Cultural factors such as family and religious systems should be integrated when attempting to culturally tailor DUI prevention programs to specific Latino immigrants. Addressing RWID among recent Latino immigrants should be a priority for traffic safety. Future interventions should make efforts to 1) identify immigrants who had DWI and DWID in their country of origin, given they may be at higher risk; and 2) design and deliver specific and culturally-relevant messages to prevent engaging in those risk behaviors in the host country.

27. Mariana Sanchez (1), M. A. Cano (1), R. Gonzalez (1), S. Hawes (1), J. Arroyo (2), (1) Florida International University, (2) NIAAA (M.sanche@fiu.edu)

PRELIMINARY VALIDATION OF THE VANCOUVER INDEX OF ACCULTURATION IN A NATIONAL REPRESENTATIVE COHORT OF ADULTS IN THE US

Acculturation is a multifaceted process involving the confluence of heritage and mainstream cultural practices, values, and attitudes. Most research has measured acculturation in a uni-dimensional way through demographic proxies such as language use and nativity. The Vancouver Index of Acculturation (VIA) is a bi-dimensional scale measuring

adherence to mainstream and heritage cultures. While the VIA has demonstrated good internal consistency across a variety of samples it has not been validated in the US. This study assesses the psychometric properties of an adapted version of the VIA in a sample of native and foreign-born adults in the US. Data for this study comes from the Adolescent Brain and Cognitive Development (ABCD) Study, a landmark study examining how biological and social determinants impact substance use and brain development trajectories throughout adolescence. A sample of $n=2669$ parents completed a 16-item version of the VIA adapted for the ABCD Study. Nativity, language use/proficiency and ethnic identity were assessed. Heritage culture distributions were 37% European, 21% Latino, 11% African American, 16% religious affiliation (i.e. Mormon, Jewish), 15% other. Approximately 24% were foreign born. Principal components analysis revealed a two factor solution based on eigenvalues and screeplot inspection, explaining 31.7% of the total variance. Both Heritage and mainstream dimensions evidenced high internal consistency ($\alpha=0.91$ and $\alpha=0.90$, respectively). Inter-correlations revealed an oblique association between subscales ($r=.47$, $p<.001$). Higher heritage culture scores were related with less English use/proficiency and being foreign born. Higher mainstream culture scores were associated with greater English use/proficiency; no differences by nativity were found. Ethnic identity was associated with adherence to both heritage and mainstream cultures. Further exploratory/confirmatory factor analytic models will examine model fit and measurement invariance across ethnic/racial groups. Findings provide preliminary evidence for the validity of a bi-dimensional measure of acculturation across racial/ethnic groups in the US. Future directions include replicating findings with the complete ABCD sample and among youth once data becomes available. This line of research paves the way for new advances in theory and research examining how multidimensional aspects of culture impact health outcomes across the lifespan.

28. Seth J. Schwartz, E.C. Brown (1), P. Montero-Zamora (1), A. Meca (1), C. Scaramutti (1), M.H. Soares (1), S.R. Vos (1), N. Javakhishvili (1), C.P. Salas-Wright (2), J. Dickson-Gomez (3), A. Perez-Gomez (4), J. Mejía-Trujillo (4), (1) University of Miami, (2) Boston University, (3) Med. Wisconsin, (4) Nuevos Rumbos (SSchwartz@med.miami.edu)

CULTURAL STRESS AND PSYCHOLOGICAL SYMPTOMS IN RECENT VENEZUELAN IMMIGRANTS TO THE UNITED STATES AND COLOMBIA

Venezuela has emerged as a new and critically-important source of immigrants to the United States (US) and to countries across Latin America. The aim of the present study is to compare cultural stressors, psychological distress, and their interrelationships between recent Venezuelan immigrants in the US and in Colombia. Cultural stress theory suggests that immigrant groups in receiving contexts that are more culturally similar would report less discrimination, and a less negative context of reception, compared to immigrant groups settling in countries that are more culturally dissimilar. We therefore hypothesized that recent Venezuelan immigrants in Colombia would report less cultural stress, and less psychological distress (depressive and anxiety symptoms.), compared to Venezuelan immigrants in the US. Participants in the present study were 647 Venezuelan immigrant adults in the US ($n = 342$) and Colombia ($n = 305$). All participants reported having one or more children under age 18 and 78% of participants reported having migrated in the previous 12 months. In both sites, the study team engaged community leaders to recruit participants using respondent-driven sampling. Each participant was asked to refer up to three additional participants, and incentives were provided for these referrals. Participants completed surveys assessing perceived discrimination, negative context of reception, and depressive and anxiety symptoms. Contrary to expectations, we found that Venezuelan immigrants in Colombia reported significantly

greater discrimination, a worse context of reception, and more depressive symptoms., compared to their counterparts in the US. Mediation models indicated that a negative context of reception was related to depressive and anxiety symptoms indirectly through experiences of discrimination. Contrary to what cultural stress theory would predict, Venezuelan immigrants in Colombia reported more discrimination and a more unfavorable context of reception than did Venezuelan immigrants in the US. Venezuelan immigrants in Colombia also reported more symptoms of depression (but not more symptoms of anxiety) than did Venezuelan immigrants in the US. Potential explanations for this unexpected pattern of results are explored in reference to theory and recent findings from qualitative research with Venezuelan immigrants in the US and Colombia.

29. Cho Hee Shrader, P. Montero-Zamora, M. Kanamori, Division of Prevention Science and Community Health, Department of Public Health, University of Miami, Miller School of Medicine (cxs939@miami.edu)

COMPARING THE 2016 MALE AND FEMALE HIV INCIDENCE BETWEEN THE US AND 17 LATIN AMERICAN COUNTRIES: AN ANALYSIS FROM THE GLOBAL BURDEN OF DISEASE STUDY

HIV continues to be a serious health issue worldwide. Globally, there were about 1.8 million new HIV cases in 2016. The US is a major funder of the global HIV response; yet, has its own untreated epidemic to address. We present a comparative analysis of the 2016 HIV incidence between the US and 17 Latin American countries by gender and age specific groups. We analyzed HIV incidence by age-standardized and age-specific groups (<5, 5-14, 15-49, 50-69, and >70 years) then stratified by gender for 17 Latin American countries and the US using estimations from the 2016 Global Burden of Disease Study. Country specific data was acquired through National Vital Statistics Systems., antenatal care clinics, and population-based seroprevalence surveys. These estimates were produced using the World Population Prospects: 2015, UN Population Division, and the WHO Human Mortality Database. In 2016 the age-standardized HIV incidence per 100,000 people for males in the U.S. (20.21) was higher than 14 Latin American countries (Brazil: 20.0, Argentina: 19.7, México: 19.4, Nicaragua: 16.0, Colombia: 15.5, Bolivia: 14.6, Guatemala: 14.4, Ecuador: 14.1, Honduras: 13.0, Costa Rica: 12.8, Chile: 9.2, El Salvador: 8.6, Peru: 7.7, and Paraguay: 7.1). The age-standardized HIV incidence per 100,000 people for females in the US (8.5) was higher than 12 Latin American countries (Venezuela: 8.3, Honduras: 8.1, Guatemala: 7.8, Bolivia: 7.1, Nicaragua: 5.5, Colombia: 5.3, México: 5.1, Paraguay: 4.6, Costa Rica: 4.0, El Salvador: 4.0, Peru: 2.4, and Chile: 1.7). For age-specific HIV incidence per 100,000 people, we found: 1) <5 years old, the US HIV incidence was higher than 11 countries for males (1.2) and females (1.2). For ages 15-49 years, US HIV incidence was higher than 13 countries for males (35.9) and 12 for females (3.8). For age group 50-69 years, US HIV incidence was higher than 13 countries for males (12.4) and 8 for females (3.8). Finally, in age group >70 years, US HIV incidence was higher than 7 countries for males (3.2) and 5 for females (0.5). Some countries in Latin America have made significant progress in tackling HIV transmission- this progress has been uneven and contrary to what is expected from the US. Our findings are relevant and timely: reducing the incidence of the disease will require strengthening HIV prevention efforts such as the implementation of culturally tailored high-impact HIV combination prevention packages.

30. Vanessa Torres, S.R. Doyle, D. Donovan, B. Duran, I.J. Ornelas, University of Washington (torresvn@uw.edu)

DRINKING MOTIVES AND ALCOHOL-RELATED CONSEQUENCES AMONG LATINO DAY LABORERS

Latino day laborers may engage in unhealthy alcohol use as a way of coping with immigration-related stressors, which can

ultimately lead to negative health and social consequences. Interventions to reduce unhealthy alcohol use focus on weighing the pros and cons of drinking. The purpose of this study is to describe Latino day laborers' motives for drinking, as well as their alcohol-related consequences using the 15-item Short Inventory Problems. (SIP) to calculate lifetime consequences score. We assessed differences in drinking motives and lifetime consequences by level of AUDIT risk (scores 0-7 indicate low risk or abstinence, scores 8-15 suggest unhealthy alcohol use, scores 16-19 indicate harmful and hazardous drinking and scores 20-40 suggest alcohol dependence) using chi-square tests of independence and two-sample tests of proportions. The most commonly reported drinking motives were to cope with anxiety, to enhance feelings of fun, and to socialize. However, those men with higher AUDIT scores (20-40) compared to those with lower AUDIT scores (6-19) reported higher mean levels of anxiety, enhancement, and social motives. Men with higher AUDIT scores reported an average of twelve alcohol-related consequences, while men with lower AUDIT scores reported an average of six alcohol-related consequences. Initial results demonstrate that those men who are alcohol dependent as indicated by AUDIT scores \geq 20 face additional alcohol-related consequences and have more anxiety-related motives to drink compared to those men with lower AUDIT scores. These findings suggest that screening for unhealthy alcohol use and providing referral to treatment may be useful to reduce alcohol-related consequences. In addition, these findings may inform interventions to reduce unhealthy alcohol use among this population. More research is needed to determine most effective ways of reducing alcohol consumption among this population.

31. Kevin Uribe, R. Flores, V. Correria, B. Cruz, L. O'Dell, *Department of Psychology, University of Texas at El Paso (kpuribe@miners.utep.edu)*

OVEREXPRESSION OF A STRESS PEPTIDE IN THE NUCLEUS ACCUMBENS INCREASES NICOTINE SELF-ADMINISTRATION IN FEMALE VERSUS MALE RATS

Pre-clinical studies have revealed that the stress hormone, corticotrophin-releasing factor (CRF), within the nucleus accumbens (NAc) modulates the strong negative affective states produced by nicotine withdrawal in female rats. The present study expanded this work by examining the role of CRF in the NAc in promoting the reinforcing effects of nicotine in female and male rats. A group of ovariectomized (OVX) females were also included to examine whether our behavioral effects are ovarian-hormone mediated. Briefly, self-administration was compared in female, OVX female, and male rats that received intra-NAc infusions of an adeno-associated vector-CRF (AAV-CRF) to over-express CRF in this region. Control rats received a control vector (AAV-GFP). The animals were then prepared with a jugular catheter for extended access (23-hour) to self-administer escalating doses of nicotine. After the final session, the rats were sacrificed and their brains were collected in order to verify over-expression of CRF using qRT-PCR methods. The results revealed that over-expression of CRF in the NAc produced a selective increase in nicotine self-administration in intact female rats as compared to males. The effects of CRF-overexpression appeared to be ovarian-hormone dependent, as OVX females displayed similar levels of nicotine intake as males. The qRT-PCR results revealed that the viral vector over-expressed CRF in the NAc, and this effect was similar in female (178%) and male (171%) rats relative to GFP controls. These findings suggest that stress systems in the NAc play a key role in modulating sex differences in the reinforcing effects of nicotine.

32. Suzan Walters (1), A.V. Rivera (2), K.H. Reilly (2), S. Braunstein (2), B.J. Anderson (3), B. Bolden (4), A. Wogayehu (4), A. Neaigus (5), (1) Stony Brook University, (2) New York City Department of Health and Mental Hygiene, (3) New York State Department of Health, (4) New Jersey Department of Health, (5) Columbia University (suzanmwalters@gmail.com)

EXCHANGE SEX AMONG PERSONS WHO INJECT DRUGS IN THE NEW YORK METROPOLITAN AREA: THE IMPORTANCE OF LOCAL CONTEXTS, GENDER AND SEXUAL IDENTITY

Exchanging sex for money or drugs is known to increase risk for HIV among persons who inject drugs (PWID). To better understand determinants of exchange sex among PWID we examined factors associated with exchange sex in the New York metropolitan area - defined as New York City (NYC), NY; Newark, NJ; and Long Island, NY. Data used was from the 2012 National HIV Behavioral Surveillance system cycle on injection drug use and respondent-driven sampling was used to recruit participants. To estimate prevalence ratios (PRs) and adjusted prevalence ratios (aPRs) we used log-linked Poisson regression with robust standard errors. Of the 1,160 PWID in this analysis, 24% reported exchange sex, with differences in gender and sexual identity by location. In multivariable analysis gay/bisexual men, heterosexual women, and lesbian, gay, or bisexual (LGB) women were more likely to exchange sex compared to heterosexual men. Exchange sex was also associated with race/ethnicity, homelessness, incarceration, location, and non-injection crack and cocaine use. We find that heterosexual women and LGB women who injected drugs residing in Newark were more likely to report exchange sex compared to NYC. In sub analyses, exchange sex was associated with being Hispanic/Latino in Long Island and NYC, but not in Newark. This study demonstrates that local conditions and cultural context are important determinants for exchange sex among PWID.

33. Renee Waters, A. M. Maldonado-Devincci, Department of Psychology, College of Health and Human Sciences, North Carolina A&T State University (rcwaters@aggies.ncat.edu)

FORCED SWIM STRESS ALTERS CIRCULATING AND BRAIN CORTICOSTERONE RESPONSE IN C57BL/6J MICE

Naturally, the human body is designed to respond to stressful situations, including activation of the hypothalamic-pituitary-adrenal (HPA) axis. Several brain regions, including limbic brain structures and the HPA axis are activated in response to stress. Over time chronic stress will disrupt functioning in these brain regions causing inappropriate responses to stressful situations and alterations of several neuroactive steroids. Neuroactive steroids are derived from cholesterol in the brain and work innately to preserve homeostasis. Understanding how neuroactive steroids are altered in response to stress is vital in understanding the overall effects of stress in the brain. Previously, we observed a decrease in the neuroactive steroid, allopregnanolone (3 α ,5 α -THP) in limbic brain regions following acute forced swim stress in mice. The present study aims to evaluate if compensatory changes in the neuroactive steroid corticosterone are observed following acute forced swim stress. In the brain, 3 α , 5 α -THP and corticosterone are derived from the same biosynthetic pathway, thus leading us to hypothesize there would be compensatory changes in one for the other. Typically, corticosterone is considered a hormone that is released in response to stress from the adrenal glands. Nevertheless, synthesis of this steroid occurs in the brain as well. Twenty-seven male C57BL/6J mice were used in this study. The mice were placed in an inescapable tank of water for 10 minutes, removed and dried, and then remained in the home cage for 50 min. They were then euthanized and brains were collected for immunohistochemical analysis. Peripherally, mice exposed to forced swim stress showed an 81.92 \pm 23.37% increase ($p < 0.002$) in circulating corticosterone in the blood. In the lateral subregion of the amygdala, data indicate a trend for increased corticosterone immunostaining by 20.45 \pm 11.0% ($p = 0.07$) in mice that were exposed to the acute stressor compared to controls. In contrast, in the basolateral subregion of the amygdala and in the central nucleus of the amygdala, there was no difference in corticosterone immunostaining between the two groups. Currently other limbic and hippocampal brain structures are under investigation. Together, these data indicate that amygdalar subregions in the brain respond differently to acute stress and may be associated with a compensatory increase in the neuroactive steroid corticosterone.

Data indicate that corticosterone immunostaining was increased by 31.0 \pm 13.8% ($p < 0.02$) in ethanol-exposed mice compared to air-exposed controls in the nucleus accumbens core. However, no change was observed in the nucleus accumbens shell. In the lateral subregion of the amygdala, there was a 22.1 \pm 12.0% ($p < 0.05$) decrease in corticosterone immunostaining in ethanol-exposed mice compared to air-exposed mice. However, there was no change in the basolateral or central nucleus subregions of the amygdala. In the CA3 subregions of the hippocampus, corticosterone immunostaining was decreased by 21.44 \pm 12.2% in ethanol-exposed mice, but no change in the CA1 subregion of the hippocampus. Together, in the present work we observed compensatory changes in corticosterone responding in the nucleus accumbens core and in the CA3 subregion of the hippocampus. However, in the lateral amygdala we observed a decrease in both corticosterone in the present work and 3 α ,5 α -THP in previous work. These data indicate specific subregions of limbic brain structures show compensatory changes in corticosterone levels, where we previously observed changes in 3 α ,5 α -THP. Currently, other limbic brain structures and a longer withdrawal time point are under investigation for assessment of changes in brain corticosterone levels following chronic intermittent ethanol exposure.

34. Bryce White, A. M. Hill, A. M. Maldonado-Devincci, North Carolina A&T State University (Bawhite2@aggies.ncat.edu)

BRAIN CORTICOSTERONE LEVELS ARE ALTERED FOLLOWING CHRONIC INTERMITTENT ETHANOL EXPOSURE IN MALE C57BL/6J MICE

Alcoholism and withdrawal can seriously affect the brain, including altering regulation of steroids and hormones. Neuroactive steroids are important for learning, memory and stress responses. Previous research showed that acute ethanol exposure increased hippocampal levels of the neuroactive steroid corticosterone, but not allopregnanolone (3 α ,5 α -THP). Corticosterone and 3 α ,5 α -THP are both progesterone-derived neurosteroids. Based on this, we hypothesized that chronic intermittent ethanol would induce compensatory increases in corticosterone in the same brain regions where we previously observed decreased 3 α ,5 α -THP. The present study examined how chronic intermittent ethanol exposure altered brain corticosterone levels in subregions of the nucleus accumbens, amygdala, and hippocampus. Male C57BL/6J mice were exposed to four cycles of chronic intermittent ethanol vapor or air over four weeks. Eight hours following the last ethanol-vapor or air exposure cycle, mice were euthanized, brains collected, cut into 40 μ m sections, and immunohistochemical analysis was conducted to visualize brain corticosterone immunostaining.

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