



NATIONAL
HISPANIC
SCIENCE
NETWORK

NHSN at 20:

**The Legacy and Future Impact of Substance Abuse
Research in Underrepresented Communities**

Virtual Conference
October 14 – 16, 2020



Welcome from the Conference Scientific Chairs

On behalf of the Conference Planning Committee and the Steering Committee of the National Hispanic Science Network (NHSN), we welcome you to the 20th Annual International Conference of the NHSN. Our theme this year is “NHSN at 20: The Legacy and Future Impact of Substance Abuse Research in Underrepresented Communities” in recognition of 20 years of dedicated work, and of the future impact of NHSN in substance abuse research in underrepresented communities. With the next 20 years of the NHSN in mind, this year’s meeting will engage participants in discussion of timely biomedical, clinical, and behavioral issues in substance abuse research, keeping in mind our collective goal of supporting the development of independent investigators in our field. We will also incorporate activities that help us take a moment to look back at our achievements and to reevaluate future goals of our organization. We have done so much, but the work is not over!

This year is like no other in our lifetime. Our global community is united in the challenges produced by the COVID-19 pandemic. In addition, domestically, the fight against explicit and implicit racial bias has come to the forefront of our collective consciousness. While this year’s meeting will be on a virtual format, we are more committed than ever to connect, to learn, and to support junior investigators. Our meeting and pursuing our long-term mission is more critical than ever. Thus, we remain excited and committed to bringing you recent advancements in substance abuse research with timely discussions about the impact of COVID-19. We hope you will join us to bring together our community of researchers, and we hope you will join in on our activities that will help advance the careers of young investigators.

This year we are joined by two leaders from the National Institutes of Health (NIH), Dr. Redonna Chandler (Director of AIDS Program at the National Institute on Drug Abuse), and Dr. Nora Volkow (Director of the National Institute on Drug Abuse) each will deliver a plenary presentation. Additionally, we will be covering pressing issues and recent advancements in substance abuse research during 3 scientific sessions that will focus on 1) the Adolescent Brain Cognitive Development (ABCD) study, 2) Alcohol as a challenge to ending the HIV epidemic, and 3) The neural mechanisms of nicotine use. These scientific sessions will feature distinguished researchers who have made significant contributions to each of these scientific areas. Dr. Albert Avila, Director of the Office of Diversity and Health Disparities (ODHD), National Institute on Drug Abuse, will be leading a grant writing session that will be structured to answer real questions from our community of junior, mid-career, and senior researchers. As usual, we will continue to provide a dedicated space for our early career members to share their exciting work through the yearly New Investigators in Drug Abuse Research Panel and the poster session. Finally, we have added a roundtable discussion on Race and Ethnicity that has been organized for NHSN members. This timely discussion will be important as we consider the role of NHSN in addressing current challenges for underrepresented communities.

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

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committee: Drs. Lucas Albrechet-Souza, Judith Arroyo, Tara Bautista, Carlos Bolaños-Guzman, Miguel Cano, Luis Carcoba, Berenice Castillo, Rubi Gonzales, Felipe Gonzalez Castro, Danielle Levitt, Catalina Lopez-Quintero, Luis Natividad, Miguel Piñedo, Eden Robles, Hugo Sandoval, Flavia Souza-Smith, Mayra Vargas-Rivera, and Arturo Zavala. A special thanks as well to all those members who volunteered their time to review abstracts for the New Investigators in Drug Abuse Research Panel and poster session. We want to give special recognition to, Melissa Prestwood who provided support and guidance to the conference chairs and committee. Finally, it is with pleasure that we acknowledge our funders: National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse and National Institute on Minority Health and Health Disparities, in addition to Louisiana State University Health Sciences Center New Orleans, Michigan State University.

We look forward to reconnecting and to an exciting virtual meeting on our 20th anniversary!

Conference Chairs:

Laura O'Dell, Ph.D., Professor, Department of Psychology, University of Texas at El Paso

Diana M. Sheehan, Ph.D., M.P.H., Assistant Professor, Department of Epidemiology, Florida International University



Schedule of Events

Note all times are Central/Standard Time

Wednesday, October 14, 2020

1:00 PM – 3:00 PM

NHSN Members Roundtable Discussion: Una Plática: From a Conceptual Knowledge of Diversity and Inclusion to Practice in Academia

Moderator: **Eden Robles, MSW, PhD**, Research Assistant Professor, School of Psychology, The University of Texas at El Paso (eden.robles@ttuhsc.edu)

Abstract: In this interactive discussion, participants will explore diversity and inclusion and the opportunities to apply conceptual knowledge of diversity and inclusion to practice. The moderators will engage the participants for the purpose of fostering an active discussion on sharing and refining strategies that promote inclusion and diversity in academia.

Objectives:

- 1) To increase participants' understanding of diversity and inclusion and its importance in academia through active discussion.
- 2) To engage participants in an interactive discussion about the opportunities associated with critically analyzing inclusion and diversity and its application in academic settings.
- 3) To stimulate participants to identify and develop various strategies for promoting inclusion and diversity in academia among colleagues.
- 4) To empower participants to identify and develop various strategies for mentoring students pursuing academic careers to practice inclusion and diversity.

Thursday, October 15, 2020

12:00 PM – 12:10

Welcome from Chairs

12:10-1:10 PM

Plenary Presentation

Presenter: **Redonna Chandler, PhD**, Director of AIDS Research Program, NIDA

1:10 PM – 2:10 PM

Scientific Session: Adolescent Brain Cognitive Development (ABCD) Study

Chair: **Raul Gonzalez, Jr, PhD**, Professor of Psychology, Psychiatry and Immunology, Florida International University (gonzara@fiu.edu)

Presenters: **Marybel Robledo Gonzalez, PhD**, Postdoctoral Scholar, University of California San Diego

Role of Socio-economic Contexts in Psychosocial and Cultural Associations with Alcohol Use Risk Among Youth

Mariana Sanchez, PhD, Assistant Professor, Department of Health Promotion & Disease Prevention, Florida International University

Psychosocial and Cultural Influences of Alcohol Use Risk Among Youth in the United State: Findings from the ABCD Study

Abstract: Background: The Adolescent Brain Cognitive Development Study (ABCD) is the largest long-term study of brain development and child health in the U.S. Across 21 sites, 11,880 9-10 year-old youth and their caregivers are being assessed over 10 years, with ongoing annual data releases made available to the scientific community. Critical domains assessed span mental health, physical health and activity, socio-cultural, neighborhood, and family environment, neurocognition, genetics, brain structure and function, and substance use. Over 2,000 families in the cohort identify as Latinx, presenting an unprecedented opportunity to understand complex biological and socio-cultural risk and resilience factors for alcohol use in this population. Compared to Black and non-Latinx White adolescents in the U.S., Latinx youth report: the highest prevalence of lifetime underage drinking (64.7%), drinking alcohol before age 13 (19.3%) and the second highest prevalence of binge drinking (14%) (CDC, 2018). Presenting additional challenges, Latinx families tend to experience lower socioeconomic status (SES), including lower parental education and lower household incomes, than non-Latinx White families. Methods: In this symposium we introduce the ABCD study and the various domains assessed, as well as present examples of how sociocultural factors can be analyzed to examine their influence on alcohol risk behaviors. Extant evidence indicates that cultural mechanisms play a major role in the development of alcohol use among Latinx youth. However, little is known about the cultural mechanisms involved in the pathways to these risk behaviors. Results: Data from the 2-year follow-up of ABCD is used to examine how psychosocial determinants at the individual, family, and community level interact with cultural mechanisms to impact alcohol use risk outcomes among Latinx youth (n = 2232). The diversity of the ABCD sample makes it possible to examine sub-sets of Latinx youth diverse in SES to more closely evaluate the extent by which relationships between psychosocial determinants of risk for alcohol use and cultural mechanisms are influenced by SES. Conclusions: The diverse sample and rich data being collected by the ABCD study presents a unique opportunity to understand the development of alcohol use and alcohol use disorders during adolescence and into young adulthood, including the role of culturally relevant risk and protective factors.

2:15 PM – 3:15 PM

Scientific Session: Alcohol as a Challenge to Ending the HIV Epidemic

Co-Chairs: **Diana Sheehan-Delgado, MPH, PhD**, Assistant Professor, Department of Epidemiology, Florida International University (dsheehan@fiu.edu)

Danielle Levitt, PhD, Postdoctoral Fellow, Department of Physiology, Louisiana State University Health Sciences Center New Orleans (dlevit@lsuhsc.edu)

Presenters: **Angela Amedee, PhD**, Professor, Department of Microbiology, Immunology and Parasitology & Associate Dean, School of Graduate Studies, Louisiana State University Health Sciences Center New Orleans

Chronic Alcohol Misuse is Associated with Increased Levels of Viral Reservoirs in a Macaque Model of HIV Disease: Implication for Disease Co-Morbidities

Robert Leeman, PhD, Associate Professor & Mary F Lane Endowed Professor,
Department of Health Education and Behavior, University of Florida
Mobile Technologies to Break Linkages Between Alcohol Misuse and HIV

Abstract: This scientific session will cover the challenges posed by alcohol use and misuse to biomedical, care and treatment, and prevention strategies to ending the HIV epidemic. Dr. Amedee will discuss her studies that sought to evaluate the effect of chronic binge alcohol use on the establishment and maintenance of HIV reservoirs in tissues, since the levels and distribution of viral reservoirs can contribute to disease progression and co-morbidities. Using SIV-infected rhesus macaques exposed to chronic-binge alcohol (CBA) as a model of HIV, she and her team evaluated viral levels over time in plasma and discrete tissue reservoirs. Dr. Robert Leeman will then discuss his research involving the etiology of substance misuse and new interventions to reduce substance misuse (alcohol, in particular), enhance sexual health behavior and prevent HIV with a focus on the adolescent and young adult populations.

3:15 PM – 4:15 PM

Poster Session

Chair: **Tara Bautista**, Postdoctoral Associate, Interdisciplinary Stress Center, School of Medicine, Yale University (tara.bautista@yale.edu)

Details: Abstracts and recordings of presentations will be available beginning Wednesday, October 7 at https://www.the-nhsn.org/Conference/2020_poster_session.aspx.

Each presenter has recorded a short presentation for viewing before the live Poster Session. During the poster session, each presenter will have their own Zoom meeting link. They will not do a presentation during the live session, but will only answer questions and discuss the data. Please be sure to watch the presentation and read the abstract before entering the Zoom meeting room and have your questions ready. You can begin watching the presentations one week before the live session.

Abstracts, presentations a Zoom meeting links are all posted at https://www.the-nhsn.org/Conference/2020_poster_session.aspx.

Friday, October 16, 2020

12:00 PM – 1:00 PM

Plenary Presentation: Health Disparities Amidst the Opioid Crisis and COVID Pandemic

Presenter: **Nora Volkow, MD**, Director, National Institute on Drug Abuse (NIDA)

1:00 PM – 2:00 PM

New Investigators in Drug Abuse Research

Co-Chairs: **Danielle Levitt, PhD**, Postdoctoral Fellow, Department of Physiology, Louisiana State University Health Sciences Center New Orleans (dlevit@lsuhsc.edu)

Miguel Pinedo, PhD, Assistant Professor, Department of Kinesiology & Health Education, University of Texas at Austin (mpinedo@austin.utexas.edu)

Presenters: **Veronika Espinoza**, Graduate Student, University of Texas at El Paso

Female Rats Display Greater Neuronal Activation in the Interpeduncular Nucleus During Nicotine Withdrawal Than Males



Alejandra Fernandez, PhD, Postdoctoral Associate, University of Miami

Predictors of Attendance in an EHealth Intervention: Latent Profile Approach

Monica Goncalves-Garcia, Graduate Student, University of New Mexico

Effects of Moderate Prenatal Alcohol Exposure on Long-Term Potentiation and Rhythmic Activity in the Dentate Gyrus

Catalina Lopez-Quintero, MD, MPH, PhD, Assistant Professor, Department of Epidemiology, University of Florida

Racial-Ethnic Differences in Trends of Past 30-Days Alcohol, Cigarette and Cannabis Use Among Pregnant Women in the US

Abstracts: See page 19

2:15 PM – 3:15 PM

Scientific Session: Neural Mechanisms of Nicotine Use: From Animal Models to Human Subjects

Co-Chairs: **Hugo Sandoval, PhD**, Senior Research Associate, Department of Radiology, Texas Tech University Health Sciences Center (hugo.sandoval@ttuhsc.edu)

Laura O'Dell, PhD, Professor, Department of Psychology, University of Texas at El Paso (lodell@utep.edu)

Presenters: **Eric Claus, PhD**, Associate Professor of Translational Neuroscience, The Mind Research Network

Neural Mechanisms Supporting Long-Term Abstinence in Former Cigarette Smokers

Ian Mendez, PhD, Assistant Professor, Department of Pharmacy, University of Texas at El Paso

Establishing a Rodent Model of E-Cigarette Use: Current Progress and Early Findings

Matthew Sutherland, PhD, Associate Professor, Department of Psychology, Florida International University

Nicotine-related Striatal Alteration, Vaping Among LatinX Teens, and Covid-19's Impact on substance Use and Mental Health

Abstract: This panel brings together researchers working on providing a better understanding of the underlying brain mechanisms that promote nicotine use. Our panelists will cover various forms of nicotine use, including vaping, cigarette smoking, and tobacco use. The panel will begin with a presentation from Dr. Ian Mendez (University of Texas El Paso) who will present his findings on the effects of nicotine vapor exposure on reward systems and decision making in rats. Then, Dr. Matthew Sutherland (Florida International University) will discuss the impact of nicotine vaping in adolescents. Dr. Sutherland will discuss his research findings which apply fMRI methods to elucidate the impact of nicotine use on the human brain, with a focus on the striatum. Dr. Eric Claus (Mind Research Network, Albuquerque) will present data from individuals who successfully quit smoking, and neural changes that may have supported long-term abstinence from cigarette smoking. The session co-chairs Drs. Hugo Sandoval (Texas Tech Health Science Center El Paso) and Laura O'Dell (University of Texas El Paso) will provide an overview of the panel discussion with a focus on the long-term implications of the

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panelists' work towards developing personalized cessation treatments that have the potential to reduce health disparities produced by nicotine use.

3:15 PM – 4:00 PM

Career development session: NIH/NIDA Funding Opportunities, Diversity Initiatives, and Updates

Co-Chairs: **Catalina Lopez-Quintero, MD, MPH, PhD**, Assistant Professor, Department of Epidemiology, University of Florida (catalinalopezqui@ufl.edu)

Mayra Vargas-Rivera, MD, Clinical Research Laboratory Manager, Department of Epidemiology, Florida International University (mvargasr@fiu.edu)

Presenter: **Albert Avila, PhD**, Director, Office of Diversity and Health Disparities, NIDA

4:00 PM – 4:30 PM

Awards and Closing Ceremony

- **If you would like to submit questions to ask the presenters prior to the session, please email the session co-chairs. Co-chairs will moderate the sessions and ensure your question will be answered.**
- **During the sessions, please post your questions in the Chat window, after the presentation, the moderator will pose your questions to the presenter.**
- **If you are having technical difficulties during the conference, please contact Melissa Prestwood at mpres3@lsuhsc.edu.**

Chairs and Presenters



Laura O'Dell, PhD

Dr. O'Dell is a Professor in the Department of Psychology at The University of Texas at El Paso (UTEP). She received her Ph.D. in Behavioral Neuroscience from Arizona State University, and then conducted her post-doctoral training at The Scripps Research Institute where she also served as a Staff Scientist. Dr. O'Dell's research program uses rodent models to study the underlying neural mechanisms that promote tobacco use in vulnerable populations, including females, adolescents, and persons with diabetes. Her laboratory combines neurochemical and molecular approaches with behavioral models in order to provide a better understanding of the mechanisms that promote nicotine use. For the past 15 years, her research program has been independently funded by organizations such as the National Institute on Drug Abuse and the American Diabetes Association. Dr. O'Dell has a deep interest in promoting young scientists who want to pursue a career in neuroscience, particularly trainees from diverse backgrounds.



Diana Sheehan Delgado, PhD, MPH

Diana Sheehan is an Assistant Professor in the Department of Epidemiology at the Robert Stempel College of Public Health and Social Work at Florida International University (FIU). Her research focuses on identifying gaps and improving outcomes along the HIV care continuum, particularly for Latinos living with HIV in the United States and Latin America. Currently, Dr. Sheehan is leading an ecological momentary assessment (EMA) study that examines antiretroviral therapy adherence and the feasibility of a related Just-In-Time Adaptive Intervention (JITAI) among Latino men who have sex with men. Dr. Sheehan's work has been funded by the National Institute on Drug Abuse (NIDA), the National Institute on Minority Health and Health Disparities (NIMHD), the HIV Prevention Trials Network (HPTN), and the Robert Wood Johnson Foundation. Additionally, Dr. Sheehan is dedicated to advancing the research careers of minority investigators, both as a faculty under the FIU-Health Disparities Initiative (FIU-HDI) and as a co-investigator on the FIU Center for Reducing Health Disparities in Substance Abuse & HIV in South Florida (FIU-RCMI). She holds a PhD in Epidemiology from FIU, and a Bachelor of Science and Master of Public Health degrees from Boston University.



Angela Amedee, PhD

Angela M. Amedee, PhD is a Professor in the Department of Microbiology, Immunology, and Parasitology at the School of Medicine at LSUHSC, and the Associate Dean for the LSUSHC School of Graduate Studies. She earned a BS degree from Nicholls State University and a MS and PhD from LSU Health New Orleans. She conducted her postdoctoral training at the Tulane National Primate Research Center, followed by a faculty position in the Department of Pediatric Infectious Disease at Tulane University School of Medicine. In 2001, she joined the faculty at LSU Health Sciences Center in New Orleans.

Dr. Amedee's primary research interest is HIV pathogenesis and includes clinical and non-human primate model studies that focus on viral transmission and proviral reservoirs. A major area of research in her laboratory includes studies to evaluate the impact of alcohol on HIV/SIV disease progression. Recent studies have focused on the interaction of chronic alcohol misuse, viral response to anti-retroviral drugs, and the establishment and maintenance of viral reservoirs.



Albert Avila, PhD

Dr. Albert Avila is currently the Director of the National Institute on Drug Abuse (NIDA), Office of Diversity and Health Disparities (ODHD) and Deputy Director of the NIDA Office of Research Training (ORT). As the ODHD Director he oversees the health disparities and diversity outreach efforts for NIDA and provides guidance to NIDA leadership on matters pertaining to diversity, equity and inclusivity as they relate to the substance use and addiction workforce. His primary goal for the ODHD is to increase the number of independently funded underrepresented scientists conducting addiction research through internal and extramural research and professional development opportunities. As the NIDA ORT Deputy Director, he ensures that the training and career development opportunities are addressing the needs of the substance use and addiction community at all career stages. Dr. Avila received his undergraduate degrees in psychobiology and English Literature from UCLA and his doctorate degree in Pharmacology from Georgetown University studying the effects of cocaine, withdrawal, and stress on the neuroimmune system. Following postdoctoral training in pain neurotransmission at the National Institute of Dental and Craniofacial Research (NIDCR), he became an Intramural Training Director, leading training programs for pre- and post-doctoral scientists in NIDCR. Prior to joining NIDA, Dr. Avila was a Program Officer for NIDCR directing extramural research training and career development research programs. At NIDA, Dr. Avila served as a Program Officer in the Division of Basic Neuroscience and Behavioral Research for five years and managed a research grant portfolio in the area of neuroimmunology, psychopharmacology, and HIV as they relate to drug abuse. In addition, he managed a robust research training and career development grant portfolio for early-career investigators. At NIDA, Dr.

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Avila works to equip NIDA trainees and early-stage investigators with the tools, resources, and support necessary to successfully transition to independent research careers. He is also leading NIDA's Research Equity Scientific Workforce Diversity workgroup which is working to increase research equity and inclusivity among underrepresented minority scientists.



Tara Bautista, PhD

Dr. Tara Bautista is a Postdoctoral Fellow at Yale University in the School of Medicine. Her appointment is funded by Yale Center for Clinical Investigation (NIH/NCATS 5TL1TR001864) and Yale Stress Center (NIH/NIDDK 5R01DK117651). Dr. Bautista has been an active member of NHSN since her first conference in 2014. She holds a transdisciplinary Ph.D. in Nursing and Health Innovation from Arizona State University. Her research is in stress and substance use, and tailoring interventions such as mindfulness to prevent relapse among vulnerable populations.



Redonna K. Chandler, PhD

Redonna K. Chandler, Ph.D. is the director of the AIDS Research Program and the HEALing Communities Study at the National Institute on Drug Abuse (NIDA), part of the National Institutes of Health (NIH). As the AIDS Research Program Director, she is responsible for the development, planning, and coordination of high priority research on HIV, AIDS, and drug use within NIDA and across NIH Institutes. As the HEALing Communities Study Director, she is responsible for coordinating and providing scientific direction on the largest implementation study focused on increasing uptake, access, and utilization of evidence-based practices to decrease opioid overdose deaths in 67 highly affected communities across 4 states. Her areas of expertise include research with criminal justice populations, clinical trials, health services research, treatment adherence, and implementing evidence-based treatments. Dr. Chandler earned her Ph.D. in psychology from the University of Kentucky and is a licensed psychologist. As a clinician, she has treated those struggling with addiction use disorder and serious mental health issues.



Eric Claus, PhD

Dr. Claus is an Associate Professor of Translational Neuroscience at the Mind Research Network in Albuquerque, NM. He completed his Ph.D. in Psychology and Neuroscience from the University of Colorado and postdoctoral training in imaging genetics of substance use disorders. Dr. Claus focuses on alcohol and nicotine use disorders, with a primary focus on understanding the mechanisms of behavior change by which individuals reduce their use of substances. In addition, he has interest in translating findings from neuroimaging to novel treatments including neuromodulation to improve neural function. His work has been funded by the National Institute on Drug Abuse, National Institute on Alcohol Abuse and Alcoholism, and the Food and Drug Administration.



Veronika Espinoza

Veronika Espinoza is originally from San Diego, CA and received her bachelor's degree in Biochemistry from California State University, San Marcos in 2018. As an undergraduate at CSUSM, Veronika conducted research in the Psychopharmacology and Behavioral Neuroscience laboratory of Dr. Keith Trujillo where her research focused on the locomotor response to the stimulant effects of various amphetamine-like drugs in adolescent and adult rats. After graduation, Veronika worked as a post-baccalaureate student at The Scripps Research Institute in the Neuroscience laboratory of Dr. Olivier George. There, her research focused on the effects of the clinical use of oxycodone and if exposure during adolescence was linked to a significant change in oxycodone abuse during adulthood. In August of 2019, Veronika became a graduate student at The University of Texas at El Paso in the Department of Psychology. Currently, Veronika conducts research in the Neural Basis of Addiction laboratory of Dr. Laura O'Dell where her research focuses on the role of the medial habenula-interpeduncular nucleus pathway in modulating sex differences in the behavioral effects of nicotine withdrawal.



Alejandra Fernández, PhD

Alejandra Fernandez, Ph.D., is a post-doctoral associate in the School of Nursing and Health Studies at the University of Miami. She received her Ph.D. in Health Behavior and Health Education from the University of Texas at Austin in December 2017. Her dissertation focused on the influence of parental monitoring behaviors on internalizing and externalizing behaviors among Hispanic early adolescents. Alejandra's research interests include the healthy development of Hispanic adolescents, the influence of parental behaviors on adolescent development, and the beneficial interactive behaviors between parent and adolescent. Alejandra's post-doctoral position was awarded through a diversity supplement funded by the National Institute on Drug Abuse (NIDA) at the National Institute of Health.

**Monica Goncalves-Garcia**

Monica Goncalves-Garcia is a 2nd year Ph.D. student at the University of New Mexico. Her primary research focuses on the effects of developmental alcohol exposure on behavior and brain functions. She began performing research using a rat model of prenatal alcohol exposure to investigate spatial behaviors as an undergraduate student. During her undergraduate studies she also worked as a research assistant in a human research laboratory using brain stimulation methods to improve cognition and learning. Currently she is performing experiments on neural plasticity - using electrophysiology technique - and spatial behavior on a rodent model of prenatal alcohol exposure.

**Raul Gonzalez, Jr, PhD**

Dr. Gonzalez is Professor of Psychology, Psychiatry, and Immunology at Florida International University (FIU) and Director of the Substance Use and HIV Neuropsychology Lab. He is a faculty member of the Department of Psychology Clinical Science and Cognitive Neuroscience Programs and is affiliated with the Center for Children and Families (CCF) and the Center for Imaging Science (CIS).

Dr. Gonzalez graduated with his PhD in Clinical Psychology from the San Diego State University / University of California, San Diego Joint Doctoral Program, where he specialized in Clinical Neuropsychology. He has approximately 20 years of experience conducting research on neurocognitive contributors and consequences of substance use and addiction, with a focus on cannabis. Most have been funded by the National Institutes on Drug Abuse (NIDA).

Through his research, Dr. Gonzalez aims to identify neurocognitive differences that may place individuals at risk for substance use disorders or that emerge from their use. He is currently the site Co-Principal Investigator of the Adolescent Brain Cognitive Development (ABCD) study: a landmark project that brings together scientists and clinicians from across the United States with a broad range of knowledge and expertise to enroll 11,000+ healthy children and follow them from age 9-10 into early adulthood in order to better understand biological and environmental contributors healthy development, including risk factors and consequences for substance use disorders.

**Robert Leeman, PhD**

Robert Leeman, Ph.D. is an Associate Professor and Mary F. Lane Endowed Professor in the Department of Health Education and Behavior at the University of Florida and Adjunct Faculty in Psychiatry at the Yale School of Medicine. He earned a bachelor's degree from Clark University, followed by an M.A. and Ph.D. in Psychology from the University of Pennsylvania. After his Ph.D., Dr. Leeman spent a decade at Yale, first as a post-doctoral fellow, then as a faculty member. During his time at Yale, he also spent three years as a research scientist with the VA MIRECC in West Haven, CT before joining the faculty at UF.

His primary research interests are addictive behaviors (particularly alcohol), sexual health behavior and difficulties with self-control (e.g., impulsivity). Using human laboratory, survey and randomized controlled trial methods, Dr. Leeman tests novel interventions for substance misuse and HIV prevention and attempts to learn more about risk factors for these behaviors, particularly in adolescent and young adult populations. In his recent research, these novel interventions have been primarily technology-based including web-based interventions, devices and smartphone applications.

**Danielle Levitt, PhD**

Danielle Levitt, PhD, is currently a Postdoctoral Fellow in the Department of Physiology at Louisiana State University Health Sciences Center, New Orleans, under the mentorship of Drs. Patricia Molina and Liz Simon. She earned her BA in Psychology from the University of Texas at Dallas, MS in Kinesiology from the University of North Texas, and PhD in Biology/Exercise Physiology from the University of North Texas. Her research currently focuses on alcohol-mediated skeletal muscle mitochondrial dysfunction in the context of HIV utilizing pre-clinical and clinical models. Following her postdoctoral training, Dr. Levitt plans to establish her own laboratory examining mechanisms by which alcohol and substance use contribute to metabolic dysfunction in health and disease and to identify interventions, such as exercise, nutritional, and therapeutic strategies, to improve metabolic outcomes.



Catalina Lopez-Quintero, MD, MPH, PhD

Catalina Lopez-Quintero is an assistant professor with the Department of Epidemiology at the University of Florida, Gainesville. Her research focus is on identifying the role that factors at different levels of influence (e.g. biological, behavioral, psychiatric, socio-cultural, or political) exert on the transitions from the early stages of drug use involvement to the development of drug use disorders and other related outcomes. Her long term career goals are to: 1) Develop a comprehensive and interdisciplinary insight of the mechanisms that explain drug use trajectories and disparities, by focusing on the complex and dynamic interactions between neuro-psychological and socio-cultural level factors across the lifespan, and using cutting-edge methods and technologies; and 2) Contribute to the design of effective drug use prevention and treatment strategies to reduce drug use disparities.



Ian Mendez, PhD

Dr. Mendez is a Tenure-Track Assistant Professor at the University of Texas at El Paso School of Pharmacy with over 20 year of experience working in Cellular and Behavioral Neuroscience. The primary aim of the Mendez Laboratory is to elucidate the signals and circuits of the brain that become dysregulated following repeated exposure to rewards and how these changes ultimately contribute to changes in motivational, hedonic, and cognitive processes. The Mendez Laboratory investigates these processes by utilizing experimental methods in behavioral neuroscience, biology, pharmacology, genetics, and neurochemistry. Dr. Mendez is also interested in establishing excellence in teaching and mentorship, while enhancing research training opportunities for students.



Miguel Pinedo, PhD

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. His 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.



Marybel Robledo Gonzalez, PhD

Dr. Marybel Robledo Gonzalez has been an ABCD study postdoctoral scholar at Children's Hospital Los Angeles and currently at UC San Diego. Her research interests are in examining factors of risk and resilience for adolescent health, in particular among underrepresented minority populations. Dr. Gonzalez was born and raised in East Los Angeles, and went on to attend UC Berkeley as an undergraduate and received her doctorate in Cognitive Science from UC San Diego.



Eden Robles PhD

Dr. Robles is a passionate community engaged scholar and is the regional Director of the Texas Children Health Access Through Telemedicine Program in the Department of Psychiatry at Texas Tech University Health Sciences Center El Paso. She also assists in directing the Child Psychiatry Access Network. Through these programs, she helps connects children and adolescents to healthcare through telemedicine. She received her Ph.D. in Social Work from The University of Texas at Austin where she primarily worked on policy, community building, and cultural adaptation research projects. She then conducted her post-doctoral training at The University of Texas at El Paso where she taught through the BUILDING SCHOLARS Program, a program oriented towards promoting inclusion and diversity in the biomedical sciences. Dr. Robles' expertise in community building and mobilization, organizational development, diversity, and policy helped start up backbone organization for collective impact a binational and intrastate strategic regional mental health effort. She also volunteers her time to various grassroots organizations and academic departments to help them strategically plan and assist in mobilizing their communities. Dr. Robles has a passion for inclusion and diversity in organizational development and a deep interest in building capacity for others seeking to change the world.



Mariana Sanchez, PhD

Dr. Sanchez is an Assistant Professor in the Department of Health Promotion and Disease Prevention in the Robert Stempel College of Public Health and Social Work at Florida International University. She has over 20 years of experience in conducting longitudinal research with youth and young adults. Her program of research seeks to gain a deeper understanding of the cultural mechanism that influence health behaviors, particularly alcohol misuse, and its related consequences in the Latinx population. To date, the bulk of her research has focused on examining

how sociocultural determinants impact alcohol misuse and adverse mental health outcomes among particularly vulnerable Latinx sub-groups including recent immigrants, unauthorized immigrants, and farmworkers. Dr. Sanchez is a co-investigator in the Adolescent Brain and Cognitive Development (ABCD) Study. She serves on the *ABCD Culture & Environment Workgroup*, where she provides guidance in the selection of cultural instruments that are brief, valid, developmentally appropriate, and cross-culturally relevant across the national study sites. Ultimately, she aspires that knowledge gained from her research is translated into the development of culturally relevant evidence-based interventions that target identified vulnerability factors and leverage key protective factors in preventing substance misuse and its related consequences among Latinx and other racial/ethnic minority youth and young adults.



Hugo Sandoval, PhD

My research passions are the application of Magnetic Resonance Imaging and functional Magnetic Resonance Imaging to study the organization of the human brain so we can understand the causes as well as the effects of drug abuse and addiction and apply this knowledge to improve personal and public health. I have been using MRI to study very different diseases and disorders ranging from Cyclic Vomiting Syndrome to Alzheimer's disease and Bipolar Disorder. We have applied neuroimaging methods to provide endophenotypes for Bipolar Disorder, to study the neuroanatomical and functional changes present in Alzheimer's disease, as well as the neural abnormalities associated with Cyclic Vomiting Syndrome and its comorbidity with marijuana use. We are currently using MRI tools to learn more about the addictive and health effects of cigarettes smoking and its sex differences



Matthew Sutherland, PhD

Dr. Sutherland is an Associate Professor in the Department of Psychology at Florida International University (FIU) in Miami. He received his Ph.D. in Cognitive Neuroscience from The University of New Mexico, and then conducted his postdoctoral training through the intramural research program at the National Institute on Drug Abuse of the NIH. Dr. Sutherland's research program uses magnetic resonance imaging (MRI) techniques to elucidate neurobiological factors leading to and maintaining substance use. With a particular emphasis on nicotine and marijuana, his work has focused on adult cigarette smokers, adolescent vaping, and marijuana use among people living with HIV. Dr. Sutherland's research

program has been funded through the National Institute on Drug abuse and the National Institute on Minority Health and Health Disparities. He has a deep interest in promoting and engaging in community outreach to educate teens, parents, and teachers about the impact of drug use on the developing brain.

**Mayra Vargas-Rivera, MD**

Mayra E. Vargas-Rivera is a clinical research laboratory manager at the Department of Epidemiology at the Robert Stempel College of Public Health & Social Work, Florida International University. Originally from Camuy, Puerto Rico, Dr. Vargas-Rivera completed her BS degree in Biology at Iowa State University before earning her MD from Ross University School of Medicine. She has extensive experience in implementing and conducting research with a focus on minority populations experiencing health disparities, as well as teaching clinical research methodology. She is committed to addressing the needs of minority populations that have been disproportionately burdened by substance abuse, with a focus on tobacco and the use of nicotine delivery devices such as electronic cigarettes and waterpipe/hookah among teenagers and young adults. She has a strong interest in preventive medicine research that makes a difference in improving outcomes that will achieve health equality. Dr. Vargas-Rivera has also worked for the landmark Hispanic Community Health Study/Study of Latinos at both the Northwestern University and University of Miami Field Centers, and was selected as a fellow of the highly competitive Interdisciplinary Research Training Institute on Hispanic Drug Abuse (IRTI) at the University of Southern California in 2016. Her other academic and research interests include stress and health behaviors, and well-being promotion.

**Nora Volkow, MD**

Dr. Volkow is Director National Institute on Drug Abuse at NIH. She pioneered the use of brain imaging to investigate the effects of drugs in the human brain and has demonstrated that drug addiction is a brain disease. She has published more than 790 scientific articles and co-edited an encyclopedia and three books. She has received multiple awards, including membership in the Institute of Medicine, named one of Time Magazine's "Top 100 People Who Shape our World", included as "One of 20 People to Watch" by Newsweek magazine and named "Innovator of the Year" by U.S. News & World Report.

New Investigators in Drug Abuse Research Abstracts

Espinoza, Veronika

V.E. Espinoza; F.L. Matos; P. Correa; V. Correa; L.M. Carcoba; I.A. Mendez; A.M. Khan; L.E. O'Dell.

The University of Texas at El Paso

FEMALE RATS DISPLAY GREATER NEURONAL ACTIVATION IN THE INTERPEDUNCULAR NUCLEUS DURING NICOTINE WITHDRAWAL THAN MALES

Background: Pre-clinical studies in male rodents established that the medial habenula-interpeduncular nucleus (MHb-IPN) pathway modulates negative affective states produced by nicotine withdrawal. Previous work has also revealed that female rats display greater anxiety-like behavior during withdrawal as compared to males. Despite profound behavioral differences, the role of the MHb-IPN pathway in modulating sex differences in nicotine withdrawal remains unexplored. Thus, the present study compared neuronal activation via Fos expression in the IPN of female and male rats during nicotine withdrawal.

Methods: Briefly, adult male and female rats received an osmotic pump that delivered nicotine (3.2 mg/kg/day) and controls received sham surgery. Fourteen days later, rats received an injection of the nicotinic receptor antagonist mecamylamine (3.0 mg/kg, sc) to precipitate withdrawal. Ninety minutes after mecamylamine administration, rats were euthanized and the brains were processed for Fos immunofluorescence.

Results: The results revealed that controls did not display sex differences in Fos expression in the IPN. Females displayed a withdrawal-induced increase in Fos-positive cells in the intermediate and central portions of the IPN as compared to males, however the largest sex differences were observed in the central portion of the IPN.

Conclusion/Discussion: These results suggest that the IPN plays a critical role in modulating sex differences in nicotine withdrawal. This study is an important first step towards understanding the underlying mechanisms that enhance withdrawal differences in females compared to males.

Fernández, Alejandra

A. Fernández; A. Lozano; T.K. Lee; Y. Estrada; G. Prado. University of Miami

PREDICTORS OF ATTENDANCE IN AN EHEALTH INTERVENTION: LATENT PROFILE APPROACH

BACKGROUND. Evidence-based family-based preventive intervention are shown to reduce/prevent adverse health outcomes among adolescents. Yet, many existing family-based interventions take place face-to-face and require numerous resources. eHealth interventions may help reduce the resources needed to deliver interventions and may help reach a wider audience. However, more research is needed regarding patterns and predictors of attendance in eHealth interventions. This study aimed to: 1) identify subgroups of Hispanic participants based on patterns of attendance in an eHealth intervention using latent profile analysis and 2) to determine predictors of intervention attendance patterns.

METHODS. Data for this study was integrated across two randomized controlled trials using the same eHealth intervention, eHealth Familias Unidas. This study included data from 338 adolescents and their primary caregivers who were randomly assigned to the eHealth intervention. Adolescents were approximately 13.8 (SD = 1.19) years of age at baseline and a slight majority (51.5%) were male. The eHealth intervention consisted of 12 sessions, 8 face-to-

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face parent-only video sessions and 4 family sessions. Families completed on average 8.73 of 12 sessions. Predictors of attendance profiles included: family functioning behaviors (positive parenting, parental involvement, peer monitoring), Hispanicism/Americanism, externalizing behaviors (e.g., socialized aggression), and substance use behaviors.

RESULTS. Latent profile analysis of the dichotomized 12 session indicators suggested that a 3-class solution provided the best fit and interpretability to the data. The three attendance patterns included consistent attenders (67%), decreasing attenders (10%), and non-attenders (22%). Findings indicated that relative to consistent attenders, decreasing attenders and non-attenders reported higher levels of youth socialized aggression. Also, when compared to the consistent attenders, the decreasing attenders reported higher levels of positive parenting.

CONCLUSION/DISCUSSION. It is possible that the intervention did not meet the needs of parents reporting social aggression behaviors in their youth. Further, participants who perceive to be effectively parenting may not see the need for an intervention focused on improving parenting behaviors. In the future, it may be important to consider parents' baseline needs at baseline and integrate intervention tailoring.

Goncalves-Garcia, Monica

M.Goncalves-Garcia, D.D.Savage, D.A.Hamilton. University of New Mexico, Departments of Psychology and Neuroscience

EFFECTS OF MODERATE PRENATAL ALCOHOL EXPOSURE ON LONG-TERM POTENTIATION AND RHYTHMIC ACTIVITY IN THE DENTATE GYRUS

The hippocampus is susceptible to the teratogenic effects of prenatal alcohol exposure (PAE) that can result in persistent impairments in learning and memory. Although there have been many investigations, deficits in synaptic plasticity following PAE remains poorly understood. Previous studies have identified deficits in long-term potentiation (LTP) in the perforant pathway to dentate gyrus synapses as a robust consequence of PAE that can persist well into adulthood. This study sought to investigate how PAE effects LTP in the dentate gyrus and to better understand how PAE influences continuous EEG signaling and time-frequency relationships in evoked responses after high-frequency stimulation (HFS). We utilized a rat model of moderate PAE (60 mg/dl peak blood alcohol content). Thirteen urethane-anesthetized adult male rats (7 PAE, 6 SAC) were implanted with two monopolar electrodes (a recording in the dorsal dentate gyrus, and a stimulating in the entorhinal cortical perforant pathway). An input-output (IO) curve protocol ranging from 50-500 uA was used to determine the stimulus intensity equal to 40% (EC40) of the maximal population spike response for each animal and used for the subsequent recordings. Evoked responses were recorded (1/30s) at 20KHz and continuous data were obtained at 1KHz throughout sessions. Synaptic potentiation was induced by 5 trains of HFS over 25ms with 30s inter-train intervals. There were no differences between groups for the IO curve, baseline for fEPSP slope or population spike. PAE rats displayed reduced LTP of the fEPSP ($p = 0.01$). Data were analyzed using fast Fourier transformation (FFT) within the delta to gamma frequency bands, as well individual frequencies ranging from 1-16 Hz, including slow oscillatory activity (<1Hz) and rhythmic slow activity (3-15Hz). At baseline, the PAE group displayed a trend toward increased delta power ($p = 0.055$) and significantly increased 2-3Hz power ($p = 0.042$). There were no group differences following HFS or in relative power for any phase. Time frequency analyses performed on individual evoked responses revealed a greater increase in power associated with

the fEPSP in SAC rats, whereas PAE displayed increased power in later portions of the evoked response that reflect feedback signaling from local interneurons. These observations suggest that deficits in LTP following PAE may be related to alterations in local inhibitory interneuron activity and rhythmic activity in the dentate gyrus.

Lopez-Quintero, Catalina

C. Lopez-Quintero¹; V. Sharma;¹ A. David¹; O. Escamilla- Sanchez¹; E. Castaneda¹; C. Bares².
¹University of Florida, Department of Epidemiology; ²University of Michigan, School of Social Work

RACIAL-ETHNIC DIFFERENCES IN TRENDS OF PAST 30-DAYS ALCOHOL, CIGARETTE AND CANNABIS USE AMONG PREGNANT WOMEN IN THE US.

Background: Prenatal exposure to alcohol, cigarettes and cannabis has been associated with negative acute and long-term outcomes for the offspring. Although, analysis of trends of past-month prevalence of alcohol, cigarette and cannabis use among US pregnant women indicate a decline in alcohol and cigarette use, and an increase of cannabis use. It is unknown whether these changes are homogeneous across racial-ethnic subgroups. This study aims to describe racial-ethnic differences in trends of past-30 day alcohol, cigarette and cannabis use among US pregnant women.

Methods: Data from 12,181 adult pregnant women (18 to 44 years old) surveyed between the 2002-2018 National Study on Drug Use and Health (NSDUH) were analyzed in this study. Multiple logistic regression models were used to model alcohol, cigarette or cannabis use in the 30 days prior to the survey as a function of interview year for each self-identified racial/ethnic group [Non-Hispanic Whites (NHW), Non-Hispanic Blacks (NHB) and Hispanics (H)], adjusted for sociodemographic covariates and trimester of pregnancy. Adjusted prevalence estimates were derived from back-transforming model-predicted marginal log-odds. To determine if trends differed across racial-ethnic groups, a year*race-ethnic group term was included in the regression models.

Results: Overall, between 2002 to 2018, the adjusted prevalence of past 30-days alcohol use decreased from 11.1% to 8.5% ($p < 0.05$), past 30-days cigarette use decreased from 16.5% to 13.5% ($p < 0.05$) and past 30-days cannabis use increased from 2.6% to 5.8% ($p < 0.05$). These changes were not homogeneous across racial-ethnic subgroups. Alcohol use significantly declined only among NHW (change between 2002 to 2018= NHW -4%, NHB +1.8%, H-2%). Cigarette use significantly declined only among NHW (change between 2002 to 2018= NHW -3.1%, NHB -0.4%, H+0.4%). Cannabis use significantly increased for all subgroups (change between 2002 to 2018= NHW +3%, NHB +6.6%, H+1.2%).

Conclusions: Except for cannabis, favorable trends in alcohol and cigarette use have been seen among all pregnant women in the US. However, these changes are not encouraging when examining specific racial-ethnic subgroups. Increase or no change in use of drugs among minority pregnant women indicate that additional preventive efforts among childbearing age women are needed to reduce the burden of drug use in these populations, which might eventually translate in better offspring outcomes.

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We look forward to seeing you September 22 – 24, 2021 in Grand Rapids, MI!



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