

# YALE

# CONFERENCE FOR ALCOHOL RESEARCH & EDUCATION 2022

Saturday, September 10, 2022 TAC Auditorium, 300 Cedar St, New Haven, CT 06519 & Virtual

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**Learning Objectives:** Upon completion of this program, participants should be able to: 1. Recognize the potential for alcohol to affect various body systems 2. Identify evidence-based practices to improve care for patients with alcohol use disorder 3. Identify how alcohol use disorder can affect patient utilization of care 4. Recognize differences in alcohol use disorder among different sexes and 5. Understand potential biomarkers for alcohol associated liver disease.

# Agenda

8:00AM Registration   Poster Setup   Continental Breakfast		
8:20AM	Opening Address: Conference Directors  Bubu A. Banini, MD, PhD; Yale School of Medicine, Digestive Diseases  David Fiellin, MD; Yale School of Medicine, Addiction Medicine  Graeme Mason, PhD; Yale School of Medicine, Psychiatry	
8:30-9:00AM	Keynote Speech: Breaking Silos in Alcohol Research (Virtual)	George F. Koob, PhD Director, National Institute on Alcohol Abuse and Alcoholism (NIAAA)
9:05-9:35AM	Cortical subcortical reorganization and risk for behaviors for early alcohol use initiation	Marc Potenza, MD, PhD Yale School of Medicine, Psychiatry
9:40-10:00AM	Alcohol consumption and receipt of antiviral therapy for chronic hepatitis C	Lamia Y.K. Haque, MD, MPH Yale School of Medicine, Digestive Diseases
10:05-10:35AM	Sex Differences in Alcohol Use Disorder	Sherry McKee, PhD Yale School of Medicine, Psychiatry
10:40-11AM	Behavioral treatment approaches for alcohol use disorders	<b>Brian D. Kiluk, PhD</b> Yale School of Medicine, Psychiatry
11:00-11:15AM	Break	
11:15-11:45AM	Biomarkers for alcohol-associated liver disease	Vasilis Vasiliou, PhD Yale School of Public Health, Environmental Health Sciences Georgia Charkoftaki, MPharm, PhD
		Yale School of Public Health, Environmental Health Sciences
11:50AM-12:10PM	Epigenetics of Alcohol dependence	<b>Ke Xu, MD</b> Yale School of Medicine, Psychiatry
12:15-12:35PM	Alcohol-induced liver injury	Xinshou Ouyang, PhD Yale School of Medicine, Digestive Diseases
12:40-1:10PM	Pharmacological and alternate treatment approaches for alcohol use disorders	<b>Ismene Petrakis, MD</b> Yale School of Medicine, Psychiatry
1:10-2:15PM	Lunch   Poster Viewing   Parallel Sessions	
1:30-2:15PM	Session A: Alcohol and mitochondria Room N203	<b>Wajahat Mehal, MD, PhD</b> Yale School of Medicine, Digestive Diseases
		Michael H. Nathanson, MD, PhD Yale School of Medicine, Digestive Diseases
1:30-2:15PM	Session B: Alcohol and impaired driving Room \$124	<b>Deepa Camenga, MD, MHS</b> Yale School of Medicine, Emergency Medicine
1:30-2:15PM	Session C: Technology-based treatment for AUD TAC Auditorium	<b>Brian D. Kiluk, PhD</b> Yale School of Medicine, Psychiatry
1:30-2:15PM	Session D: Alcohol and sleep Room S247	<b>Gretchen Hermes, MD, PhD</b> Yale School of Medicine, Psychiatry
2:25-2:45PM	Integrated Stepped Care for Alcohol in HIV Clinical Settings	E. Jennifer Edelman, MD, MHS, AAHIVS Yale School of Medicine, General Medicine
2:50-3:10PM	Stress and alcohol	<b>Stephanie Wemm, PhD</b> Yale School of Medicine, Psychiatry
3:10PM	Poster Awards   Closing Remarks	

## **Posters**

- Elevated fasting morning cortisol levels in binge drinkers and prospective relationship to future alcohol intake. Authors: M. Krah, C. McGowan, S. Fan, N. Fogelman, D. Seo, R. Sinha. Presenters: Monika Krah/ Colleen McGowan
- Sex differences in corticolimbic microglia levels in individuals with alcohol use disorder compared to healthy controls. Authors: Yasmin Zakiniaeiz, Karissa McCright,
- Ansel T. Hillmer, Hannah Shi, Nabeel Nabulsi, Yiyun Huang, David Matuskey, Gustavo A. Angarita, Sherry A. McKee, Kelly P. Cosgrove. <u>Presenter: Yasmin Zakiniaeiz</u>
   Efficacy of daily breathing exercise on alcohol craving, stress, and anxiety delivered via smartphone application. Authors: Dauginikas, E., Martins, J.S., Odukoya, J., Goldberg, L., R. Sinha, & D. Seo. <u>Presenter: Emalee Dauginikas</u>
- Plasma angiopoietin 1 paired with selected proteins provides a high ability to separate patients with acute alcoholic hepatitis from those with heavy drinking and health controls. Authors: A. Suyavaran, J. Lee, B. Barton, X. Ouyang, W. Mehal, and the AlcHepNet Clinical Centers Investigators. Presenter: Arumugam Suyavaran
- Distinct plasma lipidomic profiles in patients with acute alcoholic hepatitis compared to heavy drinkers, healthy controls and chronic liver disease. Authors: E. Kaffe, Xinshou Ouyang, R.A. Flavell, W.Z. Mehal and the AlcHepNet Clinical Centers Investigators. Presenter: Eleanna Kaffe
- Modified clinical and ethical construct for patients with acute alcoholic hepatitis undergoing liver transplantation at Yale. Authors: James Danahey, Kassandra Gressmann, Noemi Jester, Manwi Singh, AnnMarie Liapakis, MD, Michael Schilsky, MD, David Mulligan, MD, Paula Zimbrean, MD, Kara Ventura, DNP, Ramesh Batra, MD, MA (Bioethics). Presenter: James Danahey
- Neutrophils decrease ITPR2 levels in hepatocyte by direct injection of elastase in alcoholic hepatitis. Authors: N Ogino, M Fatima Leite, E Kruglov, H Asashima, DA Hafler, BE Ehrlich, MH Nathanson. <u>Presenter: Noriyoshi Ogino</u>
- Imaging neuroimmune response to acute alcohol consumption in social drinkers: TSPO PET study using [11C]PBR28. Authors: Nakul R. Raval, Gustavo Angarita, David Matuskey, Rachel Miller, Lindsey R. Drake, Michael Kapinos, Nabeel Nabulsi, Henry Huang, Richard E. Carson, Stephanie S. O'Malley, Kelly P. Cosgrove, Ansel T. Hillmer. Presenter: Nakul Raval
- Sex differences in mortality from alcohol-associated hepatitis in the United States, 1999-2020. Authors: Farzaneh Dashti, Sanjaya Chauhan, Wajahat Mehal, Bubu A. Banini. <u>Presenter: Farzaneh Dashti</u>
- Preliminary evidence of sex differences in negative mood and beta arrestin levels in alcohol use disorder: a possible marker of hyperkatifeia? Keisha Smith, Verica Milivojevic, and Rajita Sinha. <u>Presenter: Keisha Smith.</u>

# **Conference Faculty**

### Bubu Banini, MD, PhD (YCARE Director)

Dr. Banini is an Assistant Professor of Medicine in the Section of Digestive Diseases at Yale School of Medicine, where she also serves as the Translational Research Director of the Metabolic Health and Weight Management Program. Prior to joining Yale, Dr. Banini completed research and clinical fellowships in gastroenterology, hepatology and nutrition at Virginia Commonwealth University (VCU) during which she worked in the laboratory of Dr. Arun J. Sanyal under an NIH T32 fellowship training grant. She then stayed on at VCU to pursue Transplant Hepatology fellowship. Dr. Banini's research interests are in the pathophysiology and treatment of steatohepatitis in the context of alcohol associated and nonalcoholic fatty liver disease.

### Deepa Camenga, MD, MHS (Speaker)

Dr. Camenga is an Associate Professor of Emergency Medicine, Pediatrics and Public Health (Chronic Disease Epidemiology) at the Yale Schools of Medicine & Public Health. Dr. Camenga is the Associate Program Director for Pediatric Programs within the Yale Program in Addiction Medicine wherein she works on building educational, clinical and research initiatives that focus on the impact of substances on children and adolescents. Her research focuses on the etiology, prevention, and treatment of tobacco and high-risk substance use in adolescents and young adults.

### Georgia Charkoftaki MPharm, PhD (Speaker)

Dr. Charkoftaki is currently a Research Scientist in the Department of Environmental and Health Sciences, at Yale School of Public Health working in Dr. Vasiliou's group. In her current research, she utilizes high resolution mass spectrometry-based omics approaches along with tissue imaging mass spectrometry to study bile acid metabolism and its role in the gut-brain axis in alcohol use disorders. In addition, she is studying the underlying pathology/mechanisms of aldehyde dehydrogenases in neurodevelopmental disorders.

### E. Jennifer Edelman, MD, MHS, AAHIVS (Speaker)

Dr. Edelman is Associate Professor of Medicine and Public Health at Yale. Certified as an internist, HIV specialist and in Addiction Medicine, she serves as an HIV provider and physician consultant in the Addiction Medicine Treatment Program at the Yale-New Haven Hospital Nathan Smith HIV Clinic. She is Director of the Center for Interdisciplinary Research on AIDS (CIRA) Clinical and Health Services Research Core, Associate Director of the Research in Addiction Medicine Scholars Program, and co-Director of Education at the Yale Center for Clinical Investigation. Her NIH-funded research focuses on addressing substance use in clinical and community settings among individuals with and at substantial risk for HIV.

### David A. Fiellin, MD (YCARE Co-Director/ Poster Judge)

Dr. Fiellin is a Professor of Medicine, Emergency Medicine and Public Health at Yale where he Directs the Yale Program in Addiction Medicine and is Vice Chief for Faculty Affairs, Section of Generatl Internal Medicine. He is an internist board certified in Addiction Medicine. His research is focused on integrating treatment for unhealthy substance use in general medical settings including office-based practice, primary care, emergency departments, hospitals and HIV specialty settings. He is Co-Editor of the American Society of Addiction Medicine's textbook, Principles of Addiction Medicine, 4th, 5th and 6th Editions, and has served on the Board of Directors of the College on Problems of Drug Dependence.

### Lamia Y.K. Haque, MD, MPH (Speaker/ Poster Judge)

Dr. Haque is an Assistant Professor in the Section of Digestive Diseases at Yale School of Medicine as well as a Core Faculty Member in the Yale Program in Addiction Medicine

and a NIDA-K12 Scholar in the Yale Drug use, Addiction, and HIV Research Scholars program. She received her medical degree from the Warren Alpert Medical School of Brown University and completed her residency in Internal Medicine, and fellowship training in Addiction Medicine, Digestive Diseases, and Advanced/Transplant Hepatology at Yale School of Medicine. Her scholarly and educational efforts have focused on optimizing outcomes for individuals with liver diseases and addiction, specifically alcohol-associated liver disease and chronic hepatitis C infection. In addition to her research, she has established the Yale Clinic for Alcohol and Addiction Treatment in Hepatology where patients receive integrated care for liver disease and addiction and has worked with the American Association for the Study of Liver Diseases to organize an addiction medicine curriculum for liver care providers.

### Gretchen Hermes, MD, PhD (Speaker)

Dr. Hermes is the Medical Director of the APT Foundation, a cornerstone treatment facility for individuals with substance use disorders, supporting 8,000 individuals annually through a uniquely successful open-access model of care. She is currently engaged as a co-investigator at the Yale Stress Center on research protocols related to effects of adrenergic receptor agonists on drug craving and withdrawal as well as large cohort studies on the long-ranging effects of early life trauma and acute stress. Dr. Hermes established and co-teaches the Neurobiology of Addiction course series for Psychiatry and Medicine Addiction fellows at Yale and is the site director of the Addiction Psychiatry fellowship at the APT Foundation.

### Ansel Hillmer, PhD (Poster Judge)

Dr. Hillmer is an Assistant Professor in the Departments of Radiology & Biomedical Imaging, Psychiatry at the Yale School of Medicine and Biomedical Engineering at the Yale School of Engineering and Applied Sciences. He received his Ph.D. in Medical Physics from the University of Wisconsin, Madison in 2014. His research focuses on the development and application of PET neuroimaging paradigms to study psychiatric (and other) conditions. Specific areas of active research include developing novel approaches to study brain immune function, developing multimodal (PET-PET, PET-MRI) data analysis approaches, and improving analytic methods to detect the brain response to acute, short-lived drug challenges.

### Simona Jakab, MD (Poster Judge)

Dr. Jakab is Associate Professor at Medicine at Yale University in the Section of Digestive Diseases, Firm Chief of the Klatskin Firm/Liver Inpatient Service at Yale New Haven Hospital, and Associate Chief of Digestive Diseases (Hepatology) at VA Connecticut Healthcare System. She is an experienced clinician, educator, and investigator in several clinical trials. She is passionate to <a href="improve">improve</a> the management of patients with cirrhosis and forge multidisciplinary collaborations, in particular with addiction medicine and palliative care.

### Brian D. Kiluk, PhD (Speaker)

Dr. Kiluk is Associate Professor of Psychiatry at the Yale School of Medicine and Director of the Psychotherapy Development Center. He is Principal Investigator of multiple NIH-funded research grants through the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism focused on the development, evaluation, and enhancement of a computer-delivered version of cognitive behavioral therapy (CBT4CBT) for alcohol and drug use disorders. As an expert in CBT for substance use disorders, Dr. Kiluk also consults with treatment facilities across the U.S. to provide workshop training in manual-guided CBT, as well as ongoing fidelity monitoring and coaching.

# Conference Faculty

### George F. Koob, PhD (Speaker)

Dr. Koob is an internationally-recognized expert on alcohol and stress, and the neurobiology of alcohol and drug addiction. He is the Director of the National Institute on Alcohol Abuse and Alcoholism (NIAAA), where he provides leadership in the national effort to reduce the public health burden associated with alcohol misuse. As NIAAA Director, Dr. Koob oversees a broad portfolio of alcohol research ranging from basic science to epidemiology, diagnostics, prevention, and treatment. Dr. Koob earned his doctorate in Behavioral Physiology from Johns Hopkins University in 1972. Prior to taking the helm at NIAAA, he served as Professor and Chair of the Scripps' Committee on the Neurobiology of Addictive Disorders and Director of the Alcohol Research Center at the Scripps Research Institute. Dr. Koob has authored more than 650 peer-reviewed scientific papers and is a co-author of The Neurobiology of Addiction, a comprehensive textbook reviewing the most critical neurobiology of addiction research conducted over the past 50 years. Dr. Koob has consistently pursued a goal of public dissemination of issues related to alcohol, health, and treatment.

### Terril Luce, PhD (Poster Judge)

Dr. Verplaetse is an Assistant Professor of Psychiatry at Yale School of Medicine. Her research focuses on human laboratory modeling of addictive behaviors, including examining mechanisms underlying stress-related drinking and medication screening for sex-appropriate treatments for alcohol use disorder. Her research interests also include using PET to image a putative marker of stress in alcohol use disorder, as well as using epidemiologic data to examine interactive effects of sex and stress in the development and maintenance of substance use disorders.

### Graeme Mason, PhD (YCARE Co-Director/ Poster Judge)

Dr. Mason develops experimental models and methods for studies of brain metabolism using 1H and 13C Nuclear Magnetic Resonance (NMR) and Mass Spectrometry in conjunction with 13C isotopic labeling in vivo, in cell preparations, and other systems. He received his Bachelor's degree in Nuclear Engineering at Penn State University and came to Yale for his Ph.D. in MRI, MR spectroscopy, and neurotransmitter metabolism. Dr. Mason studies effects of psychiatric disorders and substances, especially alcohol, on the brain, as well as diabetes and brain function. He also studies detailed kinetic modeling of isotopomer and isotopologues using data from high-resolution NMR and mass spectrometry.

### Sherry McKee, PhD (Speaker)

Dr. McKee is a Professor of Psychiatry at the Yale Medical School, Director of the Yale Behavioral Pharmacology Laboratory, and Clinical Director of the Forensic Drug Diversion Clinic. Dr. McKee directs a translational program of research focused on treatment development for addictive disorders, with an emphasis on women and more recently criminal justice populations. Dr. McKee leads the Yale-Specialized Center of Research Excellence on Sex Differences in Alcohol Use Disorder.

### Wajahat Mehal, MD, PhD (YCARE Planning Committee/ Speaker/ Poster Judge)

Dr. Mehal is Professor of Medicine in the Section of Digestive Diseases. He is the Director of the Yale Fatty Liver Disease Program, and of the Yale Metabolic Health and Weight Management Program. He has been at the forefront of identifying mechanism of sterile inflammation and fibrosis that are required for alcohol-associated and non-alcoholic steatohepatitis, and these include the key roles of damage associated molecules, and the role of mitochondria in the activation of the NLRP3 inflammasome. In addition, he has a busy outpatient practice of patients with alcohol-associated and non-alcoholic liver disease and manages in-patients with end-stage cirrhosis.

### Michael H. Nathanson, MD, PhD (Speaker)

Dr. Nathanson is the Gladys Philips Crofoot Professor of Medicine in the Section of Digestive Diseases, and Professor of Cell Biology. He is the Director of the NIDDK-sponsored Yale Liver Center and the founding Director of the Klatskin inpatient liver service at Yale New Haven Hospital. Dr. Nathanson served as Chief of Digestive Diseases for fifteen years and served as Editor in Chief of Hepatology for five years. His research focus is on calcium signaling pathways in the liver in health and disease and his most recent research investigates alterations in calcium signaling in hepatocytes and cholangiocytes that contribute to the pathogenesis of alcoholic hepatitis.

### Xinshou Ouyang, PhD (Speaker)

Dr. Ouyang has longstanding interests in liver immunology and molecular biology in hepatic inflammation. Metabolic stress to the liver, in the absence of pathogens, results

in sterile inflammatory responses that cause liver injury. This has important implications for clinically significant inflammation in ASH, NASH, fibrosis, and HCC. Dr. Ouyang has therefore focused on the identification of key regulators and the mechanistic post-translational/transcriptional modifications of proteins, RNAs for the control of metabolic inflammation in liver diseases. Dr. Ouyang has published in several high impact journals, including Cell Metabolism, Nature Communication, Science, Journal of Hepatology, Cell Death & Differentiation, and Cell Reports.

### MacKenzie Peltier, PhD (Poster Judge)

Dr. MacKenzie Peltier is an Assistant Professor of Psychiatry at Yale School of Medicine, where she is an Early Career Investigator within the Yale-SCORE on Sex Differences in Alcohol Use Disorder. Her research focuses on the impact of sex hormones on stress-related mechanisms that underlie alcohol use and concurrent psychiatric disorders, including posttraumatic stress disorder. Dr. Peltier is also a Staff Psychologist at VA Connecticut Healthcare System.

### Ismene Petrakis, MD (Speaker)

Dr. Petrakis is Professor of Psychiatry at Yale School of Medicine and the Chief of Psychiatry and Mental Health Services at VA Connecticut Healthcare System, the Director of the Addiction Psychiatry Residency at Yale and the principal investigator of a National Institute of Drug Abuse (NIDA-T32) training grant. Dr. Petrakis received her undergraduate degree at Northwestern University, her medical training at the University of Pittsburgh and completed psychiatry residency and addiction psychiatry fellowship at Yale. She is a grant funded investigator whose research interests include testing potentially effective treatments for individuals with alcohol dependence with and without comorbid Axis I psychiatric disorders and with opioid use disorders. Dr. Petrakis has over 25 years of experience in the clinical treatment of substance use disorders, research in this field and in the education of residents, medical students, and post-doctoral fellows.

### Marc Potenza, MD, PhD (Speaker)

Dr. Potenza is a board-certified psychiatrist with sub-specialty training in addiction psychiatry. He completed all of his post-high-school training at Yale. Currently, he is a Professor of Psychiatry, Child Study and Neuroscience at the Yale University School of Medicine where he is the Director of the Division of Addiction Research, Center of Excellence in Gambling Research, Women and Addictive Disorders Core of Women's Health Research at Yale and Yale Research Program on Impulsivity and Impulse Control Disorders. His research has focused on the neurobiology and treatment of substance and non-substance (behavioral) addictions and other disorders characterized by impaired impulse control and reward-related motivations.

### Vasilis Vasiliou, PhD (Speaker)

Dr. Vasiliou is the Susan Dwight Bliss Professor of Epidemiology and the Chair of the Department of Environmental Health Sciences at Yale School of Public Health. His research focuses on the role metabolism (aldehyde dehydrogenases and cytochrome P-450s) and antioxidants (glutathione and catalase) in human disease (specifically, alcohol-induced tissue injury, diabetes, and cancer). Genetically engineered mouse models and integrated systems approaches that include metabolomics, tissue imaging mass spectrometry and deep-learning are employed to discover biomarkers and to elucidate mechanisms of human disease. He has edited three books on Alcohol and Cancer.

### Stephanie Wemm, PhD (Speaker)

Dr. Wemm is an Associate Research Scientist and clinical psychologist in the Department of Psychiatry and Director of In-Field Research at the Yale Stress Center. Dr. Wemm joined the Yale Stress Center as part of the Yale Research Training Fellowship in Substance Abuse T32 postdoctoral fellowship after completing her doctoral degree at the University at Albany and internship at Brown Medical School. She was awarded a YCCI Scholar Award and is now part of the research faculty at the Yale Stress Center. Her research investigates how stress impacts substance and behavioral addictions using laboratory and naturalistic methods.

### Ke Xu, MD (Speaker)

Dr. Xu is an Associate Professor of Psychiatry and an outpatient psychiatrist at VA Connecticut Healthcare System. She was trained as an Addiction Geneticist at NIAAA. Her current research focuses on translating genetic and epigenetic findings of substance misuse into future clinic practices, especially among people living with HIV.

### Contacts/Support

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