

## PROGRAM

# 17th Annual Amygdala, Stress, and PTSD Conference **BRAIN, BEHAVIOR, AND BEING: UNRAVELING STRESS**

April 23, 2024

Virtual Conference



The Amygdala, Stress, and PTSD Conference at the Uniformed Services University brings together scientists and clinicians working towards solving the biological basis of stress, fear, and post-traumatic stress disorder.



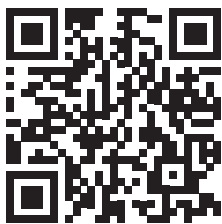
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# 17th Annual Amygdala, Stress, and PTSD Conference **BRAIN, BEHAVIOR, AND BEING: UNRAVELING STRESS**

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SPONSORED BY: The USU Center for the Study of Traumatic Stress, USU Department of Psychiatry, USU Neuroscience Program, USU Department of Family Medicine, and USU Brain and Behavior Hub



[www.AmygdalaPTSDconference.org](http://www.AmygdalaPTSDconference.org)

# Background

The Center for the Study of Traumatic Stress (CSTS) of the Uniformed Services University (USU), in collaboration with the USU Department of Psychiatry, USU Neuroscience Program, USU Department of Family Medicine, and USU Brain and Behavior Hub, is pleased to present the 17th Annual Amygdala, Stress, and PTSD Conference — BRAIN, BEHAVIOR, AND BEING: UNRAVELING STRESS.

The Amygdala, Stress, and PTSD Conference at the Uniformed Services University brings together scientists and clinicians working towards solving the biological basis of stress, fear, and posttraumatic stress disorder.

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# Agenda

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0900–0915	Welcome and Conference Announcements <b>James A. Naifeh, PhD</b> <b>COL Vincent F. Capaldi, II, ScM, MD, MC, USA</b> <b>Robert J. Ursano, MD</b>
0915–1000	The Four Realms of Existence: A Fresh Look at the Science of What and Who We Are <b>Joseph E. LeDoux, PhD</b>
1000–1045	The Role of Neuropeptide Signaling Pathways in Social Impairment <b>Karen J. Parker, PhD</b>
1045–1115	Break and Poster Review
1115–1145	DISCUSSION PANEL 1 <b>MODERATOR: Kimberly D. Kumer, MD, Col, USAF, MC</b> <b>Joseph E. LeDoux, PhD</b> <b>Karen J. Parker, PhD</b>
1145–1245	Lunch
1245–1330	Cross-Species Investigations of Anhedonia and Stress-Related Phenotypes: Implications for Treatment Development and Stratification <b>Diego A. Pizzagalli, PhD</b>
1330–1415	Precision Mental Health: Using Amygdala Circuit Measures to Diagnose Subtypes and Inform Treatment <b>Leanne Williams, PhD</b>
1415–1445	Break and Poster Review
1445–1530	Structures, Systems, and History and the Consequences of Trauma in the Present Day <b>Sandro Galea, MD, MPH, DrPH</b>
1530–1545	Break
1545–1615	DISCUSSION PANEL 2 <b>MODERATOR: Elle S. Cleaves, MD, Maj, USAF, MC, FS</b> <b>Diego A. Pizzagalli, PhD</b> <b>Leanne Williams, PhD</b> <b>Sandro Galea, MD, MPH, DrPH</b>
1615–1630	Closing Remarks <b>Robert J. Ursano, MD</b>

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*All times are listed in U.S. Eastern Time and are subject to change.*

# Speakers

## **SANDRO GALEA, MD, MPH, DRPH**

Boston University School of Public Health



Dr. Sandro Galea, a physician, epidemiologist, and author, is dean and Robert A. Knox Professor at Boston University School of Public Health. In 2015, he became dean of Boston University School of Public Health.

One of the most widely-cited scholars in the social sciences, Galea has published more than 1000 scientific journal articles, 75 chapters, and 24 books. He has published extensively in the peer-reviewed literature about the social causes of health, mental health, and trauma. He has documented the consequences of mass trauma and conflict worldwide, including the September 11 attacks, Hurricane Katrina, conflicts in sub-Saharan Africa, and the American

wars in Iraq and Afghanistan. His research has been principally funded by the National Institutes of Health, Centers for Disease Control and Prevention, and philanthropic foundations.

He is past chair of the board of the Association of Schools and Programs of Public Health and past president of the Society for Epidemiologic Research and of the Interdisciplinary Association for Population Health Science. He formerly served as chair of the New York City Department of Health and Mental Hygiene's Community Services Board and as member of its Health Board. He is an elected member of the National Academy of Medicine. He currently serves as Chair of the Boston Public Health Commission Board of Health, and he is an elected member of the National Academy of Medicine.

Galea has received several lifetime achievement awards for his research, including the Rema Lapouse Award from the American Public Health Association and the Robert S. Laufer, PhD, Memorial Award from the International Society for Traumatic Stress Studies. He is a regular contributor to media, including *The Wall Street Journal*, *Harvard Business Review*, *The Boston Globe*, TEDMED, and *The New York Times*.

Galea was born in Malta and emigrated to Canada with his family at the age of 14. After receiving his medical degree, Galea worked in Somalia with Doctors Without Borders before attending graduate school in the United States.

Galea holds a medical degree from the University of Toronto, graduate degrees from Harvard University and Columbia University, and an honorary doctorate from the University of Glasgow. Prior to his appointment at Boston University, Galea served as the Gelman Professor and Chair of the Department of Epidemiology at the Columbia University Mailman School of Public Health. He previously held academic and leadership positions at the University of Michigan and at the New York Academy of Medicine.

## Speakers, Continued

### **JOSEPH E. LEDOUX, PHD**

New York University



Dr. Joseph E. LeDoux is a University Professor and Henry and Lucy Moses Professor of Science at New York University, where he also directs the Emotional Brain Institute. His work is focused on the brain mechanisms of emotion, memory, and consciousness. LeDoux has received a number of awards for his research (Fyssen Prize, Jean Louis Signore Prize, Donald Hebb Award, among others). He is also an elected member of the National Academy of Sciences USA, and the American Academy of Arts and Sciences. LeDoux is the author of several books, including *The Emotional Brain*, *Synaptic Self*, *Anxious* (2016 APA William James Book Award), and *The Deep History of Ourselves* (finalist for the 2020 Pen America E.O. Wilson Award for Literary Science Writing). *The Four Realms of Existence* was published in October 2023. LeDoux is the 2023 President of the Association for the Scientific Study of Consciousness. He is also the lead singer and songwriter in the rock band *The Amygdaloids* and in the acoustic duo *So We Are*. A recent documentary about his life, work and music can be seen on Amazon Prime Video.



## Speakers, Continued

### **KAREN J. PARKER, PHD**

Stanford University School of Medicine



Dr. Karen J. Parker is Professor and Associate Chair of the Department of Psychiatry and Behavioral Sciences at Stanford University, where she leads the Major Laboratories Steering Committee and directs the Social Neurosciences Research Program. The principal goal of her research program is to better understand the biology of social functioning across a range of species, and to translate these fundamental insights to drive diagnostic and treatment advances for patients with social impairments, with a core focus on autism spectrum disorder. Dr. Parker's research has been supported by the National Institutes of Health (NIH), Simons Foundation, and Department of

Defense, published in leading scientific journals, and featured across diverse media outlets (e.g., NPR, CBS, *The New York Times*, *LA Times*, *Science*, *Scientific American*). Dr. Parker received her undergraduate and graduate degrees from the University of Michigan. She completed postdoctoral training at Stanford University and joined the Stanford faculty thereafter. She is an Affiliate Scientist at the California National Primate Research Center, a Fellow of the American College of Neuropsychopharmacology (ACNP), and a Kavli Fellow of the U.S. National Academy of Sciences. She has attended key opinion leader meetings at the U.S. National Academies and NIH, and held leadership roles on international research advisory committees for the Society for Neuroscience and ACNP. Dr. Parker was born in Boulder, CO and raised in suburban Chicago. She currently lives in the San Francisco Bay Area with her husband, three children, and two Australian shepherds.

## Speakers, Continued

### **DIEGO A. PIZZAGALLI, PHD**

McLean Hospital / Harvard Medical School



Dr. Diego A. Pizzagalli received his MA (1995) and PhD (1998) from the University of Zurich, Switzerland and did post-doctoral work at University of Wisconsin, Madison. From 2002–2010 he was a faculty member in the Department of Psychology at Harvard University, where he served as the John and Ruth Hazel Associate Professor of the Social Sciences. In 2010, he was recruited to McLean Hospital to serve as the Founding Director of the newly established Center for Depression, Anxiety and Stress Research (CDASR), as well as the Director of the McLean Imaging Center (MIC). Since September 2015, he also serves as the Director of Research for the Division of Depression and Anxiety. He is currently a Professor of Psychiatry at Harvard Medical School, and the Center Director for a *Silvio O. Conte Center for Basic Translational Mental Health Research* focused on the neurobiology of and novel treatment targets for depression and anxiety disorders.

The main goals of his research are to improve our understanding of the psychological, environmental, and neurobiological factors associated with mood disorders, particularly major depression. To this end, he integrates behavioral, electrophysiological, neuroimaging, and, more recently, pharmacological approaches to investigate three putative endophenotypes of depression: anhedonia (loss of pleasure), increased stress sensitivity, and executive function deficits.

Dr. Pizzagalli has published over 350 papers and chapters and serves on the editorial board of 13 journals. He is the Editor-In-Chief for the journal *Cognitive, Affective and Behavioral Neuroscience*, as well as the Principal Editor for *Psychopharmacology* (Human Psychopharmacology: Experimental).

Among several awards, he received the Distinguished Scientific Award for an Early Career Contribution to Psychophysiology from the Society for Psychophysiological Research (2006), the Early Career Award from the EEG and Clinical Neuroscience Society (2007), the Anne M. Cataldo Excellence in Mentoring Award from McLean Hospital (2015), two MERIT awards from the National Institute of Mental Health (2016, 2022), The Stuart T. Hauser, M.D. PhD. Mentorship Award in Psychiatry from Harvard Medical School (2017), the Joel Elkes Research Award from the American College of Neuropsychopharmacology (2017), a NARSAD Distinguished Investigator Award (2018), and the Anna-Monika-Prize for Research in the Neurobiology and Treatment of Depressive Disorders (2019). Since 2019, he has been a Highly Cited Researcher according to Web of Science.

## Speakers, Continued

### **LEANNE WILLIAMS, PHD**

Stanford University School of Medicine



Dr. Leanne Williams is the inaugural Vincent V.C. Woo Professor of Psychiatry and Behavioral Sciences and Associate Chair of Translational Neuroscience at Stanford University School of Medicine. She is the founding director of the Stanford Center for Precision Mental Health and Wellness and of the Stanford PanLab for Personalized and Translational Neuroscience. She holds a joint appointment as Director of the Precision Medicine Core at the Palo Alto VA Mental Illness Research, Education and Clinical Center.

Prior to joining the Stanford community, Dr. Williams was the Professor of Cognitive Neuropsychiatry and Director of the Brain Dynamics Center at Sydney Medical School.

Her PhD was completed with a British Council Scholarship for study at Oxford University. She has developed a precision neuroscience approach for application in psychiatry. This approach is grounded in a taxonomy of biotypes for depression and anxiety and a new image processing system to quantify these biotypes. Her research uses biotypes for more individualized diagnosis and for personalizing and tailoring the treatment. She evaluates pharmacotherapies, behavioral interventions, novel selective medicines, neuromodulation, and exploratory therapeutics. To tie together findings across studies, she integrates common neuroimaging, behavioral, and clinical measures. Computational approaches are used to further refine and expand her approach to precision mental health. Dr. Williams' research programs are supported by funding from the National Institutes of Health. She has published the first book on Precision Psychiatry and contributed over 375 scientific papers to the field.

# Moderators

## **ELLE S. CLEAVES, MD, MAJ, USAF, MC, FS**

Uniformed Services University



Maj Elle Cleaves is a board-certified general psychiatrist. She is an Assistant Professor of Psychiatry at the Uniformed Services University of the Health Sciences (USUHS) and currently serves as the Psychiatry Clerkship Director. Dr. Cleaves graduated with distinction from the University of Virginia with a B.A. in psychology. She also earned her medical degree from University of Virginia where she served as president of the Alpha Omega Alpha (AOA) Honor Medical Society chapter. She then completed her psychiatry residency at the University of Texas Health San Antonio (a combined civilian-Air Force residency program) in 2017 where she served as chief resident. Her first duty assignment was as the Medical

Director of the Mental Health Flight in the 87th Operational Medical Readiness Squadron at Joint Base McGuire-Dix-Lakehurst, New Jersey. She then came to USU as faculty in 2021.

## **KIMBERLY D. KUMER, MD, COL, USAF, MC**

Uniformed Services University



Col Kimberly D. Kumer is an Assistant Professor of Psychiatry at the Uniformed Services University of the Health Sciences (USU) School of Medicine (SOM) located in Bethesda, MD. Col Kumer directs the psychiatry operational curriculum, to include providing subject matter expertise on USU's annual capstone event, Operation Bushmaster. She also leads the SOM's DoD Sexual Assault Response Training and has initiated a novel approach to psychiatry consultation services at USU's family medicine clinic. While at USU, Dr. Kumer has steered her unique expertise across broad longitudinal educational platforms, including Interprofessional Practice and Education, Reflective Practice,

Neuroscience, and Ethics, adding to a robust military medical education curriculum.

She is a member of the Educational Committee; scientist for the Center for the Study of Traumatic Stress; and instructor for the Defense Institute for Medical Operations (DIMO).

Continued

Concurrent with her current duty responsibilities, Col Kumer has been hand-selected for critical manning-assist assignments to advise Commanders of both the Headquarters Pacific Air Forces and Air Force Global Strike Command and in so doing, ensuring their no-fail missions. Her exemplary leadership and dedication to both the school and the DoD is captured in her 2022 SOM Dean's Impact Award, received during her inaugural faculty year.

Colonel Kumer entered the Air Force as a direct accession in 2011 after a decade of civilian medical practice. She completed undergraduate and medical studies through a combined accelerated academic program at the Northeast Ohio Medical University in 1997. She then completed her Psychiatry Residency at Akron General Medical Center in Akron, Ohio, in 2001. Upon commissioning, she served as the Chief of Psychiatry and Medical Director of the Mental Health Flight at the 99th Medical Group, Nellis Air Force Base. Dr. Kumer then went on to complete a highly selective Forensic Psychiatry Fellowship at Harvard University in 2015. Her follow-on assignment was as the regional forensic psychiatrist for U.S. Air Forces in Europe. Most recently, she completed a short tour as Chief of Medical Staff at Incirlik AB, Turkey, supporting warfighters operating in the U.S. European Command and U.S. Central Command.

# Conference Leadership

## **JAMES A. NAIFEH, PHD**

Uniformed Services University



James A. Naifeh, Ph.D., is Research Associate Professor of Psychiatry at the Uniformed Services University of the Health Sciences and Assistant Scientific Director of the Center for the Study of Traumatic Stress. Following an undergraduate education at the University of Colorado, Dr. Naifeh received his Ph.D. from the University of South Dakota, where he completed the Doctoral Specialty Track in Clinical/Disaster Psychology and served as a Morgan Fellow in the Disaster Mental Health Institute. He completed his clinical internship with the VA Maryland Health Care System and a postdoctoral fellowship at the University of Mississippi Medical Center.

Dr. Naifeh's research aims to advance understanding of mental health risk and resilience in military personnel through the identification of psychological, environmental, and neurobiological factors associated with posttraumatic stress disorder (PTSD), suicide, and other adverse health outcomes. He has authored numerous peer-reviewed journal articles and book chapters on these topics. He has also served as an investigator on studies funded by the National Institute of Mental Health, Department of Defense, and Department of the Army. Included among these is the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS), the largest epidemiological and neurobiological study of risk and resilience ever conducted in the U.S. military, along with its longitudinal continuation and expansion (STARRS-LS).

## **HOLLY H. MASH, PHD**

Uniformed Services University



Holly Herberman Mash is a Research Associate Professor in the Department of Psychiatry at the Uniformed Services University and Assistant Scientific Director of the Center for the Study of Traumatic Stress. She received her Bachelor of Arts in Psychology from Kenyon College, and a Master of Arts in Counseling Psychology from Boston College. Dr. Mash completed her Master of Science and Ph.D. in Health Psychology at the University of Pittsburgh, with a focus on predictors of psychophysiological and behavioral sequelae of trauma exposure. She has worked in residential, inpatient, and psychiatric emergency room

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## Conference Leadership, Continued

settings, and has a background in psychological assessment. Dr. Mash has performed assessments of survivors of human-made disasters, such as motor vehicle and oil refinery accidents, rescue workers following an airplane crash, individuals considering genetic testing for BRCA1/2, and mothers experiencing postpartum depression.

Dr. Mash's research interests include: risk and protective factors associated with posttraumatic stress disorder, complicated grief, suicidal behaviors, and alcohol use disorder; psychosocial factors and health; and comorbidity of psychiatric diagnoses following disaster. She has been an author on several peer-reviewed journal articles and book chapters that focus on these areas. Dr. Mash is an Associate Editor for *Disaster Medicine and Public Health Preparedness*. Dr. Mash contributes to research as an investigator on studies of military and civilian populations, including Army soldiers participating in the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS), Department of Health workers who responded to the 2004/2005 Florida hurricane seasons, National Guard service members who were activated in response to COVID-19, and greater Washington, D.C. community residents during the 2002 DC sniper attacks. Dr. Mash joined the Center for the Study of Traumatic Stress in February 2010.

### **ROBERT J. URSANO, MD**

Uniformed Services University



Dr. Ursano is Professor of Psychiatry and Neuroscience at the Uniformed Services University, Bethesda, Maryland. He is founding Director of the Center for the Study of Traumatic Stress and served as the Chairman of the Department of Psychiatry at USU for 25 years (1992-2017). In addition, Dr. Ursano is Editor of *Psychiatry*, the distinguished journal of interpersonal and biological processes, founded by Harry Stack Sullivan. Dr. Ursano completed twenty years of service in USAF medical corps and retired as Colonel in 1991. He was educated at the University of Notre Dame and Yale University School of Medicine and did his psychiatric training at Wilford Hall

USAF Medical Center and Yale University.

Dr. Ursano served as the Department of Defense representative to the National Advisory Mental Health Council of the National Institute of Mental Health and is a past member of the Veterans Affairs Mental Health Study Section and the National Institute of Mental Health Rapid Trauma and Disaster Grant Review Section. He is a Distinguished Life Fellow in the American Psychiatric Association. He is a Fellow of the American College of Psychiatrists. Dr. Ursano was the first Chairman of the American Psychiatric Association's Committee on Psychiatric Dimensions of Disaster. This work greatly aided the integration

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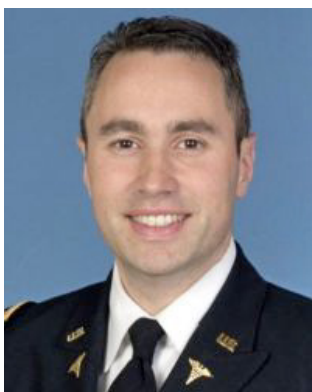
## Conference Leadership, Continued

of psychiatry and public health in times of disaster and terrorism. Dr. Ursano was an invited participant to the White House Mental Health Conference in 1999. He has received the Department of Defense Humanitarian Service Award and the highest award of the International Traumatic Stress Society, The Lifetime Achievement Award, for “outstanding and fundamental contributions to understanding traumatic stress.” He is the recipient of the William C. Porter Award from the Association of Military Surgeons of the United States, and a frequent advisor on issues surrounding psychological response to trauma to the highest levels of the US Government and specifically to the Department of Defense leadership.

Dr. Ursano has served as a member of the National Academies of Science, Institute of Medicine, Committee on Psychological Responses to Terrorism, Committee on PTSD and Compensation and the Committee on Nuclear Preparedness, and the National Institute of Mental Health Task Force on Mental Health Surveillance After Terrorist Attack. In addition, he is a member of scientific advisory boards to the Secretary of Health and Human Services and the Centers for Disease Control and Prevention. In 2012, Dr. Ursano was awarded the William C. Menninger Memorial Award for distinguished contributions to the Science of Mental Health by the American College of Physicians. In 2014, Dr. Ursano and Dr. Matthew Friedman of the VA National Center for PTSD co-founded The Leahy-Friedman National PTSD Brain Bank, supported through Senator Patrick Leahy (D-VT). It is the first human brain bank dedicated to PTSD. This joint effort of many people was a 12-year project developing concepts, pilot data and support. Dr. Ursano has more than 300 publications. He is co-author or editor of eight books.

### **COL VINCENT F. CAPALDI, II, SCM, MD, MC, USA**

Uniformed Services University



COL Vincent F. Capaldi, II, MC, USA, is Professor and Chair of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD and Senior Medical Scientist, Center for Military Psychiatry and Neuroscience, at the Walter Reed Army Institute of Research in Silver Spring, MD. He is also a Professor in the Department of Internal Medicine at the Uniformed Services University of the Health Sciences and the program director of the National Capital Consortium combined Internal Medicine and Psychiatry residency training program. COL Capaldi completed dual residency training in Internal Medicine and Psychiatry and fellowship in Sleep

Medicine at Walter Reed National Military Medical Center. COL Capaldi holds board certifications from the American Board of Psychiatry and Neurology and the American Board of Internal Medicine to practice General Psychiatry, Internal Medicine, and Sleep Medicine. COL Capaldi is a Distinguished Fellow of the American Psychiatric Association and Fellow of the American College of Physicians and the American Academy of Sleep

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## Conference Leadership, Continued

Medicine. He is a past president of the Society of Uniformed Services Psychiatrists – the Military District Branch of the American Psychiatric Association.

An alumnus of Brown University, Providence, RI, Dr. Capaldi received the following degrees from Brown: ScB in Psychology (2002), Masters in Research Psychology (2003), and MD (2007). Commissioning into the Medical Corps through the Health Professionals Scholarship Program (HPSP), Dr. Capaldi completed his dual residency training in Internal Medicine and Psychiatry in 2012 and sleep medicine fellowship in 2015. In January 2013, COL Capaldi was appointed as officer in charge (OIC) of the Restoration Program at Bagram Air Field, Afghanistan. As OIC, COL Capaldi was responsible for the comprehensive behavioral health restoration program, all clinical operations, and prevention activities for over 45,000 NATO troops stationed across Afghanistan. In January 2019, COL Capaldi deployed to Iraq in support of Operation Inherent Resolve, serving as the Theater Behavioral Health Consultant, the senior behavioral health provider supporting service members in Kuwait, Iraq, Syria, and Jordan. COL Capaldi is credited with establishing the behavioral health hotline in the CENTCOM region.

COL Capaldi has published over 150 peer reviewed scientific articles, abstracts, presentations, and book chapters on various topics such as sleep disorders, traumatic brain injury, and post stroke depression that have appeared in several medical journals. He serves as the Fatigue Management Capabilities Area Manager for the Military Operational Research Program, Medical Research and Development Command. He also serves as the Sleep Medicine Consultant to the US Army Surgeon General. In 2019 COL Capaldi was awarded the AMEDD “A” Proficiency Designator, awarded to the top 10% of military physicians and was selected as the 2019 Surgeon General Physician Recognition winner, awarded to the top military physician by rank. His other military awards include the Order of Military Medical Merit, Meritorious Service Medal (1OLC), Joint Service Commendation Medal (1 OLC), Army Commendation Medal (1OLC), Army Achievement Medal (1OLC), Inherent Resolve Campaign Medal, Afghanistan Campaign Medal, and International Security Force Operation NATO Medal.

# Continuing Education

## **APPROVED CME/CE CREDIT TYPES**

Continuing education is available for Physicians (CME) and Psychologists (CE) for this event.

5.25 CME Credit(s)

5.25 Psychology CE Credit(s)

## **ACCREDITATION**

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Psychiatric Association (APA) and the Center for the Study of Traumatic Stress. The APA is accredited by the ACCME to provide continuing medical education for physicians.

## **DESIGNATION**

The APA designates this live activity for a maximum of 5.25 *AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

## **FINANCIAL DISCLOSURES**

The American Psychiatric Association adheres to the ACCME's *Standards for Integrity and Independence in Accredited Continuing Medical Education*. Any individuals in a position to control the content of a CME activity — including faculty, planners, reviewers or others — are required to disclose all relevant financial relationships with ineligible entities (commercial interests). All relevant conflicts of interest have been mitigated prior to the commencement of the activity.

## **PLANNING COMMITTEE**

The following people have no relevant financial relationships to disclose: Dr. Robert Ursano, Dr. Rachel Shor, Dr. James Naifeh, Dr. Holly Mash, Dr. Carol Fullerton, Dr. Christina La Croix, Dr. Jeffrey Goodie, Dr. David Mears, MSgt. Jessica Moore, Dr. Kwang Choi, Alexandra Blumhorst, Luke Sumberg, Natasha Dhanraj.

## **FACULTY DISCLOSURES**

The following people have no relevant financial relationships to disclose: Dr. Joseph LeDoux, Dr. Leanne Williams, Dr. Sandro Galea, and Dr. Karen Parker. Dr. Diego Pizzagalli has the following financial relationships to disclose: Consultant (Boehringer Ingelheim; Neurocrine Biosciences; Sama Therapeutics), SAB, Stock Options (Compass Pathways; Neumora Therapeutics; Neuroscience Software), and Honorarium (Sage Therapeutics; Alkermes).

# Conference Committee

**James A. Naifeh, PhD, Co-Chair**

Research Associate Professor of Psychiatry  
Assistant Scientific Director, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Holly B. Herberman Mash, PhD, Co-Chair**

Research Associate Professor of Psychiatry  
Assistant Scientific Director, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Kwang H. Choi, PhD, Scientific Coordinator**

Associate Professor of Psychiatry  
Scientist, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Rachel Shor, PhD, Continuing Education Coordinator**

Research Assistant Professor of Psychiatry  
Scientist, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**David Mears, PhD**

Professor and Vice Chair for Education, Department of Anatomy, Physiology and Genetics  
Professor, Graduate Program in Neuroscience  
Uniformed Services University of the Health Sciences

**Christina L. La Croix, DO**

CDR, MC, USN  
Assistant Professor of Psychiatry  
Assistant Professor of Physical Medicine and Rehabilitation  
Scientist, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Carol S. Fullerton, PhD**

Research Professor of Psychiatry  
Scientific Director, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Jeffrey L. Goodie, PhD, ABPP**

Professor and Director of Research, Department of Family Medicine  
Uniformed Services University of the Health Sciences

Continued

**Jessica N. Moore**

MSgt, USAF, CADC  
NCOIC, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Alexandra Blumhorst, BS**

Study Coordinator, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Natasha Dhanraj, BS**

Study Coordinator, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Luke Sumberg, BS**

Research Assistant, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

**Hanna Nettles, BS**

Research Assistant, Center for the Study of Traumatic Stress  
Uniformed Services University of the Health Sciences

## About Us

The Amygdala, Stress, & PTSD Conference series is sponsored by: the Center for the Study of Traumatic Stress, under the direction of Robert J. Ursano, MD; the USU Department of Psychiatry, under the direction of COL Vincent F. Capaldi, II, MD; the USU Graduate Neuroscience Program, under the direction of Kimberly Byrnes, PhD; the USU Department of Family Medicine, under the direction of Dana Nguyen, MD; and the USU Brain and Behavior Hub.

# Posters

## **WINNER: BEST CLINICAL POSTER**

### **Right Amygdala Volume Predicts Future PTSD Severity in Preadolescent Children Exposed to Trauma**

Sattvik Basarkod<sup>1</sup>, Charis N. Wiltshire<sup>2</sup>, John France<sup>1</sup>, Shaurel Valbrun<sup>1</sup>, Sterling Winters<sup>1</sup>, Sophie George<sup>1</sup>, & Tanja Jovanovic<sup>1</sup>

1. Wayne State University School of Medicine, Detroit, MI, USA
2. Emory University, Atlanta, GA, USA

### **Effects of Intravenous Ketamine Infusion on Neuroinflammation Following Mild Traumatic Brain Injury in Sprague-Dawley Rats**

Rina Y. Berman<sup>1</sup>, Martin Boese<sup>2</sup>, Haley F. Spencer<sup>3</sup>, Kennett D. Radford<sup>2</sup>, & Kwang H. Choi<sup>1,2,3,4</sup>

1. Center for the Study of Traumatic Stress, Uniformed Services University, Bethesda, MD, USA
2. Daniel K. Inouye Graduate School of Nursing, Uniformed Services University, Bethesda, MD, USA
3. Program in Neuroscience, Uniformed Services University, Bethesda, MD, USA
4. Department of Psychiatry, F. E. Hébert School of Medicine, Uniformed Services University, Bethesda, MD, USA

### **Microglia-Mediated Neuroimmune Suppression in PTSD Is Associated with Anhedonia**

Robin Bonomi<sup>1</sup>, Ansel T. Hillmer<sup>1,2,3</sup>, Eric Woodcock<sup>1</sup>, Shivani Bhatt<sup>1</sup>, Gustavo A. Angarita<sup>1</sup>, Richard E. Carson<sup>2,3</sup>, Margaret T. Davis<sup>1,4</sup>, Irina Esterlis<sup>1,2,4</sup>, Nabeel Nabulsi<sup>2,3</sup>, Yiyun Huang<sup>2,3</sup>, John H. Krystal<sup>1,4</sup>, Robert H. Pietrzak<sup>1,4</sup>, & Kelly P. Cosgrove<sup>1,2,4</sup>

1. Department of Psychiatry, Yale School of Medicine, New Haven, CT, USA
2. Department of Radiology and Biomedical Imaging, Yale School of Medicine, New Haven, CT, USA
3. Yale PET Center, Yale School of Medicine, New Haven, CT, USA
4. U.S. Department of Veterans Affairs, National Center for Posttraumatic Stress Disorder, Clinical Neurosciences Division, VA Connecticut Healthcare System, West Haven, CT, USA

### **Posttraumatic Stress Disorder in Mortuary Affairs Soldiers 2006–2018**

Nur M. Bookwala<sup>1,2</sup>, Sonia Warrior<sup>1,2</sup>, Quinn M. Biggs<sup>1,2</sup>, MSgt Jessica Moore<sup>1</sup>, Carol S. Fullerton<sup>1</sup>, Leming Wang<sup>1</sup>, & Robert J. Ursano<sup>1</sup>

1. Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD, USA
2. Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., Bethesda, MD, USA

### **Alterations In Electrocardiogram Waveform Following Incubation of Fear in Rats**

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### **MDMA, PTSD, & Comorbid OCD: A Systematic Review of the Potential Effects of 3,4-Methylenedioxymethamphetamine-Assisted Therapy for PTSD on Comorbid OCD**

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### **Subjective Cognitive Complaints, Neuropsychological Performance, and Suicidal Behavior Risk in PTSD**

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### **The Associations of Posttraumatic Stress Disorder and Family Composition with Firearm Ownership and Unsafe Firearm Storage Practices Among Military and Veteran Servicemembers**

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### **Neuroinflammatory and Behavioral Consequences of Shockwave-Induced Traumatic Brain Injury in Mice**

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### **2-Month Transcutaneous Auricular Vagal Nerve Stimulation (taVNS) in PTSD (Pilot Study): Significant Reduction in CAPS-5 and Quality of Life Scores**

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### **Relationships Between Adult Bullying Behaviors and Suicide Risk: Results from a Psychological Autopsy Study of U.S. Army Servicemembers**

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### **Avoidant Coping and Supportive Coping Differentiate Patterns of Comorbidity in Groups In 9/11-Bereaved Fifteen Years After 9/11**

Joscelyn E. Fisher<sup>1,2</sup>, Christin M. Ogle<sup>1,2</sup>, Jing Zhou<sup>1,2</sup>, Tasanee R. Walsh<sup>1,2</sup>, Mary Fetchet<sup>3</sup>, Rafael F. Zuleta<sup>1,2</sup>, Carol S. Fullerton<sup>1</sup>, Robert J. Ursano<sup>1</sup>, & Stephen J. Cozza<sup>1</sup>

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## **Metabolomics Alterations in Acute Stress Disorder: Neurotransmitters, Energy, and Inflammation Related Small Biomolecules Associated with Acute Stress**

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## **Food Insecurity in the U.S.: Implications for Military Families**

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## **Brave Faces, Hidden Fears: Intolerance of Uncertainty Predicts Startle Response in Trauma-Exposed Teens**

Leah Gowatch<sup>1</sup>, Amanpreet Bhogal<sup>1</sup>, Jennifer Losiowski<sup>1</sup>, Alexandra Ehrhardt<sup>2</sup>, Faiza Bakth<sup>2</sup>, Sneha Bhargava<sup>1</sup>, Bilal Elhasan<sup>1</sup>, Emily Crisan<sup>1</sup>, Samantha Ely<sup>1</sup>, Carmen Carpenter<sup>1</sup>, MacKenna Shampine<sup>1</sup>, Reem Tamimi<sup>1</sup>, Emilie-Clare O'Mara<sup>1</sup>, Clara Zundel<sup>1</sup>, Mubeena Hanif<sup>1</sup>, Tanja Jovanovic<sup>1</sup>, Hannah Schacter<sup>2</sup>, & Hilary Marusak<sup>1</sup>

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## **The Novel Involvement of PTSD-Associated FKBP5 in Protein Networks and Signaling Pathways**

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## **Repetitive Subconcussions Impact Executive Functioning: Evidence from ERP and Cognitive Motor Performance**

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## **The Role of Central Amygdala GABAergic Input to The Parabrachial Nucleus in Food Intake**

Danielle S. Lafferty<sup>1</sup>, Jeremiah Isaac<sup>1</sup>, & Andrew Lutas<sup>1</sup>

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### **Child Protective Actions in Response to Specific Types of Child Neglect**

Christin M. Ogle<sup>1,2</sup>, Joscelyn E. Fisher<sup>1,2</sup>, Jing Zhou<sup>1,2</sup>, Tasanee Walsh<sup>1,2</sup>, Steven P. Nemcek<sup>1</sup>, Rafael F. Zuleta<sup>1,2</sup>, Carol S. Fullerton<sup>1</sup>, Robert J. Ursano<sup>1</sup>, & Stephen J. Cozza<sup>1</sup>

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### **The Impact of Handling Qualities on Psychomotor Performance and Operational Stress in a Compensatory Tracking Task**

Kyle F. Pietro<sup>1</sup>, Hyuk Oh<sup>1</sup>, Alexandra A. Shaver<sup>1</sup>, Rodolphe J. Gentili<sup>1</sup>, Roberto Celi<sup>2</sup>, & Bradley D. Hatfield<sup>1</sup>

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### **Lighting and Mental Health: Insights from Recent Sleep and Circadian Studies**

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### **Prefrontal Metabolite Alterations in Individuals with Posttraumatic Stress Disorder: A 7T Magnetic Resonance Spectroscopy Study**

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### **An Investigation of Psychological and Neurobiological Factors Influencing the Ideation or Usage of a Violent Suicide Method in Depression Patients**

Carlos S. Rodriguez<sup>1</sup>, Steven J. Lamontagne<sup>1</sup>, Laura R. Waldman<sup>1</sup>, Jessica R. Gilbert<sup>1</sup>, Carlos A. Zarate Jr.<sup>1</sup>, Elizabeth D. Ballard<sup>1</sup>, & Mark D. Kvarata<sup>1</sup>

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### **RECONsolidation of Traumatic memories to ResOLVE Posttraumatic Stress Disorder RECONTROL: Preliminary Results**

Michael J. Roy<sup>1,3</sup>, Paula G. Bellini<sup>1,4</sup>, Annabel Lee Raboy<sup>1,4</sup>, Patricia T. Spangler<sup>2,3,4</sup>, Deborah Probe Adams<sup>2,3,4</sup>, Kerri E. Dunbar<sup>1,4</sup>, Catherine L. Dempsey<sup>2,3,4</sup>, & Richard M. Gray<sup>5</sup>

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**WINNER: BEST PRECLINICAL POSTER**

**A Novel Animal Behavioral Model for Assessing Arousal and Anxiety States: Implications for Post-Traumatic Stress Disorder**

Hannah C. Smith<sup>1</sup>, Zhe Yu<sup>1</sup>, Patrick Yagizi<sup>1</sup>, Benjamin Turley<sup>2</sup>, Adam Swiercz<sup>3</sup>, Jeanie Park<sup>4</sup>, & Paul J. Marvar<sup>1</sup>

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4. Emory University, Atlanta, GA, USA

**WINNER: BEST CLINICAL POSTER**

**Stress Biomarkers and In-Session Exposure to Nightmare Content: Results from a Pilot Trial of Nightmare Deconstruction of Reprocessing**

Patricia T. Spangler<sup>1,2</sup>, James C. West<sup>1</sup>, Catherine L. Dempsey<sup>1,2</sup>, David M. Benedek<sup>1</sup>, Jessica Gill<sup>3</sup>, Xianzhang Hu<sup>1</sup>, Rebecca Kwasinski<sup>1</sup>, Brent Winslow<sup>4</sup>, & Lei Zhang<sup>1</sup>

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**The Neurochemical and Anatomical Profile of Resilience**

Gabriel Vargas<sup>1,2</sup> & Mary C. Vance<sup>3</sup>

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**A Feasibility Trial to Assess a New Yoga Program to Enhance Quality of Life and Well-Being Among Hispanic Women At Risk for or Living with Type 2 Diabetes**

Maricarmen Vizcaino<sup>1</sup> & Dorothy D. Sears<sup>1</sup>

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## **Joint Influence of Attachment Styles And Social Support Network on Lifetime Suicidal Behaviors**

Jing Wang<sup>1,5</sup>, James A. Naifeh<sup>1,5</sup>, Holly B. Herberman Mash<sup>1,5</sup>, Jeffrey Thomas<sup>1,5</sup>, Joshua C. Morganstein<sup>1</sup>, Carol S. Fullerton<sup>1</sup>, Stephen J. Cozza<sup>1</sup>, Murray B. Stein<sup>2,3,4</sup>, & Robert J. Ursano<sup>1</sup>

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## **Identification of A Locus Coeruleus-Amygdala Angiotensinergic Circuit: Implications for Stress-Related Cardiovascular Diseases**

Zhe Yu<sup>1</sup> & Paul J. Marvar<sup>1</sup>

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