



National Institute on Alcohol
Abuse and Alcoholism

NIAAA DIRECTOR’S REPORT ON INSTITUTE ACTIVITIES TO THE 161ST MEETING OF THE NATIONAL ADVISORY COUNCIL ON ALCOHOL ABUSE AND ALCOHOLISM

Thursday, September 8, 2022
Hybrid Meeting

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IN MEMORIAM

Logan E. Johnson, Postbaccalaureate in the Section on Medicinal Chemistry, Division of Intramural Clinical and Biological Research, passed away on June 11, 2022. Logan graduated from the University of Toledo in May 2021 with college honors distinction with a Bachelor of Pharmaceutical Science in Pharmacology/Toxicology, as well as a Bachelor of Science in Biology. He also received a minor in Chemistry and Departmental Honors in Medicinal and Biological Chemistry. Logan worked as an undergraduate researcher at the University of Toledo College of Pharmacy and Pharmaceutical Services. In addition to his academic achievements, Logan was a friend and mentor to many. His life was lived in a way to inspire others to be “unapologetically” themselves. He desired to make a positive impact in this world through science and medicine. Logan established a history and legacy of love and acceptance that will live on through his family, his friends, and anyone who shared the pleasure of his acquaintance.

NIAAA BUDGET

Fiscal Year (FY) 2022

On March 15, 2022, the President signed H.R. 2471 - Consolidated Appropriations Act, 2022. NIH received a total of \$45.2 billion, \$2.3 billion or 5.4 percent above the fiscal year 2021 enacted level. This funding includes allocations for the Helping to End Addiction Long-term (HEAL) Initiative, the 21st Century Cures Act, NIH Brain Research Through Advancing Innovative Neurotechnologies (BRAIN), and the All of Us research program. The bill provides a general increase to NIH Institutes and Centers (ICs), and it continues to support for the Gabriella Miller Kids First Act pediatric research initiative.

The FY 2022 appropriation for NIAAA provides \$573.7 million. This represents an \$18.8 million, or a 3.4 percent increase over the FY 2021 actual budget level. NIAAA estimates it will support a total of 714 RPGs in FY 2022.

FY 2023

The FY 2023 President’s Budget (PB) was released on March 28, 2022, requesting \$52.0 billion for NIH, a \$6.8 billion increase from the FY 2022 enacted budget. The NIAAA PB increase is \$566.7 million, a \$7 million decrease from FY 2022.

The House Labor, Health and Human Services, Education, and Related Agencies (LHHS) subcommittee released their draft report on June 22, 2022. The draft House bill has a \$2.5 billion increase for NIH above the FY 2022 enacted funding level. The House mark proposed for NIAAA is \$18.1 million, or a 3.2 percent increase from the FY 2022 enacted budget.

The Senate released the draft FY 2023 LHHS bill on July 28, 2022. The draft Senate bill has a \$2.0 billion increase for NIH above the FY 2022 enacted level, as compared to the \$2.5 billion increase in the House bill, excluding ARPA-H. The Senate report cites a minimum 3.1 percent increase for most ICs, along with targeted increases for various priorities such as pain/opioids, health disparities, and environmental health. The NIAAA proposed increase is \$17.8 million or 3.1 percent from the FY 2022 enacted budget.

HONORS AND AWARDS

Dr. Nancy Diazgranados, Deputy Clinical Director, Office of the Clinical Director, Division of Intramural Clinical and Biological Research, received the honor of Distinguished Fellow from the American Psychiatric Association.

Hannah Goldbach, Graduate Student, Laboratory on Neurobiology of Compulsive Behaviors, Division of Intramural Clinical and Biological Research, earned an Honorable Mention in the 2022 Ford Fellowship program.

Dr. Tommy Gunawan, Postdoctoral Fellow, Laboratory on Human Psychopharmacology, Division of Intramural Clinical and Biological Research, received the Top Postdoctoral Presentation Award at the Behavioral Biology and Chemistry Conference on Translational Research in Addiction.

Dr. Paule Joseph, Acting Chief, Section on Sensory Science and Metabolism, Division of Intramural Clinical and Biological Research, was named as the inaugural 2022–2024 American Academy of Nursing Fellow at the National Academy of Medicine, as well as one of the 40 under 40 Leaders in Minority Health.

Dr. Andras Leko, Visiting Fellow, Laboratory on Clinical Psychoneuroendocrinology and Neuropsychopharmacology, Division of Intramural Clinical and Biological Research, was selected as an NIH Center on Compulsive Behaviors Fellow.

Dr. Andras Leko and **Rani Richardson**, M.D./Ph.D. Student, Laboratory on Clinical Psychoneuroendocrinology and Neuropsychopharmacology, Division of Intramural Clinical and Biological Research, received the NIH Fellows Award for Research Excellence.

STAFF TRANSITIONS

New Staff



Kimberly Benton has joined the Ethics and Management Analyst Branch, Office of Resource Management. Kimberly comes to NIAAA from the U.S. Food and Drug Administration, where she worked in the Office of Ethics and Integrity. In her new role, Kimberly is responsible for all aspects of NIAAA's ethics program.



Dr. Laura Brockway-Lunardi joined the Office of Science Policy and Communications as Chief, Science Policy Branch. Dr. Brockway-Lunardi comes to NIAAA from the National Cancer Institute (NCI), where she made major contributions to NCI's scientific strategy and policy efforts. Previously, she served as the Scientific Program Director of the Melanoma Research Alliance, managing nearly \$80 million in international research funding. She was Senior Science Policy Analyst at the Federation of American Societies for Experimental Biology and a science policy fellow at the National Academy of Sciences. She received her doctorate in Vision Science from the University of Alabama at Birmingham.



Sarah Ganda joined the Division of Metabolism and Health Effects in July as a Health Specialist. Sarah earned a master's degree in public health from American Public University. Prior to joining NIAAA, she worked at the Maryland Department of Health in both the Prevention and Health Promotion Administration and the Office for Genetics and People with Special Health Care Needs. Sarah's experience also includes working as a Bone Marrow Donor Workup Coordinator at the C.W. Bill Young/Department of Defense Marrow Donor Program partnership with Georgetown University. She also completed an internship at MedChi, The Maryland State Medical Society, working on maternal mortality in the state of Maryland.



Dr. WooChan Kim joined the Laboratory of Neuroimaging, Division of Intramural Clinical and Biological Research, as a Postdoctoral Visiting Fellow. Dr. Kim's research will focus on the development of positron emission tomography (PET) radiotracers for use in brain imaging to better understand the pathological mechanisms underlying addiction. His research will also focus on the development of new radiochemical methodologies and in vivo animal imaging using PET.



Dr. Bruno Paes Leme Ferreira joined the Laboratory of Cardiovascular Physiology and Tissue Injury (LCPTI) as a Postdoctoral Visiting Fellow. His work will focus on examining interorgan interactions during tissue injury, including tissue injury induced by alcohol. He will also help develop mouse and rat models of alcohol-associated cardiomyopathies, as well as identify and test potential new therapeutic targets to alleviate alcohol-associated cardiomyopathies.



Dr. Gabriela Parra Mercado joined the Laboratory of Molecular Signaling (LMS) as a Postdoctoral Visiting Fellow to investigate the role of the endogenous docosahexaenoic acid metabolite synaptamide in neurodevelopment and neuroprotection. Specifically, she will examine molecular and signaling mechanisms of G protein-coupled receptor, GPR110, activation. GPR110 activation was previously shown to be responsible for synaptamide-induced neurite growth, neurogenesis, synaptogenesis and anti-inflammatory responses.



Caleb Waller joined the Grants Management Branch, Office of Extramural Affairs, as a Grants Management Specialist. Caleb began his career in research administration as a budget assistant at the Johns Hopkins Bloomberg School of Public Health. He ultimately concluded his tenure at Hopkins as a Senior Grants and Contracts Analyst within the School of Medicine. Prior to joining NIAAA, Caleb worked at the National Institute of Allergy and Infectious Diseases as a Grants Management Specialist.

New Post-Baccalaureate Intramural Research Training Award (IRTA) Fellows:**Mikayla Bergwood** – Laboratory on Human Psychopharmacology**Eva Cullins** – Laboratory on Human Psychopharmacology**Michael Freaney** – Laboratory of Neuroimaging**Natalie Johnson** – Section on Fibrotic Disorders**Ethan Kinstler** – Laboratory of Neurogenetics**Taylor Lehner** – Laboratory of Liver Diseases**Jacqueline Mehr** – Laboratory on Neurobiology of Compulsive Behaviors**Daniel Schratz** – Clinical Neuroimaging Research Center**Evan Swanson** – Laboratory on Neurobiology of Compulsive Behaviors**Courtney Waters** – Clinical Neuroimaging Research Center**Transitions**

Dr. Robert C. Freeman assumed the role of Acting Deputy Director of the NIAAA Division of Epidemiology and Prevention Research in July 2022.

Dr. Jeong Oen Lee was appointed Research Fellow in the Laboratory for Integrative Neuroscience, Division of Intramural Clinical and Biological Research. Dr. Lee was appointed as a postdoctoral fellow in 2018, then converted to a Research Fellow. A focus of Dr. Lee's current work is deep layer motor cortical interneurons and their early engagement in instrumental learning.

Dr. Raye Litten was appointed Director of the Division of Treatment and Recovery. Dr. Litten joined NIAAA in 1989 and previously served as Associate Director of the Division of Treatment and Recovery Research, Acting Director of the Division of Medications Development, and Acting Director of the Division of Treatment and Recovery Research.

Dr. Yon Woo Jung was appointed Research Fellow in the Laboratory of Neurogenetics, Division of Intramural Clinical and Biological Research, after serving as a Visiting Fellow. Dr. Jong's research focused on characterizing the stress granule perturbation network to understand adaptive and maladaptive neuronal responses to cocaine administration.

Departures

Elizabeth (Betsy) Davis, Psychology Technician, retired after 42 years of federal service. Betsy spent the last 23 years of her career within the Office of the Clinical Director (OCD), Division of Intramural Clinical and Biological Research, where she led staff engagement, especially for trainees. She also led auditing and monitoring, drafting new guidelines within OCD. She developed the data collection instruments and designed the interface that would be seen by patients.

Dr. Michael Hilton, Deputy Director of the Division of Epidemiology and Prevention Research (DEPR), retired after 32 years of federal service. Thirty of those years were spent at NIAAA. Dr. Hilton contributed to many of the core functions DEPR, including strategic planning, developing funding announcements, providing oversight of NIAAA's alcohol policy research portfolio, and serving as liaison with other NIH Institutes and external organizations.

Michael Kerich, Computer Scientist in the Clinical Neuroimaging Research Core, Office of the Clinical Director, Division of Intramural Clinical and Biological Research, retired after 36 years of federal service.

Michael spent the past 30 years at NIAAA, where he provided expertise in data and computer systems management. He was also instrumental in automating and developing tools and interfaces for clinical data collection and storage, as well as developing and implementing pipelines for neuroimaging data processing for clinical research.

Kathleen (Kat) Tepas, Legislative Coordinator in the Office of Science Policy and Communications, has departed NIAAA to take a position at the NIH Office of AIDS Research.

Laurie Torchinsky transferred from NIAAA after 8 years to become a Management Analyst with the Work Force Engagement and Development Section at the National Institute of Mental Health.

Mildred (Millie) Winston, Grants Management Specialist, retired with more than 45 years of federal service, 28 of which were at NIAAA working in the Grants Management Branch, Office of Extramural Affairs. Milli plans to enjoy her well-deserved retirement years spending time with friends and family and participating in activities in her church.

Departing Postbaccalaureate IRTAs:

Jared Axelowitz – Laboratory of Human Psychopharmacology

Evan Dennis – Laboratory of Neuroimaging

Seth Eisenberg – Laboratory of Neuroimaging

Chiraag Gohel – Laboratory of Neurogenetics

Alexa Gracias – Laboratory for Integrative Neuroscience

Allison Johnson – Laboratory of Neuroimaging

Hannah Kim – Office of the Clinical Director

Anooshri Maskeri – Laboratory on the Neurobiology of Compulsive Behaviors

Carlos Melendez – Laboratory of Human Psychopharmacology

Erin Murray – Laboratory on the Neurobiology of Compulsive Behaviors

Kelly O'Connor – Laboratory of Neuroimaging

Nicholas Rutland – Office of the Scientific Director

Isabella Rosario – Clinical Neuroimaging Research Core

Marlisa Shaw – Laboratory on the Neurobiology of Compulsive Behaviors

Eli Winkler – Laboratory of Neurogenetics

Kaelin Wolf – Section on Fibrotic Disorders

RECENTLY ISSUED FUNDING OPPORTUNITIES

Funding Opportunity Announcements (FOAs) Issued by NIAAA

Early Liver Transplantation Cohort Study for Alcohol-associated Liver Diseases. The goal of this FOA is to support collaborative, multidisciplinary research projects on early liver transplantation (ELT) for patients with alcohol-associated liver disease. The FOA encourages observational clinical studies to examine factors that influence the criteria for patient selection for ELT and that influence post-ELT outcomes. [RFA-AA-22-003](#) (Collaborative R01 – Clinical Trial Not Allowed).

Notice of Special Interest (NOSI) Issued by NIAAA

Notice of Change to NOT-AA-20-018 “Notice of Special Interest: Secondary Analyses of Existing Alcohol Research Data.” This Notice informs applicants of a change to [NOT-AA-20-018](#) “Notice of Special Interest: Secondary Analyses of Existing Alcohol Research Data”. This Notice includes language to encourage the utilization of data from the NIH-sponsored All of Us initiatives to conduct secondary analyses as specified in NOT-AA-20-018. The Notice also updates the previous notice with an additional research objective to examine differences in alcohol consumption alone or in combination with other substance use, risk and protective factors, and comorbid psychiatric and/or chronic physical conditions in people who consume alcohol. These factors may contribute to poor health outcomes in certain [NIH-designated U.S. health disparity populations](#). ([NOT-AA-22-014](#)).

NIH-Wide FOAs with NIAAA Participation

BRAIN Initiative: Transformative Brain Non-invasive Imaging Technology Development. [RFA-EB-22-001](#) (UG3/UH3 – Clinical Trial Not Allowed).

BRAIN Initiative: Brain Behavior Quantification and Synchronization. [RFA-MH-22-240](#) (R61/R33 – Clinical Trial Optional).

BRAIN Initiative: Team-Research BRAIN Circuit Programs – TeamBCP. [RFA-NS-22-039](#) (U19 Basic Experimental Studies with Humans Required). [RFA-NS-22-040](#) (U19 – Clinical Trial Not Allowed).

BRAIN Initiative: Research Opportunities Using Invasive Neural Recording and Stimulating Technologies in the Human Brain. [RFA-NS-22-041](#) (U01 – Basic Experimental Studies with Humans Required).

Dissemination and Implementation Research in Health. [PAR-22-105](#) (R01 – Clinical Trial Optional), [PAR-22-106](#) (R03 Clinical Trial Not Allowed), [PAR-22-109](#) (R21 – Clinical Trial Optional).

HEAL Initiative: Career Development Awards in Implementation Science for Substance Use Prevention and Treatment. [PAS-22-206](#) (K01 – Clinical Trial Required). [PAS-22-207](#) (K23 – Clinical Trial Required).

HEAL Initiative: Research to Foster an Opioid Use Disorder Treatment System Patients Can Count On. [RFA-DA-23-046](#) (RM1 – Clinical Trial Optional).

HEAL Initiative: Research Studies to Develop and Implement Interventions to Prevent Opioid Misuse in Community Health Centers [RFA-DA-23-048](#) (R61/R33 – Clinical Trial Required).

HEAL Initiative: Development and validation of virtual assessments to study children and caregivers in their natural environment. [RFA-DA-23-050](#) (R01 – Clinical Trial Not Allowed). [RFA-DA-23-055](#) (R01 – Basic Experimental Studies with Humans Required).

HEAL Initiative: Rapidly Assessing the Public Health Impact of Emerging Opioid Threats. [RFA-DA-23-045](#) (UG1 – Clinical Trial Not Allowed).

National Cooperative Drug/Device Discovery/Development Groups (NCDDG) for the Treatment of Mental Disorders or Alcohol Use Disorder. [PAR-22-143](#) (U01 – Clinical Trial Optional). [PAR-22-144](#) (U19 – Clinical Trial Optional).

NIH HEAL Initiative: Coordinated Approaches to Pain Care in Health Care Systems. [RFA-NS-22-053](#) (UG3/UH3 – Clinical Trial Optional).

HEAL Initiative: Coordinated Pain Care in Health Care Systems Research Program – Coordinating Center. [RFA-NS-22-065](#) (U24 – Clinical Trial Not Allowed).

HEAL Initiative: Development and Validation of Non-Rodent Mammalian Models of Pain. [RFA-NS-22-070](#) (R01 – Clinical Trial Not Allowed).

HEAL Initiative: Interdisciplinary Team Science to Uncover the Mechanisms of Pain Relief by Medical Devices. [RFA-NS-23-003](#) (RM1 – Clinical Trial Optional).

Maternal Health Research Centers of Excellence: [RFA-HD-23-035](#) (U54 – Clinical Trial Optional); Maternal Health Research Centers of Excellence Data Innovation and Coordinating Hub/Resource Center [RFA-HD-23-036](#) (U24 – Clinical Trial Not Allowed); Maternal Health Research Centers of Excellence Implementation Science Hub/Resource Center [RFA-HD-23-037](#) (U24 – Clinical Trial Optional).

PHS 2022-2 Omnibus Solicitation of the NIH, CDC and FDA for Small Business Innovation Research Grant Applications. [PA-22-176](#) (Parent SBIR [R43/R44] Clinical Trial Not Allowed).

PHS 2022-2 Omnibus Solicitation of the NIH and CDC for Small Business Innovation Research Grant Applications. [PA-22-177](#) (Parent SBIR [R43/R44] Clinical Trial Required).

PHS 2022-2 Omnibus Solicitation of the NIH for Small Business Technology Transfer Grant Applications. [PA-22-178](#) (Parent STTR [R41/R42] Clinical Trial Not Allowed). PHS 2022-2 Omnibus Solicitation of the NIH for Small Business Technology Transfer Grant Applications. [PA-22-179](#) (Parent STTR [R41/R42] Clinical Trial Required).

Specialized Centers of Research Excellence (SCORE) on Sex Differences. [RFA-OD-22-014](#) (U54 – Clinical Trial Optional).

NIH-Wide NOSIs with NIAAA Participation

Notice of Special Interest: Alzheimer's-Focused Administrative Supplements for NIH Grants that are Not Focused on Alzheimer's Disease. [NOT-AG-22-025](#).

Notice of Special Interest (NOSI): Promoting Mechanistic Research on Therapeutic and Other Biological Properties of Minor Cannabinoids and Terpenes. [NOT-AT-22-027](#).

Notice of Special Interest (NOSI) HEAL Initiative: Workforce Interventions to Improve Addiction Care Quality and Patient Outcomes. [NOT-DA-23-008](#)

Notice of Special Interest (NOSI) – Administrative Supplements for Research of Emerging and Existing Issues of COVID-19 Related to the Health and Well-Being of Women, Children and Individuals with Physical and/or Intellectual Disabilities. [NOT-HD-22-003](#).

HEAL Initiative Notice of Special Interest (NOSI): Development and Validation of Pain-Related Models and Endpoints to Facilitate Non-Addictive Analgesic Discovery. [NOT-NS-22-095](#).

Notice of Special Interest (NOSI): HEAL Initiative: Clinical Translation of Diagnostic and Therapeutic Devices via Blueprint MedTech. [NOT-NS-23-002](#).

Notice of Special Interest (NOSI): Increasing Uptake of Evidence-Based Screening in Diverse Populations Across the Lifespan. [NOT-OD-22-106](#).

Notice of Special Interest (NOSI): Preventive Interventions to Address Cardiometabolic Risk Factors in Populations that Experience Health Disparities. [NOT-OD-22-154](#).

Notice of Special Interest (NOSI): Research on the Health of Bisexual and Bisexual+ People. [NOT-OD-22-166](#).

Notice of Special Interest (NOSI): Research on Addressing Violence to Improve Health Outcomes. [NOT-OD-22-167](#).

Notice of Special Interest (NOSI): Increasing Uptake of Evidence-Based Screening in Diverse Populations Across the Lifespan. [NOT-OD-22-178](#).

Notice of Special Interest (NOSI): Addressing Evidence Gaps in Screening. [NOT-OD-22-179](#)

NIAAA DIRECTOR'S ACTIVITIES

NIAAA Director **George F. Koob, Ph.D.**, gave the following presentations between April 1 and July 31, 2022:

- Bridging the Gap Between Science and Clinical Practice in Addiction Medicine, American Society of Addiction Medicine, on April 2, 2022
- “Alcohol and Opioid Addiction: The Gain in the Brain is in the Emotional Pain” Sterling Lectureship, at Tufts University on April 28, 2022
- “Hyperkatifeia, Negative Reinforcement and the Negative Emotional Side of Addiction” Grand Rounds, at the Department of Psychiatry, NYU Langone Medical Center, on May 5, 2022
- “Alcohol use disorder: Covid 19, Hyperkatifeia, Closing the Treatment Gap, and Recovery” at the National Council for Mental Wellbeing, NatCon22, on April 11, 2022
- “Neurobiology of Alcohol Use Disorder, A Heuristic Framework for Etiology, Diagnosis, Prevention and Treatment of Alcohol Use Disorder” at the American Psychiatric Association Annual Meeting on May 21, 2022
- “Alcohol use disorder: Hyperkatifeia, Covid 19, and Deaths of Despair (Closing the Treatment Gap)” American Psychiatric Association Annual Meeting on May 21, 2022
- “Alcohol Use Disorder: Closing the Treatment Gap” at the American Society of Clinical Psychopharmacology Annual Meeting on June 2, 2022
- “Congratulations! Class of 2022” at the Addiction Medicine Fellow Graduation Ceremony, American College of Academic Addiction Medicine, on June 9, 2022
- “NIAAA Update: Closing the Treatment Gap” at the Friends of NIAAA Annual Meeting on June 9, 2022
- “NIAAA Update: Closing the Treatment Gap” at the College on the Problems of Drug Dependence Annual Meeting on June 12, 2022
- “Alcohol and Drug Addiction: The Gain in the Brain is in the Emotional Pain” at the VI World Congress of Dual Disorders on June 24, 2022
- “NIAAA Update” at the Research Society on Alcoholism Annual Meeting on June 26, 2022
- “Alcohol and pregnancy: What we know, what we need to know, and opportunities for research” at the University of Maryland School of Medicine (UMSOM) Symposium on Substance Use in Pregnancy on June 23, 2022

NOTABLE NIAAA STAFF ACTIVITIES

Dr. Laura Kwako served as a discussant for a session titled “Grant-Funded Student Research on Factors Impacting Substance Use: Opportunities and Accomplishments” at the virtual Collaborative Perspectives on Addiction Conference on April 7, 2022.

Dr. Jenica Patterson presented “Overview of Funding Opportunities at NIH” at the Solid-State Sensors, Actuators, and Microsystems Meeting on June 6, 2022.

Dr. Jenica Patterson presented “Leveraging NIAAA SBIR/STTR Funding to Support Commercialization of Innovations in Alcohol Use Disorder and Alcohol Related Problems” in a virtual webinar for NIH’s Small Business Education and Entrepreneurial Development on May 25, 2022.

NIAAA Staff Activities at the 2022 Research Society on Alcoholism (RSA) Annual Meeting, June 25–29, 2022:

Dr. Tatiana Balachova presented “Federal Agency Updates on the Interagency Coordinating Committee on Fetal Alcohol Spectrum Disorders (FASD)” and **Dr. Bill Dunty** presented the “NIAAA Update” to the RSA FASD Study Group.

Dr. Mehdi Farokhnia presented “Gut-Brain Neuropeptides as Novel Targets to Develop Medications for Alcohol Use Disorder” as part of the “Brain/body systems dysfunction in alcohol use disorder” Symposium.

Dr. Brett Hagman presented a program guidance talk titled “NIAAA MOBC Program Guidance: Moving the Public Health Translational Needle Forward” at the annual RSA Mechanisms of Behavior Change (MOBC) satellite meeting. **Dr. Laura Kwako** served as a discussant on the panel “The Intersection of MOBC and D&I [Diversity and Inclusion]” at the satellite meeting.

Dr. Kathy Jung and **Dr. Bin Gao** co-organized a symposium titled “Novel pathogeneses and therapeutic targets for alcohol-associated liver disease.”

Dr. Lorenzo Leggio was a discussant in two RSA symposia: “Novel approaches targeting alcohol metabolism to treat alcohol use disorder” and “Brain oxytocin system as a target for treatment of alcohol use disorder.”

Dr. Antonio Noronha co-organized a symposium with Dr. Subhash Pandey that was titled “Subbehavioral, neurobiological, and epigenetic mechanisms of the long-term impact of adolescent alcohol drinking: NADIA consortium findings.”

Dr. Abbas Parsian organized a symposium titled, “Polygenic risk scores analysis of alcohol use disorder: risk evaluations and beyond.”

Dr. Joe Wang served as a discussant for the “Alcohol use disorder and the Covid-19 pandemic” roundtable and the “The crossroads of alcohol-associated organ pathology and drinking behavior: novel mechanisms and dual therapeutic strategies” symposium.

Dr. Philippe Marmillot presented “NIAAA-Supported Research Overview” at the workshop titled “NIAAA-supported Research: A Grant Skills Workshop.” **Dr. Tatiana Balachova, Dr. Changhai Cui, Dr. Bill Dunty,**

Dr. Luis Espinoza, Dr. Peter Gao, Dr. Anna Ghambaryan, Dr. Brett Hagman, Dr. Abbas Parsian, Dr. Jenica Paterson, Dr. RV Srinivas, and Jeff Thurston and Judy Fox served as panelists.

NIAAA Staff Activities at Other Events:

Dr. Ralph Hingson organized a panel at the Community Anti-Drug Coalitions of America (CADCA) 21st Mid-Year Training Institute on “Prevention of Underage Drinking” on July 19, 2022. Dr. Hingson and the panel session explored trends and interventions to prevent underage drinking, including individual, family, school-based, and policy interventions, as well as multi-component community interventions.

Dr. Aaron White spoke during the White House Office of Science & Technology Policy Virtual Conversation: The Science Behind Alcohol Misuse as a Coping Mechanism – As part of this White House series, Dr. White discussed his recent publication, “[Alcohol-Related Deaths During the COVID-19 Pandemic](#).”

WHAT’S AHEAD?

The American College of Obstetricians & Gynecologists (ACOG) FASD Expert Work Group Annual Meeting, will be held in Washington, D.C., on August 19, 2022.

The [National Conference on Alcohol and Opioid Use in Women and Girls: Advances in Prevention, Treatment, and Recovery](#) will be held virtually on October 20 and 21, 2022. The Conference is hosted by the NIAAA and the Interagency Work Group on Drinking and Drug Use in Women and Girls.

The [Gordon Research Conference, “Alcohol and the Nervous System,”](#) will be held in Oxnard, California, October 23–28, 2022.

The [NIDA-NIAAA Frontiers in Addiction Research Mini-Convention](#) will be held virtually on November 1 and 2, 2022. The agenda includes three scientific sessions: Defining Mechanisms that Link Sleep with Substance and Alcohol Use Disorders, Reprogramming Glia for Brain Recovery: A Potential Future SUD Therapy, and Understanding Human Neurodevelopment Amid a Broader Social Context.

NIAAA SCIENTIFIC MEETINGS AND RESOURCES

On May 10, 2022, NIAAA launched the **Healthcare Professional’s Core Resource on Alcohol (HPCR)**, an online educational resource that covers the basics of what every healthcare professional needs to know about alcohol—including the many ways that alcohol impact a patient’s health—and assists them with alcohol screening and intervention. The HPCR was developed with guidance from practicing physicians and clinical psychologists with busy clinicians in mind. It is important to note that the HPCR can help overcome barriers to care for patients with alcohol problems for providers who are not addiction specialists, including ways to counteract patient stigma. This new resource offers free continuing education credit for physicians, physician assistants, nurses, clinical, psychologists, and pharmacists.

On July 12 and 13, 2022, NIAAA held a hybrid workshop, [Clinical Trial Design for Integrated Care for Patients with Alcohol Use Disorder \(AUD\) and Alcohol Associated Liver Disease](#). The goal of the

workshop was to design the next generation of clinical studies to demonstrate that active treatment of alcohol misuse changes outcomes for compensated cirrhosis, decompensated cirrhosis, and alcohol-associated hepatitis. Dr. Svetlana Radaeva, along with Dr. Laura Nagy (Cleveland Clinic) and Dr. Mack Mitchell (University of Texas Southwestern), organized the workshop. Dr. Raye Litten presented “Lessons Learned: Specific Design for AUD Trials.” Dr. Lorenzo Leggio and Dr. Dan Falk presented “Endpoints Focused on Alcohol Use Disorder.”

NIAAA RESEARCH HIGHLIGHTS

LIPOPROTEIN Z, A HEPATOTOXIC LIPOPROTEIN, PREDICTS OUTCOME IN ALCOHOL-ASSOCIATED HEPATITIS

Significance: Lipoprotein Z (LP-Z) is an LDL-like particle found with a high frequency in patients with alcohol-associated liver disease. The current study aimed to define the diagnostic value of LP-Z in alcohol-associated hepatitis (AH), a condition with a high risk of death, and interrogate the biology behind its formation. The researchers found that impaired lipoprotein metabolism in AH leads to the accumulation of LP-Z in the circulation, which is hepatotoxic due to a high free cholesterol content, suggesting a pathogenic role of LP-Z in developing AH. Furthermore, the research team found that the [LP-Z]/[total LDL] ratio, named Z-index, could predict 90-day survival independent from the most commonly used prognostic scoring system (MELD) for disease prognosis, thus providing a new risk-stratification tool in the management of patients with AH and in clinical trials testing new interventions.

Abstract:

BACKGROUND AND AIMS: Lipoprotein Z (LP-Z) is an abnormal free cholesterol (FC)-enriched LDL-like particle discovered from patients with cholestatic liver disease. This study aims to define the diagnostic value of LP-Z in alcohol-associated hepatitis (AH) and interrogate the biology behind its formation.

APPROACH AND RESULTS: We measured serum levels of LP-Z using nuclear magnetic resonance spectroscopy, a well-established clinical assay. Serum levels of LP-Z were significantly elevated in four AH cohorts compared with control groups, including heavy drinkers and patients with cirrhosis. We defined a Z-index, calculated by the ratio of LP-Z to total apolipoprotein B-containing lipoproteins, representing the degree of deviation from normal VLDL metabolism. A high Z-index was associated with 90-day mortality independent from the Model for End-Stage Liver Disease (MELD) and provided added prognostic value. Both a Z-index ≤ 0.6 and a decline of Z-index by ≥ 0.1 in 2 weeks predicted 90-day survival. RNA-sequencing analyses of liver tissues demonstrated an inverse association in the expression of enzymes responsible for the extrahepatic conversion of VLDL to LDL and AH disease severity, which was further confirmed by the measurement of serum enzyme activity. To evaluate whether the FC in LP-Z could contribute to the pathogenesis of AH, we found significantly altered FC levels in liver explant of patients with AH. Furthermore, FC in reconstituted LP-Z particles caused direct toxicity to human hepatocytes in a concentration-dependent manner, supporting a pathogenic role of FC in LP-Z.

CONCLUSIONS: Impaired lipoprotein metabolism in AH leads to the accumulation of LP-Z in the circulation, which is hepatotoxic from excessive FC. A Z-index ≤ 0.6 predicts 90-day survival independent from conventional biomarkers for disease prognostication. (Hu K, Perez-Matos MC, Argemi J, Vilar-Gomez E, Shalaurova I, Bullitt E, Landeen L, Sugahara G, Deng H, Mathur K, Tran S, Cai H, He H, Yalcin Y, Vieira Barbosa J, Ventura-Cots M, Marx K, Gad AP, Niezen S, Izunza Barba S, Ang LH, Popov YV, Fricker Z, Lai M, Curry M, Afdhal N, Szabo G, Mukamal KJ, Sanyal AJ, Otvos JD, Malik R, Saito T, Connelly MA, Chalasani NP, Bataller R, Jiang ZG. Lipoprotein Z, a hepatotoxic lipoprotein, predicts outcome in alcohol-associated hepatitis. *Hepatology*.

2022 Apr;75(4):968-982. doi: 10.1002/hep.32203. Epub 2021 Dec 7. PMID: 34662439; PMCID: PMC9299888.)

DYNORPHIN/KAPPA OPIOID RECEPTOR ACTIVITY WITHIN THE EXTENDED AMYGDALA CONTRIBUTES TO STRESS-ENHANCED ALCOHOL DRINKING IN MICE

Significance: Alcohol use disorder (AUD) and stress-related disorders frequently co-occur and are thought to share overlapping neurobiological mechanisms. The development and validation of animal models to facilitate studies on the shared neurobiological mechanisms could lead to new treatments for people with both disorders. In the current study, researchers developed a novel animal model to examine the role of the dynorphin/kappa opioid receptor (DYN/KOR) system in stress-enhanced alcohol misuse. They found that stress led to a robust and reproducible increase in alcohol consumption in the mouse model that was mediated by DYN/KOR activity in the extended amygdala. Additional research is needed to determine whether DYN/KOR activity within the extended amygdala is associated with sex differences in stress-related alcohol misuse. This finding provides additional support for targeting the DYN/KOR system in comorbid AUD and stress-related disorders.

Abstract:

BACKGROUND: While there is high comorbidity of stress-related disorders and alcohol use disorder, few effective treatments are available and elucidating underlying neurobiological mechanisms has been hampered by a general lack of reliable animal models. Here, we use a novel mouse model demonstrating robust and reproducible stress-enhanced alcohol drinking to examine the role of dynorphin/kappa opioid receptor (DYN/KOR) activity within the extended amygdala in mediating this stress-alcohol interaction. **METHODS:** Mice received repeated weekly cycles of chronic intermittent ethanol exposure alternating with weekly drinking sessions ± forced swim stress exposure. Pdyn messenger RNA expression was measured in the central amygdala (CeA), and DYN-expressing CeA neurons were then targeted for chemogenetic inhibition. Finally, a KOR antagonist was microinjected into the CeA or bed nucleus of the stria terminalis to examine the role of KOR signaling in promoting stress-enhanced drinking. **RESULTS:** Stress (forced swim stress) selectively increased alcohol drinking in mice with a history of chronic intermittent ethanol exposure, and this was accompanied by elevated Pdyn messenger RNA levels in the CeA. Targeted chemogenetic silencing of DYN-expressing CeA neurons blocked stress-enhanced drinking, and KOR antagonism in the CeA or bed nucleus of the stria terminalis significantly reduced stress-induced elevated alcohol consumption without altering moderate intake in control mice. **CONCLUSIONS:** Using a novel and robust model of stress-enhanced alcohol drinking, a significant role for DYN/KOR activity within extended amygdala circuitry in mediating this effect was demonstrated, thereby providing further evidence that the DYN/KOR system may be a valuable target in the development of more effective treatments for individuals presenting with comorbidity of stress-related disorders and alcohol use disorder. (Haun HL, Lebonville CL, Solomon MG, Griffin WC, Lopez MF, Becker HC. Dynorphin/Kappa Opioid Receptor Activity Within the Extended Amygdala Contributes to Stress-Enhanced Alcohol Drinking in Mice. *Biol Psychiatry*. 2022 Jun 15;91(12):1019-1028. doi: 10.1016/j.biopsych.2022.01.002. Epub 2022 Jan 10. PMID: 35190188; PMCID: PMC9167153.)

The study was supported in part by the NIAAA Kirschstein-NRSA award F31AA027420.

TARGETED EPIGENOMIC EDITING AMELIORATES ADULT ANXIETY AND EXCESSIVE DRINKING AFTER ADOLESCENT ALCOHOL EXPOSURE

Significance: Previous research has demonstrated that adolescent alcohol exposure in rat models produces epigenetic modifications to the Arc synaptic activity response element (SARE) in the central nucleus of the amygdala (CeA). These modifications are associated with increased anxiety and alcohol consumption in adulthood. In the current study, NIAAA-supported researchers used CRISPR/dCas9 gene editing to examine the role of epigenetic changes at the Arc SARE in adult anxiety and drinking after adolescent alcohol exposure. They found that use of the dCas9 system to alter epigenetic modifications at the Arc SARE in the CeA bidirectionally modulated behavioral changes caused by adolescent alcohol exposure. Specifically, increasing histone acetylation at the Arc SARE led to reduced adult anxiety and excessive alcohol consumption while increasing histone methylation at the Arc SARE led to increased anxiety and alcohol consumption. These findings suggest novel treatment targets for AUD and comorbid anxiety.

Abstract:

Adolescent binge drinking is a major risk factor for psychiatric disorders later in life including alcohol use disorder. Adolescent alcohol exposure induces epigenetic reprogramming at the enhancer region of the activity-regulated cytoskeleton-associated protein (Arc) immediate-early gene, known as synaptic activity response element (SARE), and decreases Arc expression in the amygdala of both rodents and humans. The causal role of amygdalar epigenomic regulation at Arc SARE in adult anxiety and drinking after adolescent alcohol exposure is unknown. Here, we show that dCas9-P300 increases histone acetylation at the Arc SARE and normalizes deficits in Arc expression, leading to attenuation of adult anxiety and excessive alcohol drinking in a rat model of adolescent alcohol exposure. Conversely, dCas9-KRAB increases repressive histone methylation at the Arc SARE, decreases Arc expression, and produces anxiety and alcohol drinking in control rats. These results demonstrate that epigenomic editing in the amygdala can ameliorate adult psychopathology after adolescent alcohol exposure. (Bohnsack JP, Zhang H, Wandling GM, He D, Kyzar EJ, Lasek AW, Pandey SC. Targeted epigenomic editing ameliorates adult anxiety and excessive drinking after adolescent alcohol exposure. *Sci Adv.* 2022 May 6;8(18):eabn2748. doi: 10.1126/sciadv.abn2748. Epub 2022 May 4. PMID: 35507645; PMCID: PMC9067919.)

DEVELOPMENT AND PRELIMINARY EFFECTIVENESS OF A SMARTPHONE-BASED, JUST-IN-TIME ADAPTIVE INTERVENTION FOR ADULTS WITH ALCOHOL MISUSE WHO ARE EXPERIENCING HOMELESSNESS

Significance: Adults experiencing homelessness have much higher rates of alcohol misuse. This study investigates the development and preliminary effectiveness of a smartphone-based, just-in-time adaptive intervention to reduce alcohol misuse among this population. Over a 4-week period, individuals showed a decrease in all alcohol use outcomes and high levels of satisfaction with the intervention.

Abstract:

BACKGROUND: Adults experiencing homelessness have much higher rates of alcohol misuse than housed individuals. This study describes the development and preliminary effectiveness of a smartphone-based, just-in-time adaptive intervention (JITAI) to reduce alcohol use among adults experiencing homelessness. METHODS: We conducted a pilot trial (N = 41; mean age [SD] = 45.2 [11.5]; 19.5% women) of the Smart-T Alcohol JITAI where participants completed brief ecological momentary assessments (EMAs) each day, received personalized treatment messages following each EMA, and accessed on-demand intervention content for 4 weeks. The prediction algorithm and treatment messages were developed based on an independent but similar sample as part of the trial. We examined three

drinking outcomes: daily drinking (yes/no), drinks per day, and heavy episodic drinking, controlling for scores on the Alcohol Use Disorders Identification Test (AUDIT) at baseline, age, and sex using quadratic growth curve models. RESULTS: Over the 4-week period, participants showed a decline in all alcohol use outcomes. Participants also reported high levels of satisfaction with the JITAI. CONCLUSIONS: Use of the Smart-T Alcohol JITAI was well received and provided encouraging evidence that it may reduce any drinking, drinks per day, and heavy episodic drinking among adults experiencing homelessness. (Walters ST, Mun EY, Tan Z, Lunningham JM, Hébert ET, Oliver JA, Businelle MS. Development and preliminary effectiveness of a smartphone-based, just-in-time adaptive intervention for adults with alcohol misuse who are experiencing homelessness. *Alcohol Clin Exp Res*. 2022 Jul 23. doi: 10.1111/acer.14908. Epub ahead of print. PMID: 35869820.)

CONSTRUCTS DERIVED FROM THE ADDICTION CYCLE PREDICT ALCOHOL USE DISORDER TREATMENT OUTCOMES AND RECOVERY 3 YEARS FOLLOWING TREATMENT

Significance: The addiction cycle has been proposed as a heuristic framework for understanding the progression of AUD. The framework is based on dysregulation in three functional domains: incentive salience (reward drinking), negative emotional states (relief drinking), and executive function (loss of control). The goal of this study was to validate the functional domains of the addiction cycle framework using self-report measures from Project MATCH (Matching Alcoholism Treatments to Client Heterogeneity) and the Combined Pharmacotherapies and Behavioral Intervention (COMBINE) study. Project MATCH and COMBINE represent two of the largest multisite alcohol clinical trials ever conducted. The researchers found that negative emotional states and incentive salience were significantly associated with outcomes at 1 and 3 years post-treatment and that executive functioning predicted non-abstinent recovery at 3 years. The results support the utility of the addiction cycle domains in predicting AUD treatment outcomes and recovery. Future research is needed to further determine how well the addiction cycle domains can inform treatment planning and precision medicine.

Abstract:

OBJECTIVE: The addiction cycle has been proposed as a framework for understanding the progression of alcohol use disorder (AUD) in terms of psychological and biological domains, including reward drinking/incentive salience, relief drinking/negative emotionality, and loss of control/executive functioning impairment. To have utility in clinical practice, self-report measures of these domains that are applicable across sociodemographic groups and associated with clinical outcomes are needed. This study sought to validate domains from self-report measures and to test whether domains are measurement invariant across sociodemographic groups and associated with treatment outcomes. METHOD: Secondary analysis of individuals with AUD ($n = 3,092$) who participated in two alcohol clinical trials, Project Matching Alcohol Treatment to Client Heterogeneity (MATCH) and COMBINE. Factor analytic methods were used to derive addiction cycle domains at baseline. These domains were then examined as predictors of outcomes. RESULTS: Fifteen self-report items were used as indicators of the addiction cycle domains, with sociodemographic differences in measurement by sex, age, race, education, and AUD symptoms. Relief/negative emotionality and reward/incentive salience were significantly associated with outcomes at 1 and 3 years following treatment, and executive functioning also predicted nonabstinent recovery at 3 years. CONCLUSIONS: The results support the utility of domains relevant to the addiction cycle in predicting AUD treatment outcomes and recovery among individuals who sought treatment for AUD. The addiction cycle domains were more strongly associated with outcomes than other measures clinicians might use to predict outcomes (e.g., AUD symptoms). Future research should continue to develop and refine the items and test whether the addiction cycle domains can inform treatment planning. (Witkiewitz K, Stein ER, Votaw VR, Hallgren KA, Gibson BC, Boness CL, Pearson MR, Maisto SA. Constructs derived

from the addiction cycle predict alcohol use disorder treatment outcomes and recovery 3 years following treatment. *Psychol Addict Behav*. 2022 Aug 11. doi: 10.1037/adb0000871. Epub ahead of print. PMID: 35951419.)

PRENATAL ALCOHOL EXPOSURE CAN BE DETERMINED FROM BABY TEETH: PROOF OF CONCEPT

Significance: Fetal alcohol spectrum disorders (FASD) diagnosis is made most often in children at school age or later. In the majority of suspected cases, the strength of the diagnosis depends on evidence of prenatal alcohol exposure, which is often missing. This study broke new ground by developing a technology and, in two cases, demonstrating convincingly the presence of alcohol biomarkers in naturally shed baby teeth. This new approach will help to reduce uncertainty associated with current FASD diagnosis, which in turn will allow for early and appropriate treatment in affected children.

Abstract:

BACKGROUND: Prenatal alcohol exposure (PAE), leading to fetal alcohol spectrum disorders (FASD), is a serious public health issue in the United States and globally. Diagnosis of FASD is crucial in obtaining appropriate care, but it is not always possible when PAE cannot be documented. METHODS: Deciduous teeth from a child with known PAE and a child with known absence of PAE were analyzed using liquid chromatography-isotope dilution tandem mass spectrometry (LC-IDMS/MS) in a multiple-reaction monitoring mode for direct markers and LC-high resolution MS in positive and negative mode with hydrophilic interaction liquid chromatography and reverse-phase chromatography, respectively, for indirect markers. RESULTS: Direct markers of PAE (ethyl glucuronide and ethyl sulfate) were detected in prenatal and postnatal dentine from a case tooth but not from a control tooth. Indirect biomarker analysis indicated a dysregulation of amino acids and an increase in cholesterol sulfate in the case compared to the control tooth. CONCLUSIONS: This proof-of-concept study demonstrates for the first time that direct biomarkers of PAE are detectable and measurable in deciduous teeth which begin forming in utero and are typically naturally shed between 5 and 12 years of age. Further examination of these novel biomarkers may allow diagnosis of FASD where documentation of PAE is otherwise unavailable. Furthermore, because teeth grow incrementally, defined growth zones can be sampled allowing for identification of gestational timing of PAE to help better understand mechanisms underlying alcohol's disruption of perinatal development. (Montag AC, Chambers CD, Jones KL, Dassanayake PS, Andra SS, Petrick LM, Arora M, Austin C; Collaborative Initiative on Fetal Alcohol Spectrum Disorders (CIFASD). Prenatal alcohol exposure can be determined from baby teeth: Proof of concept. *Birth Defects Res*. 2022 Aug 15;114(14):797-804. doi: 10.1002/bdr2.2054. Epub 2022 Jun 10. PMID: 35686682; PMCID: PMC9378437.)

NIAAA COMMUNICATIONS AND PUBLIC LIAISON ACTIVITIES

News Media

Dr. Koob and other NIAAA scientists completed 35 media interviews from April 1 to July 31, 2022. Noteworthy media outlets include *The Wall Street Journal*, *The Guardian*, National Public Radio, NBC, ABC, *The Washington Post*, Fort Worth Star-Telegram, and NBC-Telemundo.

These interviews include a Northern Michigan CBS affiliate story about risky drinking on July the Fourth and a podcast interview on "The Gist" about the new NIAAA resource [*The Healthcare Professional's Core*](#)

[Resource on Alcohol](#). Additionally, NIAAA Deputy Clinical Director Dr. Nancy Diazgranados provided information about alcohol and health for Spanish-speaking audiences for two outlets: NBC-Telemundo and KIQI Radio in San Francisco. NIAAA also participated in a local television series, “Mental Health Moments,” that aired on DCW50, WDVM, and LocalDVM.com.

News releases, announcements, and blogs

- August 2022 – [Dr. Paule Joseph selected as the inaugural American Academy of Nursing Fellow at the National Academy of Medicine](#)
- June 2022 – [Deaths involving alcohol increased during the COVID-19 pandemic](#)
- May 2022 – [New NIAAA site helps clinicians navigate alcohol and patient health](#)
- April 2022 – [NIAAA scientists unveil new definition of recovery from AUD](#)

Major Activities and Events

- *Students Against Destructive Decisions (SADD) video challenge* – NIAAA sponsored the SADD video challenge, which encouraged student members to submit brief videos addressing underage drinking using information from NIAAA’s fact sheet on [Underage Drinking](#).
- *Harold Hughes Memorial Award to Dr. Carlo DiClemente* – On May 10, NIAAA presented the Hughes award to Dr. Carlo DiClemente, a professor emeritus of Psychology at the University of Maryland, in recognition of his contributions in translating alcohol research into practice and building bridges between the alcohol prevention, treatment, and policy-making communities.
- *American College of Obstetricians and Gynecologists (ACOG) FASD Expert Working Group Meeting* – On August 19, Dr. Bill Dunty and Dr. Tatiana Balachova presented on current efforts in FASD research and how ACOG can find synergy in this work.

Publications and Web Activities

NIAAA publications elicited about 915,000 pageviews, 19,000 downloads, and 37,000 print copies ordered. The most-viewed NIAAA publications were [Alcohol Facts and Statistics](#), the [Understanding Alcohol Use Disorder factsheet](#), and the [Understanding the Dangers of Alcohol Overdose factsheet](#). The most frequently downloaded publication was the [Understanding Alcohol Use Disorder factsheet](#). The most-ordered NIAAA publications were the [Rethinking Drinking: Alcohol and Your Health](#), [Make A Difference: Talk Your Child About Alcohol](#), and [Harmful Interactions: Mixing Alcohol with Medicines](#) booklets.

New Factsheets

- [Alcohol Metabolism](#)
- [Wernicke-Korsakoff Syndrome](#)
- [Alcohol and the Adolescent Brain](#)

Advances in Accessibility

- New translations of [Alcohol Metabolism](#), [The Cycle of Alcohol Addiction](#), [NIAAA Resources on Alcohol and the Brain](#), and [Alcohol Flush Reaction](#)
- Launch of a “NIAAA en español” topic for [email subscriptions](#), which has since gained more than 1,500 subscribers

Audience testing – To help develop appropriate messaging, NIAAA conducted a large-scale survey of the general public, college students, community partners, and health professionals to determine audiences’ understanding of key alcohol terms.

New topic landing pages – To revamp the [Alcohol’s Effects on Health](#) webpages for general audiences, NIAAA is organizing multiple resources into user-friendly topic pages. So far, these pages include [Alcohol-Induced Blackouts](#), [Alcohol Overdose](#), [Alcohol Use Disorder](#), and [Women and Alcohol](#), with more to come.

NIH homepage slides – The NIH main website has begun to feature a monthly rotator slide directing viewers to NIAAA resources.

Social Media Highlights

NIAAA’s Twitter account ([@NIAAAnews](#)) currently has more than 28,600 followers (a 1.5 percent increase since April 1), NIAAA’s Instagram account ([@NIAAAnews](#)) has over 2,500 followers (a 5 percent increase), and NIAAA’s Facebook ([@NIAAAgov](#)) has almost 1,400 followers (a 10 percent increase).

Recent highlights include an April 27, 2022, Twitter chat on treatment for alcohol use disorder, led by the American Society of Addiction Medicine for Alcohol Awareness Month. Other social media highlights include:

