

Physiology News

April 1-June 30 2025 Volume 8 Issue 2

Dear All,

By now many of you have enjoyed or are planning to enjoy vacations with your friends and family. I hope we fare well throughout the summer months and that hurricanes evade us.

As we've discussed over the past few months, we're in a period of real uncertainty regarding federal research funding priorities. With transitions underway at NIH and shifting signals about future directions, it feels difficult — and perhaps unwise — to try to chart a clear path forward right now. I know many of you share this feeling of ambiguity, and at times, even despair, as we actively seek guidance.

In searching for a way to describe this moment — something a bit more reflective, maybe even a little amusing — I turned to AI for inspiration. It offered a surprisingly fitting analogy: the **octopus**. Right now, our department feels a bit like this remarkable creature — intelligent, observant, and resourceful, yet currently camouflaged against the changing backdrop of the research environment.

I know for a fact that we are not inactive or asleep at the wheel. We are watching closely, staying flexible, and waiting for the right moment to reposition ourselves. Like the octopus, I'm confident that when the new ecosystem (or funding priority landscape) comes into focus, we will adapt — and move — swiftly and strategically.

It's hard not to have answers right now. But uncertainty is part of the scientific process, and so is vulnerability. I remain confident — as I hope you do — that once the signals become clearer, we will move forward with clarity and strength.

In the meantime, let's continue supporting one another, sharing what we learn, and keeping our collective antennae up. We've navigated ambiguity before, and together we will do so again. More importantly, do not forget that there is so much that we should appreciate, value, and enjoy!

Sincerely,

Patricia



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Editor, Liz Simon

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Awards

Kaitlin Couvillion won the 2025 Endocrinology & Metabolism Research Recognition Award, from the American Physiological Society.

Eden Gallegos won the 2025 Virendra Mahesh Endocrinology & Metabolism Award, from the American Physiological Society



Dr. Keishla Rodriguez Graciani won the 2025 Martin Frank Travel Award, from the American Physiological Society. She also won the 2025 Junior Investigator Meeting Award from the Research Society of Alcohol.

Grants

Dr. Scott Edwards received a Research Enhancement Program (REP) Bridge Grant Award from the School of Medicine for the project *SRP-001: A Non-Opioid and Non-Hepatotoxic Analgesic for the Treatment of Pain in the Context of Alcohol Use Disorder*.

Recognition

Dr. Lisa Harrison-Bernard won 2025 Outstanding Service in Community Engagement and Health Equity (photo attached; Jason D. Gardner, President Faculty Assembly, Lisa M. Harrison-Bernard, Richard DiCarlo, Dean of SOM):



Dr. Harrison Bernard is the Program Director of the LSUHSC-New Orleans Postbaccalaureate Research Education Program in Biomedical Sciences, and Professor of Physiology. Dr. Harrison Bernard trained 24 postbaccalaureate students for successful enrollment, retention, and completion of a PhD degree in the biomedical sciences. She has spearheaded and led various equity and anti-discrimination initiatives, including academic programs, workshops, and curriculum development aimed at improving health equity and has co-authored publications related to health equity. She has made significant and lasting contributions to the SOM's Community Engagement and Health Equity efforts, advancing the SOM's mission of fostering equitable inclusion. Additionally, she has contributed to development of innovative equity curricula and training workshops for professional development. Dr. Harrison-Bernard is deeply committed to enhancing health equity within the community and at LSUHSC.

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Dr. Scott Edwards. Vice Chair for Training and Mentoring did an outstanding job leading the NIH/NIAAA T35 Medical Student Alcohol Summer Research Internship. With the generous support of LSU Health New Orleans and the School of Medicine, the program kicked off June 1 with seven new fellows: John Gualdo, Patrick Haydell, Tanner Hoole, Anna Leyrer, Zhaoyi Li, Sierra Runnels, and Maggie Struble. They will present their alcohol research later this year at Medical Student Research Day.

Dr. Stefany Primeaux's work was highlighted in The Physiologist May 2025 Issue. "High fat-fed female rats had higher fat taste receptor and gene expression associated with eating more. Taste may contribute to nutritional and metabolic health."



Professional services

Eden Gallegos was elected the American Physician Scientist Association (APSA) National Mentorship Chair 2025-2026.

Dr. Jason Gardner was elected for another term to the SOM Faculty Assembly.

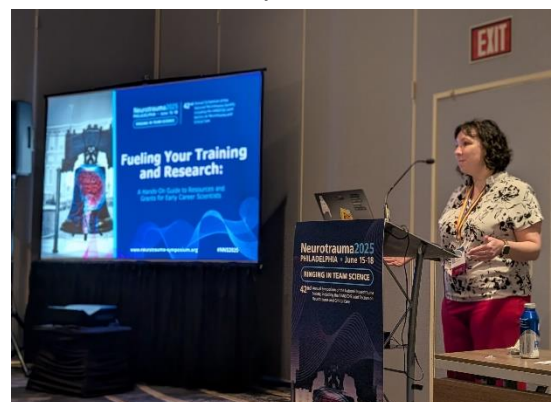
Dr. Lisa Harrison Bernard is a Member of External Promotions Committee of Pennington Biomedical Research Center. She was also a Grant Reviewer of Howard Hughes Medical

Institute Gilliam Fellowship Review Board and the Chan Zuckerberg Initiative's Science Diversity Leadership Award. In addition, she was a reviewer of the American Heart Association (AHA) Scientific Meeting Abstracts.

Dr. Lisa Harrison Bernard presented a Workshop at the American Chemical Society Spring 2025 Scientific Meeting "Mentor Training for Graduate Students and Postdoctoral Fellows" held in San Diego, CA

Dr. Lisa Harrison Bernard organized the LSUHSC-NO Postbaccalaureate Research Education Program in the Biomedical Sciences was held on May 22 with Keynote Speaker Dr. Lea Michel, Rochester Institute of Technology who gave a talk titled "Triggering Toxicity: How Antibiotics Enhance the Release of Extracellular Vesicles from Escherichia Coli". Dr. Harrison-Bernard presented a talk titled "PREP Accomplishments."

Dr. Sydney Vita chaired a workshop entitled "Fueling Your Training and Research: Fueling Your Training and Research: A Hands-On Guide to Resources and Grants for Early Career Scientists" at the National Neurotrauma Society Conference in Philadelphia, PA.



Publications

Clum G, Madkour AS, Judson J, Tokarz S, Smith E, Stojanovski K, Ferguson T, Welsh D, **Molina P**, Theall K. Pathways from violence exposure to

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medication non-adherence: exploration of mental health symptoms and coping in people living with HIV in the U.S. South. *AIDS Care*. 2025 doi: 10.1080/09540121.2024.2445202.

Deville P, Dennis J, Warren O, Fontenot C, Messa G, Carter JE, Phelan HA, Schoen J, Hobden JA, **Siggins RW, McTernan PM, Molina PE, Smith AA.J.** A Pilot Study on the Impact of Smoking on Adipose Derived Stem Cell Function in Burn Patients. *Burn Care Res*. 2025. doi: 10.1093/jbcr/iraf005.

Ferguson TF, Levitt DE, **Simon L, Molina PE, Primeaux SD.** Alcohol misuse and health-related behaviors among people with HIV during the COVID-19 stay-at-home directive: an ALIVE-Ex sub-study. *Alcohol Alcohol*. 2025 doi: 10.1093/alcalc/agaf019.

Fitzpatrick-Schmidt T, Dasa V, Leonardi C, **Ferguson TF,** Welsh DA, **Molina PE,** Ronis MJJ, **Edwards S.** Intersection of Alcohol Use, Pain Symptoms, and Negative Affect in Total Knee Arthroplasty Patients and People with HIV. *The Journal of Pain* 32:105446.

Fitzpatrick-Schmidt T, Oral E, Welsh DA, **Molina PE, Ferguson TF, Edwards S.** Recent Alcohol Use Influences Associations Between Cortisol Levels and Negative Affect: The New Orleans Alcohol Use in HIV Study. *AIDS and Behavior* *In press*.

Gallivan, KM, Ondrak, KS, Danos, DM, Luo, M, Taylor, CM, Nguyen, AW, Meyer, LE, **Byerley, AM,** Chatterjee, S, Adamec, J, Byerley, LO. Dietary Protein's Effect on the Gut Microbiome and Its Metabolites: Protocol Description and Virtual Recruitment Efforts for a Remote Randomized Controlled Trial. Accepted. *Gut Microbiome*. 2025.

Gill A, Clum G, **Molina P,** Welsh D, Ferguson T, Theall KP Life Course Stressors, Latent Coping Strategies, Alcohol Use, and Adherence among People with HIV. *AIDS Behav*. 2025 doi: 10.1007/s10461-024-04541-6.

Harrison-Bernard LM, Edwards S, Siggins RW, Primeaux SD. Evaluating the Effectiveness of an Experimental Design & Analysis Course for First-Year Medical Students. *Medical Science Educator* 2025 39:100741.

Tanvir, Md Farhan; yang, hao; **Gardner, Jason D.;** Jiang, Huabei. Investigating the Impact of Prenatal Alcohol Exposure on Fetal Cardiac Development Using Photoacoustic Tomography; *Journal of Biophotonics*, 2025

Xiao X, Schut GJ, Feng X, **McTernan PM,** Haja DK, Lanzilotta WN, Adams MWW, Li H. Structural insights into the biotechnologically relevant reversible NADPH-oxidizing NiFe-hydrogenase from *P.furiosus*. *Structure*. 2025 doi: 10.1016/j.str.2025.05.017.

Presentations

Dr. Scott Edwards presented a talk titled *Influence of Body Mass Index on Alcohol Use-Pain Interactions in People with HIV* At the 48th RSA Scientific Meeting/ISBRA Congress. June 21-25, 2025. New Orleans, LA. **Drs. Liz Simon and Patricia Molina** chaired the Symposium.

Dr. Scott Edwards and Dr. Leslie Birke participated in a panel discussion on *Navigating the Relationship between Researcher and Research Veterinarian* at the College on the Problems of Drug Dependence (CPDD) conference in June.

Eden Gallegos gave a talk entitled *Alcohol and Metabolic Stressors Synergistically Increase Triglyceride Content and Oxidative Stress in a MetALD Spheroid Model*. At the American Physiology Summit, Baltimore, MA. April 2025.

Eden Gallegos gave a talk entitled *Interaction of alcohol and diet on bioenergetic adaptations in HIV; insights from bidirectional translational longitudinal studies*. At the 48th RSA Scientific Meeting/ISBRA Congress. June 21-25, 2025. New Orleans, LA

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Dr. Keishla M. Rodríguez-Graciani gave a talk entitled *Skeletal Muscle Mitochondrial Resilience: Impact of Exercise on People with HIV and Alcohol Misuse*. At the 48th RSA Scientific Meeting/ISBRA Congress. June 21-25, 2025. New Orleans, LA

Dr. Liz Simon gave a talk entitled *Alcohol and calorie dense diet: implications on metabolism in HIV/SIV*. At the Research on Alcohol and HIV, RSA Satellite June 2025

Posters

McTernan, P.M., Siggins, R.W., Lin, H., Molina, P.E., and Welsh, D.A. At-Risk Alcohol Use Increases Circulating Activated Senescent CD8+ T Cells and Caspase 1 Activation in People With HIV. At the 48th RSA Scientific Meeting/ISBRA Congress. June 21-25, 2025. New Orleans, LA

Byerley, LO, Ondrak, KS, Danos, DM, Taylor, CM, Chatterjee, S, Gallivan, KM. The Impact of Increasing Dietary Protein Intake on the Gut Microbiome. 21st Annual Robert D'Ambrosia Musculoskeletal Research Day. LSUHSC Orthopedic Department. New Orleans, LA. June 21, 2025.

Kaitlin Couvillion, Eden Gallegos, Patrick McTernan, Robert Siggins, David Welsh, Patricia Molina, Liz Simon, Interferon-gamma and Alcohol Produce Cellular Injury in a Hepatocyte Spheroid Model, American Physiology Summit 2025, April 24-27, Baltimore, MD.

Kaitlin Couvillion, Eden Gallegos, Patrick McTernan, Robert Siggins, David Welsh, Patricia Molina, Liz Simon, Interaction of Interferon Gamma and Alcohol to Alter Cell Death Pathways in a Hepatocyte Spheroid Model, 48th RSA Scientific Meeting/ISBRA Congress. June 21-25, 2025. New Orleans, LA.

Keishla M. Rodríguez-Graciani, Liz Simon, Patricia Molina. Electrical Pulse Stimulation and

N-Acetylcysteine Protect Against Oxidative Stress-Induced Mitochondrial Dysfunction in Muscle Cells. American Physiology Summit 2025, April 24-27, Baltimore, MD

Notable Events



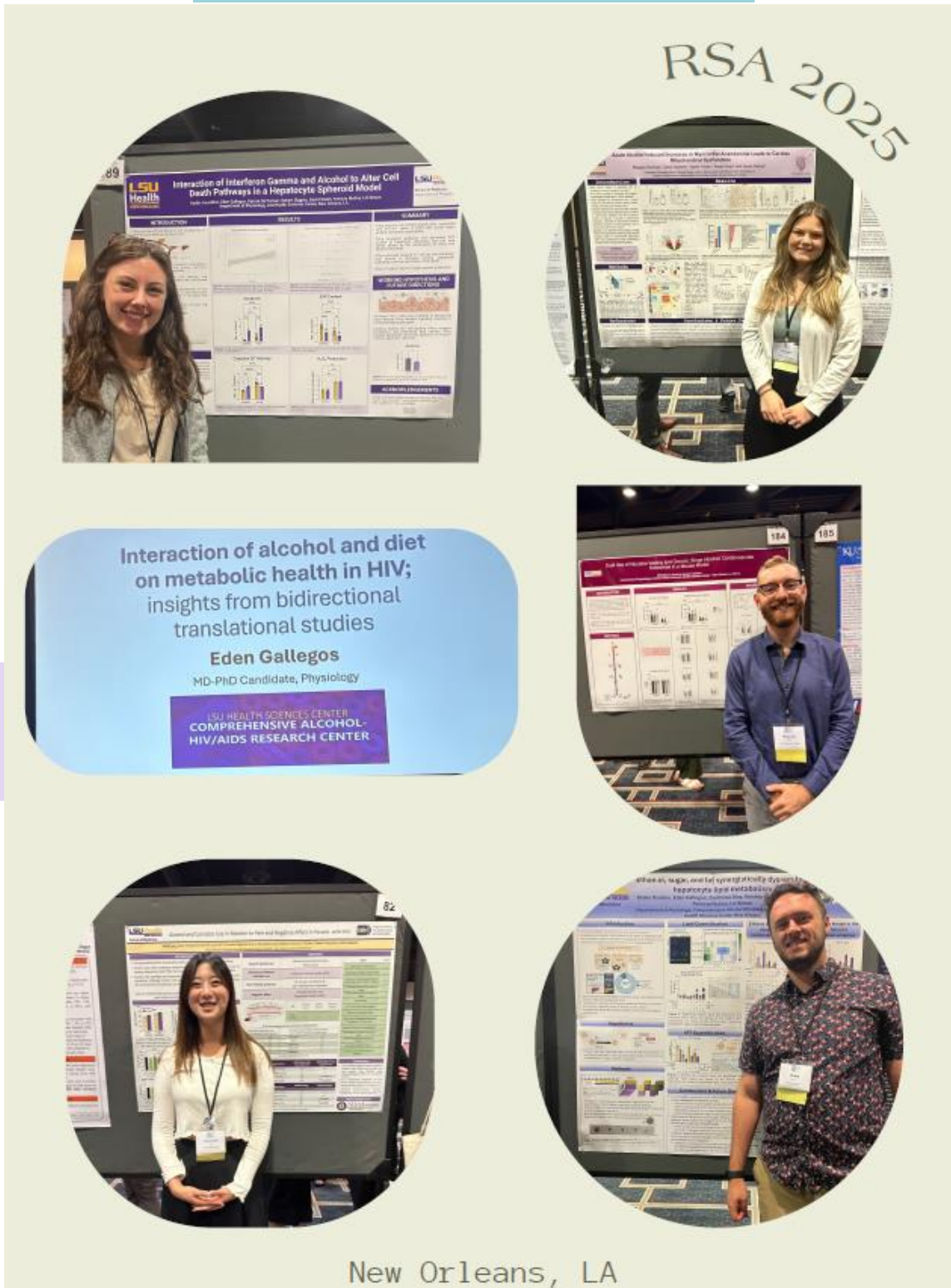
Edgar Allen Poe's untimely death at the age of 40 after being found in a state of delirium outside a Baltimore tavern remains a mystery. **Trainees from the Department of Physiology** have reignited the investigation and recently visited Baltimore to present their research on the biomedical consequences of alcohol use at the American Physiology Summit.



Janos Palocz, Danielle Levitt, and Sydney Vita introduced a group of NIAAA researchers to gator sandwiches during RSA.

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Physiology trainees made the Department proud with their outstanding presentations, and posters at the 48th RSA Scientific Meeting/ISBRA Congress. June 21-25, 2025. New Orleans, LA

Featured from the top left are **Katilin Couvillion, Meagan Donovan, Nicholas Harris, Stephanie Lee, and Drake Darden.**

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Stephanie Lee and Nicholas Harris helped orchestrate the Third Annual MD/PhD Program Retreat (Beyond the White Coat: Cultivating Purpose in Medicine, Science, and Self) featuring wellness and productivity talks from esteemed LSU Health New Orleans faculty and an immersive yoga experience from resident shaman **Kaitlin Couvillion**.

LSU Health