



Physiology News

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Dear all,

While we may not feel like it, everything points to the end of summer and beginning of fall. We have been relatively lucky escaping the wrath of nature so far. I hope and pray that we continue on that trend until hurricane season is over. I shared with you the AI generated word cloud from the responses to the survey we deployed before the State of the Department Address. I wanted to share it here to give you time to digest the message. Remember the question I asked was “what is your why?”

I admit it is easy to forget what drives us to be part of this institution, department, and overall career path. We all go through ups and downs frequently fluctuating according to our success rate as measured by funding, publications, promotions, and other awards. Unfortunately, those are few considering the number of days in the year when we just do our job without an immediate tangible gratification. Therein lies the importance of knowing why we do what we do. That is also the reason that without an inner desire and commitment, it becomes hard to remain positive and engaged. So below, you see who we are and underneath, why we are here!

On a personal note, I am sometimes surprised that in my constant search for joy, satisfaction, pride, and fulfillment I find myself looking at unlikely sources of inspiration. Sometimes it is a book, other times it is a moment of wonder and appreciation of nature, and others it is in a movie. During my recent flight, I watched the movie About Time, and I was moved by the teaching of a father to his son about life. He tells him to live each day twice to be truly happy: first, with all the everyday tensions and worries, but the second time noticing how sweet the world can be. So, the first is you live your day and go through the motions required for work, family, friends, etc. The second part is to live your day noticing and appreciating all the wonders of life. Like it is a day that will never come again. Which if you think of it, is how it is! Each day is a gift. One where our loved ones, our colleagues, our students, and staff gift us their presence. Each day with either bright shining sun, or refreshing rain. Each day with hidden moments where we can choose to smile and capture the little joys and appreciate that we have been blessed with living that moment. So, a silly movie that touched me enough to want to share my thoughts with you.

As we welcome that time of year when we prepare for so many fun celebrations, from Halloween to Thanksgiving and Christmas, I invite you to try to notice how sweet the world can be and to consider putting your two cents into making it better for someone else. I promise to do the same!



Sincerely

Patricia

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About the author- **Deja Holmes** is a Postbaccalaureate Research Education Program (PREP) in Biomedical Sciences Scholar. Deja wants to pursue a career in academic biomedical research. Deja is a poet and an avid painter. Deja works in the Simon lab and her research focus is on the mechanisms of muscle dysfunction in cerebral palsy.

The erlenmeyer flask

Fell facedown

With a splash

in the wake of

the mistake he

made trying so

hard to multitask.

With no stars;

no significance on

graphs filled with bars,

she can only scour

clusters of inconclusive

data between looking over

notes from class seminars.

All scientists know very well

when one thing goes wrong,

all else seems to follow its spell.

Maybe a failed titration here, perhaps

a nonspecific Western band there...

It is the small, and yet important errors

that cause the issues on which we dwell.

These bad days are not uncommon at all,

They can and do happen to even the best of us.

We find our tired eyes glaring out at the urban sprawl

through the dusty, blinded windows of our sterile labs.

These are the days that we take a few extra minutes

to breathe deep and remember why we've come so far.

In the in bathroom mirror, or maybe in the far right stall,

these moments transform the restroom into a portal to the past.

We reconnect with our former selves & remember why we do it all.

we recall the surmounted obstacles, and the skills we have amassed

We look back to when we first completed our own research publication

and relive how giddy we were to submit. We reminisce about the pride on

our faces when we won our first grant, and know that it won't be the last

We are reminded of all the wonderful aspects of the career we love

despite the many failed assay kits we may have had to dispose of.

We accept the flaws and imperfections of the complex field that is science,

analyze what is left of our experiment, and simply begin to put on our gloves.



Trainee corner

Kaitlin Couvillion qualified to pursue a PhD in Physiology. Kaitlin did excellent in both written and oral qualifying exams.

The NIH/NIAAA T35 Medical Student Alcohol Research Internship Summer Program was completed in July. T35 alum **Drew Bookman** (Edwards Lab) joined the School of Medicine Honors Program and is continuing her research with **Taylor Fitzpatrick-Schmidt** into associations between PTSD and alcohol use in our NIH/NIAAA Comprehensive Alcohol-HIV/AIDS Research Center.

T35 alumni **Drake Darden** joined the School of Medicine Honors Program and is continuing research with **Eden Gallegos** on alcohol and diet induced hepatocyte injury.

Recognition

Taylor Fitzpatrick-Schmidt received the 2024 Michael G. Levitzky Outstanding Teaching Award from the Department of Physiology.



Carly Pigg, CRA, CPRA - Fiscal Analyst Office of the Dean, School of Medicine was voted the 2024 Light of Physiology Awardee. The award identifies individuals outside of the department of physiology who make major contributions to the success of our department

Grants

Xavier R. Chapa-Dubocq received a notice of award for his NIH/NIAAA NRSA Postdoctoral Fellowship titled *Alcohol impact on traumatic brain injury: focus on mitochondrial alterations* (F32AA031902)

Stephanie Lee received a notice of award for her NIH/NIAAA NRSA Predoctoral Fellowship titled *Alcohol-Cannabinoid System Interactions in the Context of Pain and AUD* (F30AA031900).

Keishla M. Rodriguez-Graciani received her NIH/NIAAA NRSA Postdoctoral Fellowship on *Alcohol-mediated mitochondrial adaptations in skeletal muscle: role of Sirtuin 1* (F32AA031901).

Professional services

Jason Gardner was appointed as a standing member of the NIH/NIAAA AA-1 Study Section. The term is for 3 years.

Publications

Barattini AE, Gilpin NW, & Pahng AR (In Press). Chronic inflammatory pain reduces fentanyl intake during early acquisition of fentanyl self-administration, but does not change motivation to take fentanyl in male and female rats. *Pharmacology Biochemistry and Behavior*.

Bourgeois BL, Gallegos EM, Levitt DE, Bergeaux PJ, Molina PE, Simon L. Extracellular vesicle miR-206 improves chronic binge alcohol mediated decreased myoblast differentiation in SIV-infected female macaques. *American Journal of Physiology Cell Physiology*. 2024 doi: 10.1152/ajpcell.00290.2024.

Cunningham KC, Smith DR, Villageliú DN, Ellis CM, Ramer-Tait AE, Price JD, Wyatt TA, Knoell DL, Samuelson MM, **Molina PE**, Welsh DA, Samuelson DR. Human alcohol-microbiota mice have increased susceptibility to bacterial pneumonia. *Cells*. 2023 13;12(18):2267. doi: 10.3390/cells12182267.

Gallegos E, Simon L, Molina PE. Chronic binge alcohol mediated hepatic metabolic adaptations in SIV-infected female rhesus macaques. *Alcohol Alcohol*. 21;59(5). Doi. 10.1093/alcalc/aga060.

Harrison-Bernard LM, Raji L, Runxia T, Jaimes E. Genetically conditioned interaction among microRNA-155, alpha-klotho, and intra-renal RAS: Link to CKD progression. *Physiological Reports*, 2024, *In Press*

Souza-Smith FM, Molina PE, Maiya R Chronic alcohol feeding alters lymph and plasma proteome in a rodent model. *Life Sciences*. 2023 15; 327:121818. doi: 10.1016/j.lfs.2023.121818

Weaver KD, Simon L, Molina PE, Souza-Smith. The Role of Lymph-Adipose Crosstalk in Alcohol-Induced Perilymphatic Adipose Tissue Dysfunction *International Journal of Molecular Sciences*. 2024, 25(19), 10811; 10.3390/ijms251910811.

Wilson TE, **Harrison-Bernard LM.** A Primer: Peer review process for advances in physiology education. *Advances in Physiology Education*. doi: 10.1152/advan.00127.2024.



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Presentations

Scott Edwards presented a talk titled “*Substance Use Disorders & Treatment Considerations for People with HIV*” to the School of Dentistry General Practice Residency Program.

Lisa Harrison Bernard organized and presented at the Professional Development Workshop: *Recognizing and Mitigating Microaggressions for Physician Assistant Students*.

Patricia Molina presented talks titled “*Role of alcohol history and diet in development of comorbidities in the NOAH cohort of patients living with HIV*” and “*Findings from bidirectional translational studies on alcohol-induced alterations in the gut-liver-brain axis*” at the 3rd World Congress on Alcohol and Addictions, Melbourne Australia.

Zaidmara Diaz, MD/MPH Candidate and student worker in Physiology made her debut at National Hispanic Society Network (NHSN) Annual Meeting with her oral presentation on: *Differential Effect of Chronic Binge Alcohol Administration on Glycolytic Enzymes in Skeletal Muscle of SIV-Infected Female Macaques*. The same was presented as a poster. October 2024.

Xavier R. Chapa-Dubocq, PhD, presented at NHSN “*Post Traumatic Brain Injury Alcohol Accentuates Neurobehavioral Outcomes; Potential Role of Altered Bioenergetics in the Prefrontal Cortex.*” The same was presented as a poster.

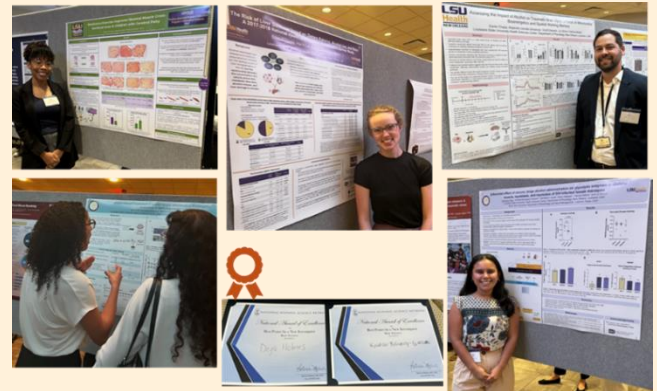


Posters

Eden Gallegos, MD/PhD student, presented a poster at NHSN “*The risk of liver steatosis based on dietary patterns, alcohol use, and race: a 2017-2018 National Health and Nutrition Examination Survey*”.

Keishla M. Rodríguez-Graciani, PhD, won best basic sciences award for her poster presentation at NHSN “*Alcohol-Induced Impairment of Skeletal Muscle Mitochondrial Bioenergetics: implication of SIRT1 Regulation*”.

Deja Holmes, PREP Scholar, won best basic sciences award for her poster presentation at NHSN 2024 “*Resistance exercise improves skeletal muscle cross sectional area in children with cerebral palsy*”.



Notable Events

Amanda Phang welcomed Liam Thomas Pahng on 7-23-24.



The Mental Hygienists Fantasy Football League began its seventh season. While several teams have been plagued by injuries, the Catecholamine Catchers (**Dr. Brianna Bourgeois**) and Fast Twitches (**Dr. Danielle Levitt**) have both started the season with 4-0 record.

Data scientist and NIH/NIAAA T32 predoctoral fellow **John Lammons** won the Department of Physiology’s Summer Physiolympics Pool. Special acknowledgement to silver medalist **Dr. Brianna Bourgeois** and bronze medalist **Dr. Jay Mussell**.

Taylor Fitzpatrick-Schmidt and **Meagan Donovan** represented the Alcohol & Drug Abuse Center of Excellence at Xavier Recovery Day in September by sharing information, distributing fentanyl test kits, building collaborative networks, and recruiting future trainees.