

Physiology News

January – April 2022 Volume 5 Issue 1

A Message from the Chair

Patricia Molina, MD, PhD

As I write this, I can't help but feel the excitement of the times. Spring is in the air! After lockdown, hurricanes, tornadoes, and fear of COVID making a comeback, we are finally getting to a point where we can see the light at the other side. Many of us just returned from Experimental Biology in Philadelphia. While the weather was a reminder of how blessed we are in having such short periods of inclement weather to deal with, being there was also a reminder of how much fun our scientific lives can be. Catching up with so many colleagues after three years, sitting through stimulating and fascinating scientific presentations, listening to what others in our fields are doing was a boost for my spirit and I sincerely hope it did the same for all who attended. I can't begin to express the pride and sense of accomplishment that overwhelmed me as I watched our trainees perform at the conference. Multiple signals that what we (collectively; faculty, trainees, and staff) are doing is great were reflected in their polished presentations, active engagement with new colleagues, section awards, and their faces beaming with pride. I must also recognize that many of our faculty attending the meeting made an extra effort to be there for trainee presentations and encourage and support them as many of them faced their very first public speaking engagement in this setting. Clearly, I am still basking in the feeling of pride and accomplishment I was left with after the meeting.

Back in our Penthouse, the progress and professional evolution continues. We have had Dissertation Defenses, Qualifying and Preliminary Exams, with more still upcoming in the next couple of months. I have never believed that our program is easy. It is challenging and rigorous, and its results can be seen in our trainee success. For so many of you that do not hear these words frequently enough; I hereby declare that I am proud of you, I appreciate your efforts, I believe in your potential, I am here to support you, to encourage you, to guide you, and to coach and push you when needed. This goes not only for our trainees, but for Faculty and Staff as well.



As an orchestra alternates between string and wind instruments creating an enchanting piece. We must try to recognize when we need to further support or provide a shoulder to those that are going through a rough patch. We all have them. We have all been vulnerable in more ways than one. Let's work to develop the mindfulness to be more empathetic, caring, and supportive as we work to regain our full strengths. We also need to be cognizant of when we need to take a break or a step back to re-energize, rest, and regroup. Only taking care of our wellbeing can we give ourselves to our work in an effective way.

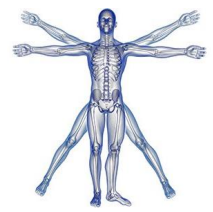
We have much to be proud of. We have much to work for and strive to improve. Every one of you is an important member of this department. Every one of your talents, efforts, and actions impacts on the collective wellbeing and strength of our department. I ask that you let the beauty of nature, the awakening we are witnessing as we welcome Spring, and the sense of accomplishment invigorate you as we shake off the last remaining cobwebs we grew during the pandemic.

With my best wishes,

Patricia



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Editor: Liz Simon

Letter from the outgoing editor

Danielle Levitt-Budnar, PhD

It is bittersweet to be writing this featured story as the outgoing editor of *Physiology News*. Over the past four years, I have had the opportunity to compile accomplishments and tidbits from the lives of the members of our department. Not only has this newsletter contained reports of the many publications, grants, and talks that demonstrate our achievements in research; it has contained demonstrations of generosity and of community, celebrated new births, and paid tribute to loved ones lost, yielded perspectives from our colleagues, and showcased important events in our lives outside the lab. Reading the final product has brought me a quarterly dose of joy and pride during a time that has been trying for each of us. I hope it has done the same for you.

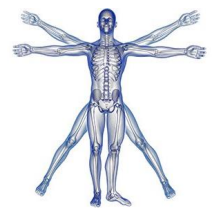
Dave Tate, someone I look up to in the powerlifting community, lives by the philosophy of “live, learn, pass on”. By this, he means that as we go through life, we gain experience and wisdom, and none of us could be where we are without help along the way. We have built on the knowledge of those who came before us, and as such, it is our duty to pass on what we have learned to help others go even further. This is true in powerlifting, and it is foundational in science. Passing the torch to the new editor, Dr. Simon, means that I am wrapping up a chapter in my academic life and preparing to set the stage for the next one.

In reflecting on my postdoctoral experience, I keep thinking about Dave Tate’s motto and realize that what I have learned can be valuable to pass on to others embarking on, or mentoring someone through, their postdoctoral journey. This learning goes well beyond the bench. While it is impractical to document everything in this newsletter, I am highlighting a few key takeaways in hopes that they help someone else.

- 1) **Embrace failure.** None of us became scientists because we love failing, but failure is a part of science. No, I’m not talking about failing classes because you didn’t feel like studying or failing to maintain commitments because you forgot to put them on your calendar. What I mean is that it is okay – and necessary – to try hard things and not have them go well the first time (or even after several tries). Take that challenging course, try that new tricky methodology. You will mess up sometimes. The important part is to learn from failures, to use them to understand our work even better, and from this, we grow. By the end of my PhD, I had become pretty good at having something go wrong, being upset, then making an action plan and trying again until I worked the problem out. As I entered my postdoc, I thought to myself “I have a solid scientific background, so working through issues would be pretty easy... right? I’ll be able to work through any issue quickly even though I was shifting my scientific focus and learning brand new skills... right? I can come in and nail that presentation on the first go, right?” Needless to say, that isn’t how things went, and part of that is because I chose a postdoc experience that was challenging and required me to try new things. I had to change the way I approached presentations to meet different



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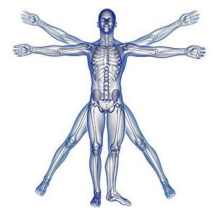


expectations. I didn't always succeed at first (heck, I'd be suspicious if I did), but I learned from each failure. For that I am grateful.

- 2) **Get comfortable being uncomfortable.** This will mean different things for different people, but for me, networking is my uncomfortable skill that I had to get comfortable doing. Surprise! I'm an introvert who cringes and panics a little bit each time I anticipate meeting new people. Settings like conferences are super uncomfortable for me. This usually surprises people because I am outgoing and have developed the skills to be able to put myself out there and network, and I like to think it looks natural by this point. When I first started going to conferences, I would stick only with the group of people I know and not really talk to others unless introduced. I soon realized that I was missing key opportunities to get to know other scientists with whom I happened to share overlapping interests inside and outside the lab, and the only way I'd be able to make connections was by getting out of my comfort zone. I began by tagging along with my PI and introducing myself to others and making an effort to talk at poster presentations. Especially during my postdoc, I began volunteering for different professional service roles which provided an additional avenue to get to know people, among other things. Now, even though it isn't always *comfortable*, I feel *confident* starting conversations with people at all career levels and thus have built my scientific network more broadly than I could have imagined when I started grad school 9 years ago. I still have to respect my need for peace and quiet after a lot of social interaction, but that no longer holds me back from putting myself out there in the first place.
- 3) **Pay attention to mentoring styles and mentoring needs.** I have had the opportunity to practice mentoring throughout my time as a postdoc, and that has been helpful when thinking about taking on my own future master's and PhD students. This sounds obvious, but it is helpful to pay attention to the different mentoring styles we come across as trainees. Those styles likely differ based on the individual mentee's needs, and also change over time as a mentee progresses. Some mentors are overall more hands-on or hands-off. Some have more formal interactions while others are more casual, and many have some combination of the two. As I consider how I will begin my mentor-mentee relationships, I look to my own mentors, to those who I've seen mentor, and to stellar mentors who have discussed their strategies, and try to develop my own style. I plan to intentionally implement structure into those relationships while carefully considering each mentee's goals and needs. Without the focus on mentorship here at LSUHSC, I don't know that I would have put as much thought into this extremely important aspect of being a future PI.
- 4) **Strike a balance between not passing up opportunities yet maintaining focus.** This one is tough, and something that I still have to work on. Someone wise told me not to say "no" to anything early in my career, and I sort of took that and ran with it. I'm glad I did because that has opened the door to new connections and opportunities; however, certain things can be a time sink where the opportunity cost ends up being quite high. The tough part is telling the difference. Having someone to talk to, whether a peer or mentor, about different opportunities is the best advice I can give as to when to say no.
- 5) **Realize that work-life balance is long-term.** Our work never does end, so it is up to us to choose when to actually end each day. During certain times (e.g., near a grant deadline or during a big experiment), we may have to pull some ridiculously long days to get things done. However, this is not sustainable long-term. Sometimes, we go through things that require more attention outside of work and are more important than working on that data analysis late into the night. I've gone through a couple of tough losses during my time here at LSUHSC, and it has meant the world to me that my mentors were supportive of me stepping away for a few days to take care of family matters. Even when things aren't so extreme, it is important to take advantage of periods with less urgent workload, take time to take care of other parts of our lives outside of work, and remember that the work will still be waiting for us the next day. That way, we are more fresh and ready to confront those more intense periods in a productive way.



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My postdoctoral period here at LSUHSC has been scientifically and personally productive. Some of the people that began as colleagues are now dear friends, and I've built scientific relationships that will outlive my time at the physical institution. I cannot thank my mentors enough for the experience I've had, and I am grateful for all who have become unofficial mentors as well. I hope that some of my experience will be useful to others. The opportunity to develop this newsletter has allowed me to have a small insight into your worlds, even if I do not see you on a regular basis. As I pass the torch on to Dr. Simon, I know that this newsletter is in good hands and I'm excited to see it continue on!

Thank you for trusting me with your news since *Physiology News* volume 1 issue 1!

Danielle

Graduate Student Milestones

Dr. Nicholas Fried successfully defended his PhD dissertation. Congratulations to Dr. Fried, and mentor Dr. Gardner.

Jessi Cucinello-Ragland successfully completed the Preliminary Exam.

Recognition

Dr. Lisa M. Harrison-Bernard was recognized as the Tulane Medical School Department of Physiology Distinguished Alumna. She presented on "Building a Postbaccalaureate Research Program in the Biomedical Sciences". (pictured is Drs. Harrison-Bernard and Gabriel Navar, Chair of the Department of Physiology).



New Faces



Amanda Nadeau is finishing up a bachelor's degree in Biology at the University of New Orleans. She joined the CARC team as a student worker assisting with non-human primate and

analytical lab activities.

Publications

Belmonte, KCD, Holmgren E.B., Wills T.A., **Gidday J.M.** (2022). Epigenetic conditioning induces intergenerational resilience to dementia in a mouse model of vascular cognitive impairment. *Alzheimer's & Dementia*. doi: 10.1002/alz.12616.

Boolani A, Gallivan KM, Ondrak KS, Christopher CJ, Castro HF, Campagna SR, Taylor CM, Luo M, Dowd SE, Smith ML, **Byerley LO** (2022). Trait Energy and Fatigue May Be Connected to Gut Bacteria among Young Physically Active Adults: An Exploratory Study. *Nutrients*. 14(3):466. doi.org/10.3390/nu14030466.

Byerley LO, Gallivan KM, Christopher CJ, Taylor CM, Luo M, Dowd SE, Davis GM, Castro HF, Campagna SR, Ondrak KS (2022). Gut Microbiome and Metabolome Variations in Self-Identified Muscle Builders Who Report Using Protein Supplements. *Nutrients*. 14(3):533. doi.org/10.3390/nu14030533.

Carmack SA, Vendruscolo JCM, **McGinn MA**, Miranda-Barrientos J, Repunte-Canonigo V, Hinrich AJ, Jodelka FM, Bosse GD, Ling K, Messing RO, Peterson RT, Rigo F, Morales M, Hastings ML, Koob GF, Vendruscolo LF. Corticosteroid-dependent sensitization to stress drives opioid addiction. *Molecular Psychiatry*. (In press).

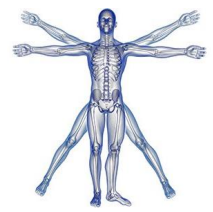
Edwards S, Sanna PP, **Edwards S**, **Callicotte CN**, **Baratinni AE**, **Cucinello-Ragland JA**, **Melain A**, **Edwards KN**, **Gilpin NW**, **Avegno EM**, **Pahng AR** (2022). Pramipexole treatment attenuates mechanical hypersensitivity in male rats experiencing chronic inflammatory pain. *Neuropharmacology* 208:108976.

Jacotte MA, Middleton J, **Stielper Z**, **Edwards S**, **Molina PE**, **Gilpin NW** (2022). Brain injury effects on neuronal activation and synaptic transmission in the basolateral amygdala (BLA) of adult male and female wistar rats. *J Neurotrauma*. PMID: 35081744.

Luk, H-Y, Jiwan, NC, Appell, CR, **Levitt, DE**, Vingren, JL. (2022). Sex specific mitochondrial dynamics and mitophagy response to muscle damage. *Physiological Reports*. DOI: 10.14814/phy2.15230.



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Molina PE (2022). Rethinking integration of environmental and behavioral stressors; back to energy homeostasis and function. *Function*. doi.org/10.1093/function/zqab074

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Rosen EM, Primeaux SD, Simon L, Welsh DA, Molina PE, Ferguson TF (2022). Associations of binge drinking and heavy alcohol use on sugar and fat intake in a cohort of southern people living with HIV. *Alcohol Alcohol*. PMID: 34611697.

Simon L, Edwards S, Molina PE (2022). Pathophysiological consequences of at-risk alcohol use; Implications for comorbidity risk in persons living with HIV. *Frontiers in Physiology-Clinical and Translational Physiology*. PMID: 35115952.

Simon L, Souza-Smith F, Molina PE (2022). Alcohol-Associated Tissue Injury: Current Views on Pathophysiological Mechanisms. *Annual Review of Physiology* 84:87-112. PMID: 35143331.

Vingren, JL, Boyett, JC, Lee, EC, **Levitt, DE,** Luk, HY, McDermott, BP, Munoz, CX, Ganio, MS, Armstrong, LE, Hill, DW. **(2022).** A single dose of ibuprofen impacts IL-10 response to 164-km road cycling in the heat. *Research Quarterly for Exercise and Sport*. DOI: 10.1080/02701367.2021.1981539.

Weera, M.M., Agoglia, A.E., Douglass, E., Jiang, Z., Rajamanickam, S., **Shackett, R.S.,** Herman, M.A., Justice, N.J., **Gilpin, N.W. (2022)** Generation of a CRF1-Cre transgenic rat and the role of central amygdala CRF1 cells in nociception and anxiety-like behavior. *eLife*.

Whitehead A.K, Meyers MC, Taylor CM, Luo M, Dowd SE, **Yue X, Byerley LO (2022).** Sex-Dependent Effects of Inhaled Nicotine on the Gut Microbiome. *Nicotine Tob Res*. doi: 10.1093/ntr/ntac064.

Book Chapters

Molina PE (2022). Environmental and Behavioral Modifiers of Comorbidities in Persons Living with

HIV. In, *PHYSIOLOGY Challenges and the Way Forward*, International Union of Physiological Sciences. ISBN # 978-0-578-33404-2

Presentations

Edwards S. Assessing Outcomes of an Interprofessional Education (IPE) Longitudinal Curriculum: In-Person vs. Online Synchronous. 10th Emswiler Interprofessional Symposium, Richmond, VA. February 5, 2022.

Professional Service

Dr. Danielle Levitt served as a Judge for the virtual Research Appreciation Day at the University of North Texas HSC in March 2022.

Dr. Marcus Weera is a member of the organizing committee for the Greater New Orleans Society for Neuroscience Seminar Series. Dr. Weera also served as co-organizer of the D'Angelo New Orleans Neuroscience Retreat, April 2022.

Notable Events

On March 31st, **Jessi Cucinello-Ragland, Tiara Hamilton, Kelly Lozano-Ortiz, Jonquil Poret, and Olivia Warren** visited Xavier University for XULA Wellness Day in association with National Drug and Alcohol Facts Week.



Danielle Levitt and Ron Budnar bought a house in Idalou, TX.



Congratulations to the best bracket (**Dr. Elizabeth Avegno**) and worst bracket (**Taylor Templeton**) in the 2022 Physiology March Madness competition! Both secured \$100 prizes.

Tribute to

Dr. John Spitzer built and led this vibrant department since 1973 until his retirement in 2001. He published more than 250 manuscripts, a dozen book chapters and was NIH funded.





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LSUHSC Physiology made a presence at EB 2022



Robert Gunn Award-
Anna Whitehead



Endocrinology & Metabolism
Research Recognition Award-
Brianna Bourgeois



Physiological Reports Hot
topics in Muscle Physiology
- Danielle Levitt



Trainees made us proud.
Congratulations!



Physiological Reports Research
Award in Endocrinology
& Metabolism- Jonquil Poret

Cardiovascular Research
Recognition Award
- Dr. Nicholas Fried



Recruitment efforts



Brianna Bourgeois



Danielle Levitt

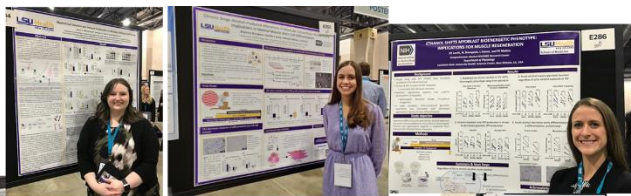
Outstanding talks



Nicholas Fried



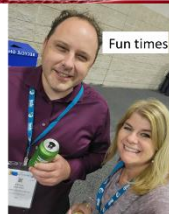
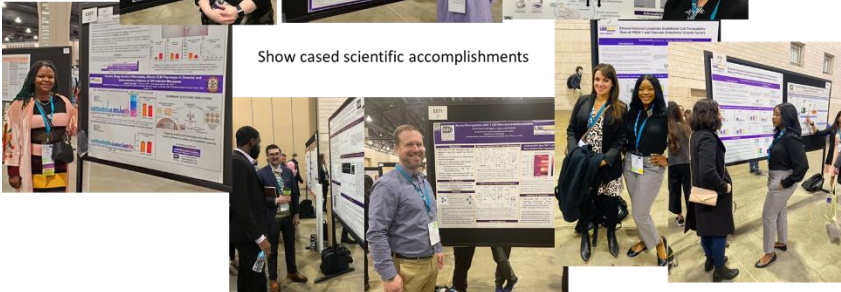
Stefany Primeaux



Show cased scientific accomplishments



Well, Pat King's or Geno's!!



Fun times