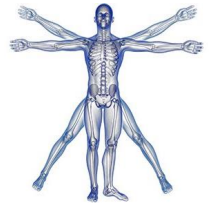


Physiology News



January – March 2021 · Volume 4 · Issue 1

A Message from the Chair

Patricia Molina, MD, PhD

RESILIENCE



Dear Friends and colleagues,

As I write this, the days are longer, plants are blooming all over town, the weather is gorgeous, and I can't help but feel a sense of excitement itching to take over the gloom and doom of the previous year. We have so much to celebrate! We have been privileged to have access to vaccines not only for ourselves but for our immediate family. We have watched with joy the stellar performance of our trainees in their Qualifying Exams and Thesis Defense. Our courses are well on their way and the end of the semester is winking in the horizon. Extramural funding continues to trickle in. We are beginning to see the light at the end of the tunnel! Gradually we have regained presence on campus and reestablished our footprint at LSUHSC. All in all, there is reason to feel proud and optimistic.

I continue to do a lot of reflecting, and it all brings me back to RESILIENCE. That is what we all need. That is what we all must strive for. I dare say it is a frame of mind. We all have challenges that we face in our professional and personal lives. We must keep our eye on the prize and keep going. Quitting, leaving, giving up is not an option! Now more than ever, our energies must be harnessed to pull together and reestablish those bonds and links that make us the strongest department on campus. We are in this together and we will come out of this together. I encourage you to reach out, to reconnect, to have coffee or tea, maybe share lunch, and to slowly allow yourselves to reengage in meaningful and collaborative ways. I take this opportunity to give a special encouragement to female trainees and early career scientists. They have faced adversity like many of us never did. Still, optimism is in the air and my message stands; [Color, Women and Scientists in Vogue! | American Physiological Society \(physiology.org\)](#)

Sincerely,

Patricia

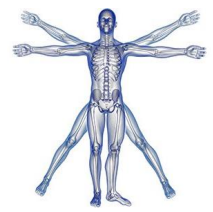
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Editor: Danielle Levitt, PhD



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Featured story:
Queer Experiences in Science

By: Jessi Cucinello-Ragland

The LGBTQ+ experience in science and academia is a unique one. Oftentimes, lesbian, gay, bisexual, transgender, and queer (LGBTQ+) students in STEM find themselves alone in their given field. As a bisexual, transgenderqueer scientist myself, I didn't meet a single openly queer scientist until coming here for graduate school, and even still I find myself looking for more queer visibility in my field. Others are not as lucky to find themselves in environments in which LGBTQ+ identities are visible. In the words of bisexual scientist Ive Velikova, often in science "the norm is to stay in the closet."

This norm of placing queer identity second to our identities as scientists is unfortunately pervasive throughout STEM fields. Because queerness is an inherently invisible identity, queer scientists are continuously faced with evaluating the safety of coming out in their workplace. While the data is incredibly limited, we know that a majority of LGBTQ+ scientists and medical students keep their identities concealed from their colleagues for fear of discrimination. This fear is founded in anecdotal and published evidence that sexual and gender minority students and scientists experience greater rates of sexual misconduct, harassment, professional devaluation, and social exclusion.

Unfortunately, queer social exclusion often goes unnoticed by non-queer colleagues. The Institute of Physics, Royal Astronomical Society, and Royal Society of Chemistry define 3 characteristics of exclusionary, hostile workplace environments in STEM:

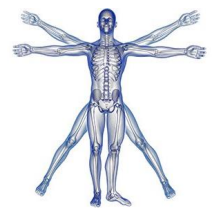
1. *Lack of support for non-heterosexual, non-cisgender employees*
2. *Casual insensitive humor*
3. *Incorrect pronoun usage*

These acts of exclusion exist at nearly every level of science, academia, and medicine, from how we teach, how we communicate science, how we treat patients, and how we promote diversity. In the Department of Physiology, we are uniquely privileged to educate future healthcare professionals, and this means that we must also be intentional in our pedagogy. Although LGBTQ+ health disparities exist across a number of pathologies, these disparities are rarely taught in the classroom. Even outside of a pathophysiological context, we must be intentional in our language when referring to sex versus gender, while also being knowledgeable of the fact that neither exists in a binary manner. As non-LGBTQ+ individuals, we can express our allyship at multiple levels, from our personal education to our research design to how we plan conferences and practice diversity and inclusivity. While we are likely all at different points in journeys to promoting queer inclusion in science, we can always continue to learn, grow, and make changes in every aspect of our lives.





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Recognition

Jessi Cucinello-Ragland was awarded the 2020 Paul S. Roheim Award of Excellence. They also received a Research Recognition Award from the Central Nervous System Section of the American Physiological Society.

Chelsea Callicoatte (PREP Scholar, Edwards Lab) was accepted into the Interdepartmental Neuroscience PhD Program at UC-Irvine.

Sarah McQuirter (Newcome-Tulane Research Scholar, Edwards Lab) was accepted into the Tissue Engineering and Regenerative Medicine Master's Program at Cardiff University in Wales.

Adrianna Jones (Edwards Lab) was accepted into the University of Miami Miller School of Medicine Skin Biology and Dermatology Master's program.

Dr. Jason Gardner received the Aesculapian Society's Excellence in Teaching Award for L1 Spring Semester Medical Physiology Course.

Jonquil Poret was selected to receive the Martin Frank Diversity Travel Award for Experimental Biology.

Anna Whitehead was selected to receive the 2021 Cardiovascular Section Research Recognition Award (APS).

Diego Torres Martinez (PREP Scholar, Simon Lab) was accepted into Cancer Biology PhD programs at Vanderbilt University and Baylor College of Medicine. Stay tuned for his decision!

New Faces

Dr. Kandasamy Neelamegam (left) received his bachelors' and master's degrees in Biochemistry from the Bharathidasan University, Tamil Nadu, India. He received his Ph.D. in Biochemistry from the Annamalai University, Tamil Nadu, India. He worked in different leading multi-

national pharmaceutical companies as a research scientist. He carried out postdoctoral studies in the Department of Physiology at Tulane University, New Orleans-LA. He has received several awards and honors and is a member of several societies. His research's long-term objectives are to delineate the molecular and physiological basis of cardiovascular and renal hypertension. He is joining our Department as a postdoc in the labs of **Dr. Jason Gardner** and **Xinping Yue** studying the effect of chronic nicotine inhalation on the homeostasis of the renin-angiotensin system and the development of cardiopulmonary diseases. Originally from India, Kandasamy is very happy to be starting his career at LSUHSC.

Chelsea Duplantis (right) graduated with a degree in biology from the University of New Orleans in fall of 2019. She is joining our department as a master's student in **Dr. Rajani Maiya's** lab. For fun, she loves spending time with her dogs Ollie and Rocket.



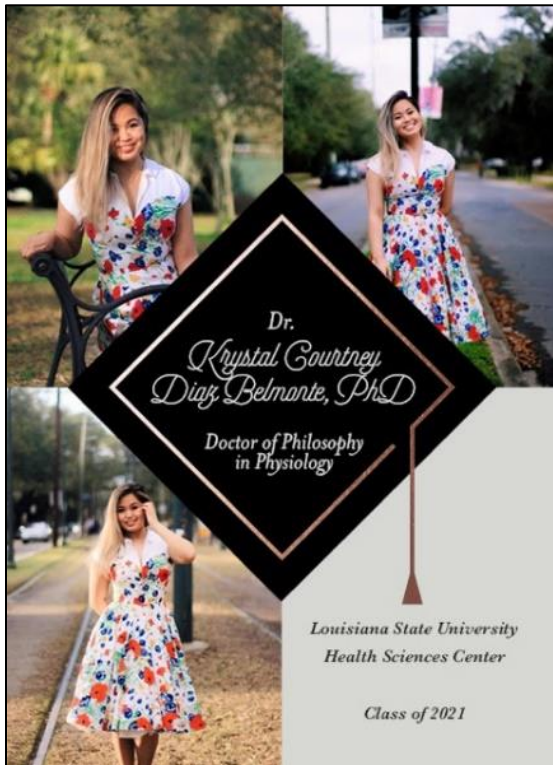
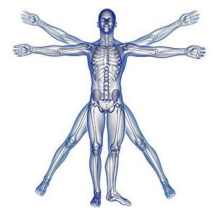
Graduate Student Milestones

Dr. Krystal Belmonte successfully defended her dissertation!





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Brianna Bourgeois, Nicholas Fried, and Anna Whitehead successfully completed their qualifying exams to officially become Doctoral Candidates!

Jessi Cucinello-Ragland submitted their first, first author paper to *Neuroscience Letters*!

Grants

Alzheimer's associated neuropathology; Risk modification by alcohol in antiretroviral-treated SIV-infected rhesus macaques. NIH/NIAAA P60 AA009803-28S1. PIs: **Drs. Patricia Molina & Liz Simon**.

Amygdala modulation of adolescent alcohol effects on pain. NIH/NIAAA F30 AA028691. PI: **Nathan Sharfman**. Mentor: **Dr. Nick Gilpin**.

Reducing vascular cognitive impairment within and across generations by epigenetic conditioning. NIH/NINDS R21 NS118223. PI: **Dr. Jeff Gidday**.

Publications

Coleman, MT, Brantley, PR, Wiseman, PM, English, MR, and **Byerley, L**. Brief, effective experience to increase first-year medical students' nutrition

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Gu, M, Samuelson, DR, Taylor, CM, **Molina, PE, Luo, M, Siggins, RW, Shellito, JE, and Welsh, DA**. Alcohol-Associated Intestinal Dysbiosis Alters Mucosal-Associated Invariant T-Cell Phenotype and Function. *Alcohol Clin Exp Res*. 2021 Mar 11. PMID: 33704802.

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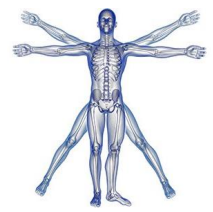
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McTernan, PM, Katz, PS, Porretta, C, Welsh, DA, and Siggins, RW. A Novel FACS-Based Workflow for Simultaneous Assessment of RedOx Status, Cellular Phenotype, and Mitochondrial Genome Stability. *BioChem*. 2021;1(1):1-18. DOI: 10.3390/biochem1010001.



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Poret, JM, Gaudet, DA, Braymer, HD, and Primeaux, SD. Sex differences in markers of metabolic syndrome and adipose tissue inflammation in obesity-prone, Osborne-Mendel, and obesity-resistant, S5B/PI rats. *Life Sciences*. [epub] March 1, 2021.

Primeaux, SD, Harrison-Bernard, LM, and Barnes, MJ. (2021). Neurophysiology of the Hypothalamus. In G.I. Uwaifo Eds. *The Hypothalamus: Anatomy, Dysfunction and Disease Management* Springer Publishing. <https://www.springer.com/us/book/9783030621865>

Vozella, V, Cruz, B, Natividad, LA, Benvenuti, F, Cannella, N, **Edwards, S**, Zorrilla, EP, Ciccocioppo, R, and Roberto, M. Glucocorticoid Receptor Antagonist Mifepristone Does Not Alter Innate Anxiety-Like Behavior in Genetically-Selected Marchigian Sardinian (msP) Rats. *International Journal of Molecular Sciences* 2021; 22(6): 3095.

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Presentations

Dr. Marcus Weera presented a talk titled “Neural Circuits of Stress-Induced Alterations in Alcohol-Related Behaviors” for the Webinars by Early Career Investigators in Addiction Neuroscience (WECAN), National Institute on Drug Abuse (NIDA) and National Institute on Alcohol Abuse & Alcoholism (NIAAA), February 2021.

Professional Service

Dr. Marcus Weera was appointed to the Editorial Board of Toxicogenomics at Frontiers Journals as Review Editor (Appointment period: 2021-2023). He

is also the co-organizer for D’Angelo NOLA Neuro Journal Club (2021- 22), the inaugural neuroscience seminar series focused on mental health and addiction for labs in New Orleans area.

Drs. Danielle Levitt, Stefany Primeaux, and Sydney Vita served as judges for the Greater New Orleans Science and Engineering Fair.

Jessi Cucinello-Ragland gave a guest lecture on biopsychology and drug research to the AP Psychology class at Patrick F. Taylor Science and Technologies Academy (adorable thank you notes, right).



Notable Events

Contract news: **Erin Davis and Kim Edwards (Edwards Lab)** have discovered that NIAAA-113 reduces excessive drinking in alcohol self-administering animals and may represent a new medication strategy for treating alcohol use disorder. **Jessi Cucinello-Ragland (Edwards Lab)** has determined that NEPE14 (a non-euphoric cannabis elixir) produces robust analgesia in an inflammatory pain model, further indicating the potential for safely treating chronic pain conditions with cannabis-based strategies.

Alex Molina (below) will be going to Portland, Oregon for his residency!





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Chloe Ball
(right) was the grand prize winner for Black History Month Trivia!



The Levitt-Budnar household grew by 8 paws!



Zippy Belmonte (left) earned a PhD alongside his mom!
Congrats, Dr. Zippy!



LSU Health

