

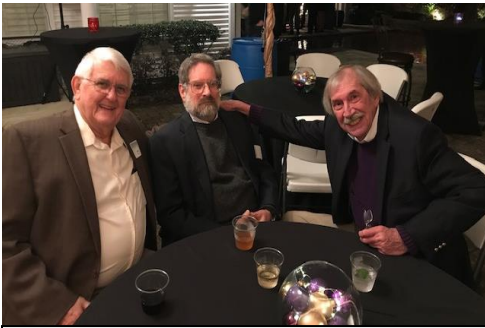
Physiology News

April – June 2021 · Volume 4 · Issue 2

A Message from the Chair

Patricia Molina, MD, PhD

Our much-anticipated post-VAX summer is here and with some hesitation we begin to engage in our favorite social rituals. The incessant rain has hampered many of our plans and the cloudy days do little to alleviate the sadness I feel with the passing of our colleague, mentor, and friend, Dr. Joe Moerschbaecher. Dr. Moerschbaecher was a loyal friend of Physiology, humoring us with his dancing and sometimes singing at our Holiday parties. He was a staunch supporter of our department, and despite his grumpy demeanor, he listened and helped us in so many ways. In creating opportunities for remediation, for giving students a second chance, and not long ago in allowing us to officially grant leave to our trainees. For me, he was a counselor and mentor, and I will miss his presence immensely. My last meeting with him, when he called to tell me about his diagnosis started with my favorite greeting, “there is my favorite Chair!”. It was a running joke, because I knew how much he favored Pharmacology and appreciated how much he still struggled to make me, and our department feel special. That, he did, and I will forever be grateful for that. He was the backbone of this



Happier days, Drs. Porter, Levitzky & JM at the Physiology Holiday Party 2016.



Dr. M presenting the 2020 Jack Hines Award to PM.

institution!

Back over in the MEB Penthouse, this summer our department is again buzzing with so many outstanding trainees. Their preliminary presentations were amazing and a treat to listen to. I look forward to hearing their final presentations later this month.

We marked another bittersweet moment in celebrating Dr. Levitzky’s (Mike) transition to Emeritus Faculty [see also: *Recognition*]. It was fun to be able to gather and celebrate and special in recognizing a lifetime of Mike’s dedication to our mission. Dr. Nelson said it all sounded like a eulogy. But I just thought to myself, how lucky that he got to hear what he has meant to so many people! Joe did not get that moment.

I hope everyone enjoys the rest of the summer and hope for better times in the near future when we can once again gather to celebrate life and the many accomplishments of so many of our team members.

With warm wishes,

Patricia



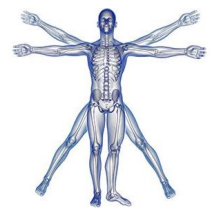
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Editor: Danielle Levitt, PhD



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Featured story:

Pride Month Reflections

By: Sydney Vita, PhD

As Pride Month 2021 comes to a close, let's reflect on what it is we are celebrating. In the United States, the LGBTQ+ community has endured through discriminating legislation, criminalization of homosexual sex acts between consenting adults, classification as mentally ill, military and federal job prohibition, and hate crimes, and of course inequality marriage, or even in the ability to use the bathroom associated with one's gender identity. Many of us know that when we celebrate Pride, we are celebrating the anniversary of the Stonewall Uprising. We know that the police were targeting and raiding places frequented by the Queer Community, roughing up and arresting patrons for their sexual orientation. But, did you know that it was a New Orleans native who is credited with one of the most important roles in that revolution?

There is much debate about that night, but what we know for sure is that primary credit is given to people of color who did not conform to the gender roles assigned to them at birth. Some insist that the first brick was thrown by Marsha P. Johnson, a Black trans¹ woman, however Marsha herself¹ said that she didn't arrive to the Stonewall Inn until the uprising was already underway. Others credit Sylvia Rivera², a trans woman of Latinx descent. Most first-hand bystander reports say that it was a Butch Lesbian who threw the first punch, and many credit that punch to New Orleans native, Stormé DeLarverie³. The piece of the story not contested is that it was Stormé who sparked the crowd into action when she was being pulled away in handcuffs by police, and turned to the crowd and called, "Why don't you do something???"

Little is known about Stormé's childhood in New Orleans. She was born to a white father and a Black mother, who was a household servant, and endured bullying and harassment as a child. She said that she was never accepted by either community, driving her to leave New Orleans as a teen. What we do know is that her advocacy didn't end start or end with Stonewall. In her younger years, Stormé was a singer and drag performer, performing to mixed-race audiences during segregation while dressed as man and singing in a deep baritone. After Stonewall, she went on to be something of a gay superhero, patrolling the streets of her neighborhood and checking in with various local bars to ensure that the younger generation was protected in a way she never had been.

¹ I feel it is important to acknowledge that while I am using currently accepted language for in this article, terms such as "transgender" were not in use at the time. We cannot know how these people would have identified themselves in today's society. Gender identity is a very personal thing, as are preferred pronouns.

² Marsha P. Johnson and Sylvia Rivera both identified as Drag Queens and used both she/her and he/she interchangeably. Historians and people who knew them personally now tend to refer to them as having been trans women. I am choosing to refer to them as trans women and using she/her pronouns based on this.

³ Stormé DeLarverie identified as a Butch Lesbian, but also performed as a Drag King. She was known for her ability to pass as either Black or white, man or woman, and was known to prefer an androgynous look while off-stage for which she is credited in popularizing.





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Recognition

Dr. Michael Levitzky transitioned to Emeritus Faculty. Faculty, staff, and trainees celebrated his career on June 30, 2021 (pictured below).



Taylor Templeton was featured in the latest Women in STEM highlight article for Fastweb.com at <https://www.fastweb.com/career-planning/articles/taylor-templeton-behavioral-neuroscientist-physiology-ph-d-candidate>



Dr. Marcus Weera was featured and published a short article in the ISBRA 2021 Newsletter, in a collection titled *Current landscape for early investigators - perspectives of five early investigators from around the globe.*

Dr. Nick Gilpin received the LSUHSC-SOM Faculty Assembly Outstanding Mentor Award.

Members of our department earned the following awards for RSA:

Junior Investigator Award

- **Dr. Danielle Levitt**
- **Dr. Marcus Weera**

Young Investigator Award:

- **Dr. Elizabeth Avegno**

Student Merit Award:

- **Jessi Cucinello-Ragland**
- **Jonquil Poret**

Roshawn Mitchell-Cleveland was selected to be a student ambassador for the NASA Lucy mission.

Dr. Tekeda Ferguson received tenure and promotion to Associate Professor in Epidemiology the School of Public Health with a joint appointment in the SOM Department of Physiology.

Dr. Lauri Byerley was inducted into the Purdue University Department of Nutrition Science Hall of Fame.

Dr. Patricia Molina was invited to hood the graduating Class of 2021, LSUHSC School of Medicine.

New Faces

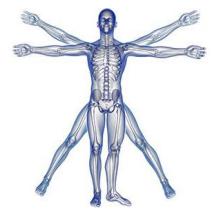
Dr. Andrea Jones received her bachelor's degree in Psychology from Indiana University and an Interdisciplinary Ph.D. in Aging Studies from Tulane University School of Medicine. Her work there focused on the role of the neuroinflammation



regulator NFkBp65 in hippocampus-based learning and memory across the lifespan. She recently worked as a postdoctoral appointee in the laboratory of Dr. Patrick Sheets at the Stark Neurosciences Research Institute at Indiana University School of Medicine. There she researched sex-specific differences in activity of medial prefrontal



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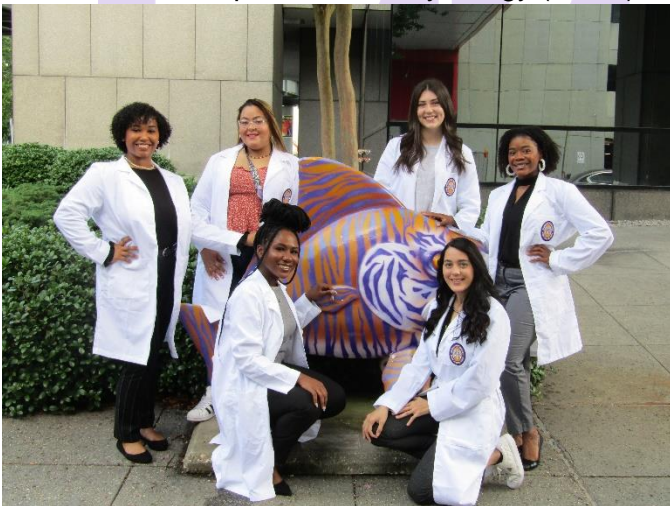
GABAergic interneurons in chronic neuropathic pain using whole-cell slice electrophysiology. At LSUHSC, she is a postdoctoral fellow on the NIAAA T32 Biomedical Alcohol Research Training Program under the mentorship of **Dr. Nicholas Gilpin**. Her work will focus on the role of the melanocortin-4 receptor in chronic inflammatory pain as well as the role of alcohol use disorder in the conversion from acute to chronic pain.



Jessica Miller received her bachelors' and master's degree in Biology from Old Dominion University. She was a microbiologist for the Department of Wildlife and Resources in Utah. Jessica is elated to join the Comprehensive Alcohol-

HIV/AIDS Research Center team as a research associate.

Six new Scholars joined the LSUHSC-NO Postbaccalaureate Research Education Program in the Biomedical Sciences on June 1, 2021. Four of the Scholars will be conducting research with mentors in the Department of Physiology (below).



Front row:

- Samira Mohammed (Mentor: Albrechet-Souza)
- Kelly Lozano-Ortiz (Mentors: Amedee, Siggins)

Back row:

- Heather Soileau (Mentor: Kim)
- Cheyleann Del Valle-Ponce de Leon (Mentor: Ronis)
- Olivia Warren (Mentor: Gardner)
- Tiara Hamilton (Mentors: Souza-Smith, Molina)

Graduate Student Milestones

Nathan Sharfman passed his preliminary exam and is now a PhD Candidate!

Grants

Preventing Alcohol Seeking with a Nonmuscle Myosin II Inhibitor under Clinical Development. NIH/NIAAA 1R21AA028727-01A1. MPI: **Dr. Nick Gilpin** (with Dr. Courtney Miller). *This project aims to prevent relapse to alcohol use by targeting the motivation to seek alcohol that is triggered by long lasting reminders of alcohol use.*

E-Cigarette Inhalation and Cardiopulmonary Dysfunction. American Heart Association Predoctoral Fellowship. PI: **Anna Whitehead**. Mentor: **Dr. Xinping Yue**.

Publications

Gu, M, Samuelson, DR, Taylor, CM, Molina, PE, Luo, M, Siggins, RW, Shellito, JE, and Welsh, DA. (2021). Alcohol-associated intestinal dysbiosis alters mucosal-associated invariant T-cell phenotype and function. *Alcohol Clin Exp Res.* 45(5):934-947. doi: 10.1111/acer.14589. Epub 2021 Apr 3. PMID: 33704802.

Maxi, JK, Foret, BL, Amedee, AM, McDaniel, LS, Nelson, S, Simon, L, Edwards, S, and Molina, PE. Antiretroviral therapy administration reduces neuroinflammation without restoring brain-derived neurotrophic factor signaling in alcohol-administered simian immunodeficiency virus-infected macaques. *AIDS.* 2021 Jul 15;35(9):1343-1353. PMID: PMC8243820.

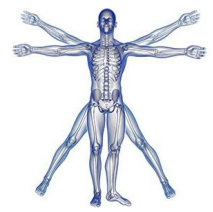
Levitt, DE, Molina, PE, and Simon, L. (2021). Pathophysiological mechanisms of alcoholic myopathy: Lessons from rodent models. *Journal of Veterinary and Animal Sciences.* 52(2): 107-116. DOI: 10.51966/jvas.2021.52.2.107-116.

Poret JM, Molina PE, and Simon L. (2021). Isolation, Proliferation and Differentiation of Rhesus Macaque Adipose-Derived Stem Cells. *J Vis Exp.* 26;(171):10.3791/61732. PMID: PMC8210449.

Primeaux, SD, Simon, L, Ferguson, TF, Levitt, DE, Brashear, MM, Yeh, A, and Molina PE. (2021).



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Alcohol use and dysglycemia among people living with HIV in the ALIVE-Ex Study. *Alcoholism: Clinical and Experimental Research*. Ahead-of-print. DOI: 10.1111/acer.14667.

Shaw, AG, Chae, S, **Levitt, DE**, Nicholson, JL, Vingren, JL, and Hill, DW. (2021). Effect of previous-day alcohol ingestion on muscle function and performance of severe-intensity exercise. *International Journal of Sports Physiology and Performance*. Ahead-of-print. DOI: 10.1123/ijsp.2020-0790.

Presentations

Brianna Bourgeois presented virtual posters titled “Associations between circulating microRNAs and measures of insulin/glucose dynamics in people living with HIV and dysglycemia” [Experimental Biology (EB), April 2021] and “Expression of myomiRs in circulating extracellular vesicles of chronic binge alcohol-administered SIV-infected male rhesus macaques” (RSA/ISBRA Joint Scientific Meeting, June 2021).

Dr. Danielle Levitt organized and co-chaired a symposium titled “Epigenomics in metabolic health and disease” (EB, April 2021). She also presented virtual posters titled “High-fat high-sucrose diet increases ACE2 receptor expression in lung and pancreatic islets in SIV-infected rhesus macaques: Implications for increased risk for SARS-CoV-2 infection” (EB, April 2021) and “Skeletal muscle mitochondrial profile is dysregulated in people living with HIV with fasting dysglycemia and aggravated by alcohol use” (RSA/ISBRA, June 2021).

Dr. Patricia Molina was a table lead at the American Physiological Society Diversity, Equity & Inclusion Committee Networking Session at Experimental Biology (April 2021), a speaker/panelist at the Enhanced Interdisciplinary Research Training Institute on Hispanic Drug Abuse (eIRTI) Annual Summer Training Program (June 2021), and gave a virtual talk titled: “Alcohol Exacerbates Infectious Disease Pathogenesis and Worsens Treatment Outcomes. Alcohol-Associated Metabolic Dyshomeostasis; Role in Enhanced Viral Pathogenesis” at RSA/ISBRA (June 2021).

Dr. Lucas Albrechet-Souza served as a chair and speaker in the symposium “Current preclinical approaches used to investigate stress vulnerability and alcohol use disorder” at RSA/ISBRA.

Dr. Maria Elena Secci presented a virtual poster at titled “Adolescent alcohol exposure induces long-term hyperalgesia and alterations in CeA->PAG signaling in male and female rats” at RSA/ISBRA.

Rosie Shackett, undergrad researcher, presented a poster at RSA 2021 titled “Central amygdala corticotropin-releasing factor-1 receptor-expressing neurons mediate anxiety-, nociception-, and avoidance-related behaviors in rats”.

Dr. Marcus Weera organized and chaired a symposium at RSA 2021 titled “Amygdala outputs & alcohol consumption-related behaviors”. He gave a talk in that symposium titled “Central amygdala outputs to lateral hypothalamus mediate stress-induced alterations in alcohol-related behaviors”. He also presented a poster titled “Lateral hypothalamus projections to lateral habenula mediate stress-induced blunting of alcohol aversion”.

Professional Service

Dr. Stefany Primeaux completed her term as Faculty Senate President on June 30, 2021 and is succeeded by **Dr. Tekeda Ferguson**.

Dr. Nick Gilpin is serving as Co-editor of special issue of *International Review of Neurobiology* Volume 157 titled “Neurobiology of Addiction and Co-Morbid Disorders”.

Dr. Xinping Yue was invited to join the Editorial Board of the American Journal of Physiology-Lung Cellular and Molecular Physiology for the term from 01 July 2021 to 31 December 2023.

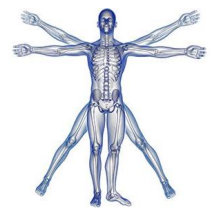
Notable Events



Dr. Krystal Belmonte took first place in March Madness. **Brianna Bourgeois** and **Katie Adler** tied for second.



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Team Fizzz-You-Well [Drs. **Elizabeth Avegno** (captain), **Danielle Levitt**, **Patricia Molina**, **Liz Simon**, **Flavia Souza-Smith**, & **Stefany Primeaux**] won 2nd place in the LSUHSC Wellness Challenge (below).

Recent themed Fridays have included Pride Friday, Hawaiian Shirt Friday, and Red-White-Blue Day (below).



Pedro Neto, Dr. Lucas Albrechet-Souza, Dr. Sydney Vita, Taylor Templeton, and Chuck Jager participated in Queer Walk NOLA (left).



German scientists built a high-resolution Lego microscope (yes, those Legos!). Read more about it here:

<https://arstechnica.com/science/2021/07/german-scientists-built-a-high-resolution-microscope-out-of-lego-bricks/>

