



Physiology News



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Recognition

Dr. Marcus Weera was awarded an RSA Junior Investigator Award.

Dr. Elizabeth Avegno was awarded an NIAAA travel award to ISBRA.

Dr. Lucas Albrechet de Souza was selected for a career development workshop at Fresno State-CA with all the expenses covered (July 16 – July 20, 2018).



Dr. Albrechet de Souza with his working group

Dr. Patricia Molina became President Elect of the Association of Chairs of Departments of Physiology (ACDP). In addition, she received the 2018 Pioneer Award as part of the NIDA-funded advanced training course entitled “Frontiers in Addiction Research and Pregnancy.” She was also selected as the Veterana Panel lead speaker at the National Hispanic Science Network 18th Annual International Conference. **Dr. Flavia Souza-Smith** was invited to be a speaker in this panel as well.

Drs. Patricia Molina and **Flavia Souza-Smith** received the IOP for the 2019 Pan American Congress in Havana, Cuba.



Betsy Giaimo retired after 39 years of service to the Department of Physiology. Congratulations, Betsy!

New Faces

Sarah Ford Mozingo joined the Molina and Gilpin Labs as a research assistant who will be conducting research using rat models of traumatic brain injury and alcohol dependence.



IDP student **Laura Monteagudo Romero** completed a successful rotation in Edwards Lab investigating fentanyl-induced hyperalgesia. We look forward to having her back in 2019.



Dr. Danielle Levitt-Budnar joined the Molina and Simon Labs as a T32 Postdoctoral Fellow investigating alcohol-mediated metabolic comorbidities in SIV/HIV.

Graduate Student Milestones

Zachary Stielper and **Krystal Belmonte** passed their qualifying examinations.

Jonquil Poret defended her thesis summarizing her work in the Primeaux Lab in April and joined the Molina Lab as a predoctoral student in the IDP program.

Grants

Stress Effects on Traumatic Brain Injury: Neural Mechanisms of Escalated Alcohol Drinking. NIH/NIAAA F32AA026779-01A1. **PI: Dr. Elizabeth Fucich**. Sponsor: Dr. Patricia Molina. Co-Sponsor: Dr. Nick Gilpin.

Vasopressin Signaling in Pain and Alcohol Dependence. R01AA025996. **PI: Dr. Scott Edwards**. *This grant will determine the functional role of vasopressin signaling in the manifestation of excessive drinking and hyperalgesia in alcohol-dependent animals.*



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Preclinical Medications Development Screening in Dependent, Affect and Pain Models of Alcoholism. NIH-NICHD-2018-05. **PI: Dr. Scott Edwards.** *This contract will test novel medication strategies for excessive drinking and hyperalgesia symptoms in alcohol-dependent animals.*

Publications

Avegno EM, Lobell TD, Itoga CA, Baynes BB, Whitaker AM, Weera MM, Edwards S, Middleton JW, and Gilpin NW. Central amygdala circuits mediate hyperalgesia in alcohol-dependent rats. *Journal of Neuroscience* 38(36): 7761-7773, 2018.

Edwards S, Molina PE, McDonough K, Mercante DE, and Gunaldo TP. The potential of interprofessional education to effectively translate physiology curricula into future team-based healthcare. *Advances in Physiology Education* 42: 354-359, 2018.

Ford SM Jr, Simon Peter L, Berner P, Cook G, Vande Stouwe C, Dufour JP, Bagby G, Nelson S, and Molina PE. Differential contribution of chronic binge alcohol and antiretroviral therapy to metabolic dysregulation in SIV-infected male macaques. *Am J Physiol Endocrinol Metab*, 2018 Jul 24. doi: 10.1152/ajpendo.00175.2018. [Epub ahead of print]

Fucich EA and Morilak DA. Shock-probe defensive burying test to measure active versus passive coping style in response to an aversive stimulus in rats. *Bio-protocol* 8(17): e2998, 2018. doi: 10.21769/BioProtoc.2998.

Fucich EA*, Mayeux JP*, McGinn MA, Gilpin NW, Edwards S, and Molina PE. A novel role for the endocannabinoid system in ameliorating motivation for alcohol drinking and negative behavioral affect following traumatic brain injury in rats. *Journal of Neurotrauma*, accepted 2018 Sep 17 (*in press*).

Levitzky, MG. *Pulmonary Physiology*. 9th Edition. New York City: McGraw-Hill (Lange Series), 2018.

Pahng AR and Edwards S. Measuring pain avoidance-like behavior in drug-dependent rats. *Current Protocols in Neuroscience* 85(1), e53, 2018.

Pahng AR, Paulsen RI, McGinn MA, Farooq MA, Edward KN, and Edwards S. Dysregulation of c-jun

n-terminal kinase phosphorylation in alcohol dependence. *Alcohol* 75: 11-18, 2019 (*in press*).

Weera MM, Agim ZS, Cannon JR, and Chester JA. Genetic correlations between nicotine reinforcement-related behaviors and propensity toward high or low alcohol preference in two replicate mouse lines. *Genes Brain Behav* 2018 Aug 21:e12515. doi: 10.1111/gbb.12515. [Epub ahead of print].

Viola TW, Wearick-Silva LE, Creutzberg KC, Kestering E, Orso R, Centeno-Silva A, **Albrechet-Souza L**, Marshall PR, Li X, Bredy TW, Riva MA, & Grassi-Oliveira R. Postnatal impoverished housing impairs adolescent risk-assessment and increases risk-taking: a sex-specific effect associated with histone epigenetic regulation of Crfr1 in the medial prefrontal cortex. *Psychoneuroendocrinology*, 99: 8-19, 2019.

Presentations

Dr. Elizabeth Avegno presented posters entitled “Alcohol dependence impacts midbrain projections to central amygdala” at the RSA Annual Meeting in San Diego (June, 2018) and “Alcohol dependence impacts ventral tegmental projections to central amygdala” at the International Society for Biomedical Research on Alcoholism Congress in Kyoto, Japan (September, 2018).

Dr. Lucas Albrechet de Souza presented a poster entitled “Predator odor stress produces adaptations in endocannabinoid system protein expression in the basolateral amygdala” at the Stress Neurobiology Workshop in Banff, Canada (June 2018).

Dr. Patricia Molina presented a poster titled “At risk alcohol consumption increases risk for metabolic comorbidities in persons living with HIV (PLWH)” at the 22nd International AIDS Conference in Amsterdam, Netherlands (July 24, 2018) She was also Co-organizer/Co-chair/Speaker at the 19th Congress of International Society for Biomedical Research on Alcoholism (ISBRA) (September 2018), where her symposium was entitled “HIV and alcohol co-morbidities: Pathogenesis and treatment. Alcohol-SIV/HIV-ART interactions & metabolic comorbidity pathways.”



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Dr. Elizabeth Fucich presented seminars for the LSUHSC-NO Department of Cell Biology & Anatomy on September 24th and the LSUHSC-NO Department of Physiology on September 27th entitled “Traumatic brain injury &

psychological stress: impact on neurobehavioral outcomes.”

On April 23rd, **Adrienne McGinn** presented a talk entitled “Dysregulated Glucocorticoid Signaling in Alcohol Use Disorder” at the Joseph Erlanger Distinguished Lectureship of the APS Central Nervous System Section – Trainee Mini-Symposium during EB2018.

On April 22nd, **Dr. Amanda Pahng** presented a talk entitled “Neurobiology of Pain and Negative Reinforcement in Drug Addiction: New Translational Targets” at the symposium “Intersection of Central Pain and Reward Circuitry in CNS Disorders” during EB2018.

On June 22nd, **Dr. Scott Edwards** participated in a continuing education event for dental providers at the LSU School of Dentistry entitled “Addressing Opioid Abuse and Addiction Among Dental Patients.” He covered the neuroscience of opioid use disorder and screening tools to help practitioners identify problematic prescription opioid use.

On July 24th, **Dr. Scott Edwards** presented a poster entitled “Neuropathological Mechanisms of Alcohol, SIV, and Antiretroviral Therapy: Enhanced Susceptibility of the Frontal Cortex in Rhesus Macaques” at the 22nd International AIDS Conference in Amsterdam, Netherlands. The presentation represents collaborative efforts of multiple investigators supported by the LSUHSC Comprehensive Alcohol-HIV/AIDS Research Center.

On September 10th, **Dr. Scott Edwards** chaired a symposium entitled “Alcohol & Opioids: Intersecting Mechanisms and Treatment Opportunities for Pain Management and Addiction” at the 19th Congress of International Society for Biomedical Research on Alcoholism, Kyoto, Japan.

Professional Service

Dr. Michael Levitzky served on the NBME IRC 3 committee in Philadelphia, September 17-19.

On September 1st, **Dr. Scott Edwards** began service as Section Editor of the Substance Abuse Section for the journal *Pharmacology, Biochemistry, and Behavior*.

Notable Events

The Physiology Wellbeing Committee (Molina, Simon, Primeaux, Souza-Smith, Fucich, and Poret) has organized weekly meditation sessions each Thurs. from 1:10-1:25 pm in MEB 7267, weekly yoga sessions each Thurs. from 4:30-5:30 pm in MEB 7101, and monthly walks to the Student Gardens. We have had 31 participants thus far, and “wellbeing points” are being logged for participation. The leaderboard as of 10/12/18 is as follows:

25	Dr. Elizabeth Fucich
20	Dr. Patricia Molina
19	Dr. Elizabeth Avegno
15	Dr. Stefany Primeaux
15	Dr. Danielle Levitt
15	Laura Monteagudo
14	Dr. Amanda Pahng
14	Chloe Ball
14	Dr. Lauri Byerley
13	Jonquil Poret



Krystal Belmonte's cat, Zippy, demonstrates a new spin on the “Cat-Cow.”



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Physiology faculty and trainees participated in the Association for Women in Science fundraiser at Painting with a Twist on Sept. 19.



Left: Dr. Maureen Basha painting. Right: Trainees Brittany Foret, Jonquill Poret, Dr. Danielle Levitt, and Katie Adler with their masterpieces.



Left: Jessica Cucinello got engaged to the man of her dreams!



Right: Jonquill Poret also got engaged to the man of her dreams!



Left: Sarah Ford Mozingo got married!



Above: Kimberly Edwards went backpacking in Norway!

