



Physiology News



January – March 2020 · Volume 3 · Issue 1

A message from the chair

Dear All:

I hope you are doing well and making the necessary adjustments to our current situation. We did not see this coming and were taken off guard by the magnitude of this crisis. Through these times, we learn to appreciate our blessings. Our world has shifted beneath us. Our plans have been put on hold, and in many cases our daily routines have been altered. Several of you are home with children and feeling the challenge of tending to their needs and wellbeing, while trying to stay engaged. I feel for you. I encourage you to treasure these times and get to know your kids a little better. Some of you find yourselves with limited space and resources to maintain your productivity and engagement. I encourage you to find your inner calm to keep you going. Others have attempted to keep some sense of normalcy in routines in hopes of feeling in control. No matter how you are dealing with this, know that we are in this together. We must pull our strengths and resources together to come out of this unscathed. We must move on.

There are some joyful news I would like to share. Keisa Mathis texted me last week, her first PhD student defended with honors. Flavia's first Masters student also did a great job defending his thesis last week. Jacques Mayeux landed a job in St. Louis in a pharmaceutical company. Jonquil's NRSA got funded. Tracey Dodd and Allison Schreiber both got into great residency programs. We continue our commitment to teaching the next generation of physicians, nurses, dentists, and physical therapists among others. We continue to submit grants, supplements, and manuscripts with unrelenting enthusiasm. And this week, many of us joyfully celebrate our faith. The beautiful moon this week reminds us to stop and be grateful.



May you be well, calm, focused, productive, and loved by those around you!

Sincerely,

Patricia

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Editor: Danielle Levitt, PhD



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Featured story:
A COVID-19 Update

By: Elizabeth Delery, PhD

At the forefront of the news and our minds sits the current COVID-19 pandemic. We are living through an unprecedented time, and our understanding of the SARS-CoV-2 virus is increasing daily. The incidence and mortality for Louisiana are updated daily on www.wgno.com, and nationwide information can be found at <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html>.

The symptoms vary, with the WHO reporting the most common symptoms are fever, tiredness, and a dry cough. They can also include aches and pains, nasal congestion, runny nose, sore throat, or diarrhea. King's College in London created a Covid Symptom Tracker app to track symptoms and among those who received a confirmed positive test, three-fifths reported a loss of smell or taste (BBC). However, not everyone who contracts the virus will present symptoms. Reports of asymptomatic cases exist, and while a majority could be presymptomatic since incubation period of the virus ranges from 1-14 days with an average of around 5 days, data from the Diamond Princess cruise allows epidemiologists to model and estimate that roughly 18%-30% of infections are asymptomatic (Buzzfeed). It has been reported that the loss of smell and taste, anosmia/hyposmia and dysgeusia, may be an indicator of infection in otherwise "asymptomatic" individuals (ENT UK, NPR).

According to Governor John Bel Edwards' official Twitter today (@LouisianaGov), Louisiana has not been adhering to social distancing practices enough, and we are on course to require 2,500 new hospitalizations a day in the New Orleans area by mid-May, if we don't adhere to the mitigation measures. The Institute for Health Metrics and Evaluation (IHME) out of the University of Washington in Seattle, has put together a useful modeling site (<https://covid19.healthdata.org/>) where you can see health projections for number of cases and hospital resources based on the current health data, and assuming full-social distancing.

However, there are easy ways to prevent the spread of this new coronavirus, including isolating at home if you are non-essential personnel and not going out except for essential things like the grocery store and pharmacy. While the data is still conflicting about whether the virus is indeed airborne or not (Nature), staying home, washing your hands for at least 20 seconds with soap and water, covering coughs and sneezes, not touching your face, and cleaning frequently touched surfaces with EPA approved disinfectants (EPA) can greatly limit your risks of contracting the virus.

References:

<https://www.who.int/news-room/q-a-detail/q-a-coronaviruses#:~:text=symptoms>

<https://www.bbc.com/news/health-52111606>

<https://www.buzzfeednews.com/article/stephaniemlee/coronavirus-asymptomatic-silent-carrier-spread-contagious>

<https://www.entuk.org/sites/default/files/files/Loss%20of%20sense%20of%20smell%20as%20marker%20of%20COVID.pdf>

<https://www.npr.org/sections/goatsandsoda/2020/03/26/821582951/is-loss-of-smell-and-taste-a-symptom-of-covid-19-doctors-want-to-find-out>

<https://www.nature.com/articles/d41586-020-00974-w>

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>



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Recognition

Nicholas Fried was selected for the APS Caroline tum Suden/Frances Hellebrandt award. Even though Experimental Biology 2020 was cancelled, it is an honor for him to have been chosen!

Dr. Christian Montanari was selected for the Post-Doctoral Fellow Poster Award at the Gordon Research Seminar & Conference in Galveston, TX.



Dr. Marcus Weera was selected as a finalist for the Enoch Gordis award for this year's deferred RSA meeting. The meeting is canceled, but the finalists will still get to do the Gordis talks via Zoom (probably some time in June).

F1000 Prime recommended **Avegno EM**, Middleton JW, **Gilpin NW** (2019). Synaptic GABAergic transmission in the central amygdala (CeA) of rats depends on slice preparation and recording conditions. *Physiological Reports*, 7(19):e14245.

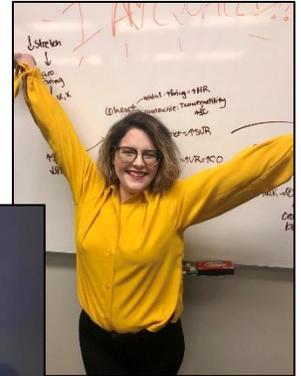
New Faces

Angela Barattini is a new Research Associate who will be working with us in Physiology for the next three months before transitioning over to the VA to join Dr. Pahng's new lab. She graduated *summa cum laude* from the University of Louisiana at Lafayette with a BS in Biology and Minor in Psychology in December 2019.



Graduate Student Milestones

Nathan Sharfman and **Jessica Cucinello** (pictured, right) passed their Oral Qualifying Exams!



Matthew Herrera (pictured with **Dr. Flavia Souza-Smith**) defended his Master's thesis!

Grants

The Role of Mesoaccumbens Dopamine in Pain and Prescription Opioid Addiction. Department of Veterans Affairs NURA-002-19S. **PI: Dr. Amanda Pahng** (below).



Chronic binge alcohol in SIV infection: Impact of adipose tissue stiffness on metabolic dysfunction. NIH/NIAAA 1F31AA028459-01. **PI: Jonquil Poret**. Mentor: **Dr. Patricia Molina**.

Dr. Danielle Levitt was selected for the APS Postdoctoral Fellowship. However, she had to decline the fellowship because of a concurrent NIAAA F32 award.



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Publications

Fucich EA, Stielper ZF, Cancienne HL, Edwards S, Gilpin NW, Molina PE, & Middleton JW. (2020). Endocannabinoid degradation inhibitors ameliorate neuronal and synaptic alterations following traumatic brain injury. *J Neurophysiol.* 123(2):707-17. PMID: PMC7052644.

Levitt, DE, Yeh, AY, Prendergast, MJ, Budnar, Jr., RG, **Adler, KA,** Cook, G, **Molina, PE, & Simon, L.** (2020). Chronic alcohol dysregulates skeletal muscle myogenic gene expression after hind limb immobilization in female rats. *Biomolecules.* 10(3): E441. DOI: 10.3390/biom10030441. PMID: 32178412.

Maffei VJ, Ferguson TF, Brashear MM, Mercante DE, Theall KP, **Siggins RW, Taylor CM, Molina P, & Welsh DA.** (2020). Lifetime alcohol use among persons living with HIV is associated with frailty. *AIDS.* Feb 1;34(2):245-254. PMID: PMC6960033.

Oakes, JM, Xu, Jiaxi, Morris, TM, **Fried, ND, Pearson, CS, Lobell, TD, Gilpin, NW, Lazartigues, E, Gardner, JD, & Yue, X.** Effects of chronic nicotine inhalation on systemic and pulmonary blood pressure and right ventricular remodeling in mice. *Hypertension.* Mar 16 [ahead-of-print]. PMID: 32172623.

Weera MM, Schreiber AL, Avegno EM, & Gilpin NW (2020). The role of central amygdala corticotropin releasing factor in predator odor stress-induced avoidance behavior and escalated alcohol drinking in rats. *Neuropharmacology.* 166:107979. PMID: 32028150.

Presentations

Dr. Patricia Molina was the invited *keynote speaker* at the Annual Federal Women's History Heritage Month Observance. Her keynote address was titled "Alcohol Interaction with HIV Comorbidities". New Orleans VA Medical Center, Southeast Louisiana Veterans Health Care System, US Department of Veterans Affairs. New Orleans, LA. March 25, 2020.

Dr. Marcus Weera gave a talk titled "Central Amygdala Signaling in Post-Stress Avoidance Behavior and Escalated Alcohol Drinking" at the Gordon Research Seminar on Alcohol and the Nervous System, March 2020, in Galveston, TX.

Dr. Christian Montanari presented a poster at the Alcohol and the Nervous System Gordon Research Seminar (GRS; February 29-March 1, 2020) and Gordon Research Conference (GRC; March 1-6, 2020), Galveston, TX, titled "Chronic Nicotine Increases Alcohol Consumption in Adult Male Wistar Rats." This presentation won the *Post-Doctoral Fellow Poster Award* (see picture in "Recognition" section). He also presented a talk at Speaker at the Society on Research on Nicotine and Tobacco (SRNT) 26th Annual Meeting; March 11-14, 2020, New Orleans, LA, titled "Nicotine E-Cigarette Vapor Inhalation Effects on Nicotine & Cotinine Plasma Levels and Somatic Withdrawal Signs In Adult Male Wistar Rats."

Dr. Lucas Albrechet-Souza presented a poster titled "Sex differences in traumatic stress reactivity in rats with a history of alcohol drinking" at the Gordon Research Conference: Alcohol and the Nervous System in Galveston, TX (March 2020).

Zach Stielper presented a poster titled "TBI Alters Basolateral Amygdala Endocannabinoids in Alcohol Naïve and Alcohol Drinking Female Rats" at the Gordon Research Conference: Alcohol and the Nervous System in Galveston, TX (March 2020).

Dr. Elizabeth Fucich was selected to give a basic science oral presentation entitled "Preclinical evidence that prior stress exposure modulates outcomes from traumatic brain injury" at the 2020 North American Brain Injury Society meeting in New Orleans in February, 2020.

Professional Service

Drs. Stefany Primeaux, Danielle Levitt, & Elizabeth Delery judged the Junior division for the Greater New Orleans Science and Engineering Fair.

Dr. Danielle Levitt served as a grant reviewer for the National Strength and Conditioning Association Foundation.

Dr. Elizabeth Avegno chaired the 2020 Alcohol and the Nervous System Gordon Research Seminar in Galveston, TX (March 2020).



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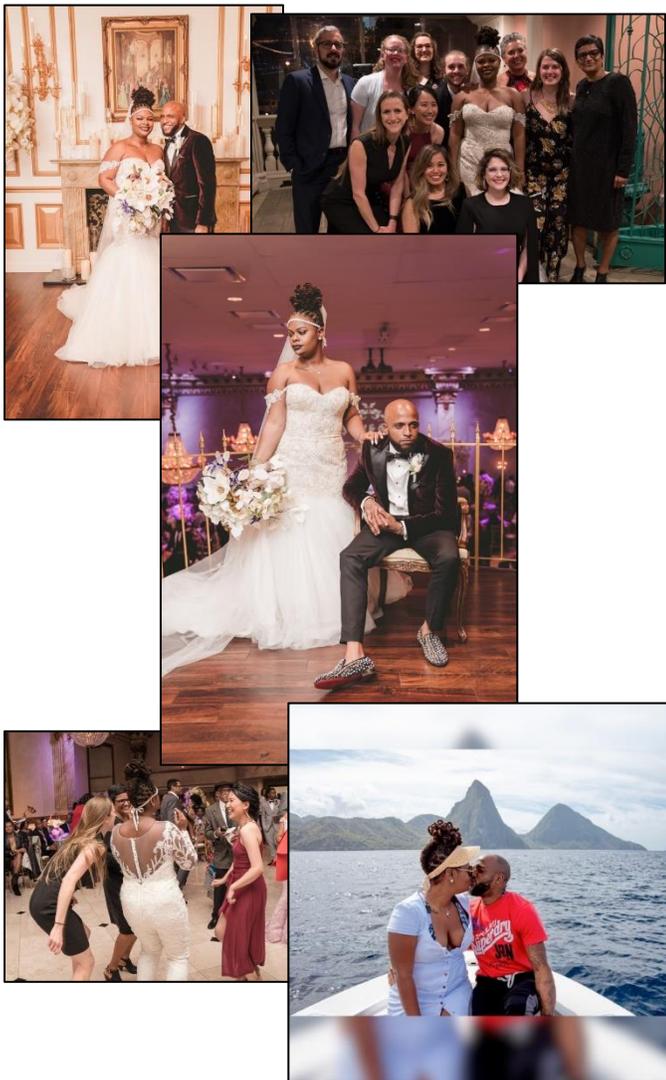
Notable Events

Dr. Lucas Albrechet-Souza and Pedro Neto enjoyed the holiday in Antigua-Guatemala (February 2020).



Deckard Avegno's first conference! He even has an official nametag ("Baby Avegno", left).

Jonquil Poret married Alton Decuir and they honeymooned in St. Lucia! (below)



Dr. Elizabeth Fucich married **Dr. Stephen Ford!** No pictures yet, but we hope they will share some when available.

Dr. Elizabeth Fucich accepted a position as Professor of Practice in Neuroscience at Tulane University. She will begin her new role on July 1, 2020.

What did Frejya destroy this time?

(Courtesy of **Dr. Bobby Siggins'** dog, Frejya)



Melissa Prestwood (right) has been selected as the winner of the "Best Face Shield in Physiology" award. We didn't know there was a competition either, but she wins.



Don't miss the Physiology (& friends) Word Search on the next page, curated by our very own **Dr. Elizabeth Delery**





Physiology Department WordSearch

Find Members of the Physiology Department below!

KGXOXFHKVFTILUOXUUAKKUGGTEMFHPJFJPGXRELT
 SUGUQBESUQVAQWCIDGEYVQQGOXSDEWUOTSSEDNAVA
 CTAGOWPZLYVUWVMTSLLTGBFUDMREDKGYLBATHEHR
 BAQFQBQQNKEGTLKYLPRESTWOODVLBVMWRKVCHI IH
 JMCGARRAHBMUWJZECSQVJQABBZMOTTYEUVPMTQVC
 FCZPICMKXJQSLAYFNADXBRYBMSLAXVNLALUCNWS
 HAOFUEPEJWSTDCHDVNSFEIUUNDLJKNAVNFHUGEGG
 FVZYLOSVMPUUROGLGDVRRQYEKCVROAZUOSEDCEVEGE
 PEPOAGOEAPKSQTBZRBYVEYDEONGVLOLRQIYRPA
 NGCYGFLTUQRWUTRROEWAXZAKIFCYYESMVFINSAJH
 MNPARETESRWAOEYXHEULOJBRERRWVIZSOCEEDEMA
 XOC CGVWQXRCLBMGMCTERNANXGZPICBTXISPLUWZZ
 SNHSRIBNOTE LPMETQKERTXJXTATVEWJ JXLXLEHCN
 CEDIPGEEQDIAAVSVBXOEGMAQVZSGWDS CRXJOOABB
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 NKDXHRWESNKG CARIXUXDAHNP GIPZOHWLTLEZTVON
 HXTFKNGHBJPIAGEEMP ORETLOLDENVNUKIDECREFB
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 NNLZYRELEDBXLOLYMHS GDZSRHVJGND CDIXAPNBSV
 GVOAFZ XVBRJHISENFENS DRKEZUDBDNCTCYROUYMQ
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AMEDEE	AUGUSTUSWALLACE	AUTIN	AVEGNO	BALL
BARATTINI	BASHA	BELMONTE	BRENNAN	BYERLY
CALLICOATTE	CHALAPATI	COLEMAN	CORLL	CUCINELLO
DELERY	DESOUZA	EDWARDS	FERGUSON	FORET
FRIED	FUCICH	GARDNER	GIDDAY	GILPIN
GONZALEZ	HAHNE	HARRISONBERNARD	HERRERA	JACOTTE
KELLEY	LEVITT	LEVITZKY	MARTINEZ	MCGARRAH
MCTERNAN	MOLINA	MONTANARI	NELSON	PAHNG
PORET	PORRETTA	PRESTWOOD	PRIMEAUX	RONIS
SCHRAT	SECCI	SHARFMAN	SIGGINS	SIMON
SOUZA	STIELPER	TEMPLETON	VANDESTOUWE	VARGAS
WEERA	WELSH	YEH	YUE	