

# The Lion Ledger

🍂 Fall 2023 🍂



## Note from the Editors:

Happy Fall, Y'all!

We hope you've been enjoying the cooler weather and beautiful leaves. It's officially time to don your coziest sweater, steep your tea, and read the Fall edition of the Lion Ledger! There's some great stuff in this edition, including local event features (go vote please!, see page 4), seasonal scientific curiosities, and some of the most noteworthy recent science happenings (Nobel Prizes)! We've also introduced spotlight features on some of the faculty and administrative staff who work hard to make the College of Medicine what it is (see page 12). If there's someone in the College of Medicine community who you appreciate and want to highlight, or if you want to contribute any other type of article or art piece, contact us ([lionstalkscience@gmail.com](mailto:lionstalkscience@gmail.com)) and we'll be happy to include it in the next edition of the Lion Ledger!

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## Local Events

### *Harrisburg Flea*

By: Alexis Scudder

Are you hunting for the best mug for warm coffee in the winter? Or are you trying to find the most fabulous pair of jeans that have been upcycled and made new? Look no further than the Harrisburg Flea! In an era of fast fashion, the Harrisburg flea provides a place to find unique items made by people in the community. Hosted in the Harrisburg Midtown Cinema parking lot from May to October and inside Strawberry Square from November to April, it runs from 9:00 a.m. to 3:00 p.m. on the first Saturday of every month.

The flea is described as a “monthly, urban market that features handmade, artisan, and vintage goods” that strives to “create a platform for growth in the community by bringing artists, small businesses, and patrons together in one place.” ([hbgflea.com](http://hbgflea.com)). For those like me, who attend almost every month, the flea makes sure to switch up some of the vendors, so you always find something new or return to buy something else from your favorite artist. First founded in 2015 by two friends, Mary Imgrund, and Meghan Weaver, they wanted to facilitate a place where small businesses of artists and makers in the City of Harrisburg could come together and highlight their work. Since then, the HBG Flea has been a beacon of the community.



You can buy handmade pottery, funky earrings, hand-poured candles, and vintage clothing. Many items are reasonably priced and accommodate a graduate student’s budget. My favorite purchases include a dragon scale-esque mug, a pair of jeans with Van Gogh’s *Skull of a Skeleton with Burning Cigarette*, and a candle that smells like spiced fig.

During the summer, the flea is surrounded by other highlights of Harrisburg, such as the Harrisburg Midtown Arts Center (HMAC), the historic Broad Street Market, and the Midtown Scholar bookstore. During the winter, you can walk around the Capital Complex or grab a coffee at Little Amps Coffee Roasters on 2nd Street before

heading to Strawberry Square. Beware that most parking is street parking, but it is free around most areas.

Anatomy graduate student Jordan Tanner says, “I love the flea because it’s a great way to support local businesses. There’s always something for everyone! From candles to jewelry to hot sauce and honey. And it’s a great way to have a little retail therapy!”

For more information and the list of vendors, visit [www.hbgflea.com](http://www.hbgflea.com) or follow them on Instagram @hbgflea.



## *What do Passwords, the Smell of Weed, & Bill Cosby have in Common?*

By: Jackson Radler

November 7<sup>th</sup>, 2023 is Election Day in Pennsylvania! While presidential elections generate the most political punditry and general hubbub, local elections are just as important, if not more so, for influencing change in your community.

### **What is a Municipal Election?**

Elections are held every November in Pennsylvania, but state and federal (including presidential) elections only take place in even-numbered years. In odd-numbered years, elections are called “municipal elections”.

### **Why you should care**

There are 3 openings on PA courts this year. While the US Supreme Court steals the spotlight, state courts still make important decisions that, although unnoticed, make a significant impact in our daily lives. Here are some examples of recent PA Supreme Court rulings that you may care about:

#### Commonwealth of Pennsylvania v. Barr II (2021)

PA Supreme Court rules that warrantless searches by law enforcement officers cannot be justified by the smell of cannabis alone.<sup>[1]</sup>

#### Commonwealth of Pennsylvania v. Cosby (2021)

PA Supreme Court rules that sexual assault convictions and sentences against Bill Cosby over the rape of Andrea Constand must be vacated, and Cosby must be released from prison.<sup>[2]</sup>

#### Commonwealth of Pennsylvania v. Davis (2019)

PA Supreme Court rules that law enforcement officers cannot force individuals to divulge any of their passwords, as per the Fifth Amendment.<sup>[3]</sup>

### **Registering to Vote**

Not sure if you’re registered to vote? [This tool](#) from vote.pa.gov will show you you’re ready for Election Day.

If you’re not already registered to vote at the time of reading this, you won’t be able to vote in the 2023 Municipal Election. Lucky for you though, there’s still plenty of time to get registered before the 2024 election! You can fill out this [easy online form](#).

### **Polling Locations**

Your polling place depends on your home address. Thankfully, PA Voter Services has a great tool for [finding your polling place](#). Polls will be open from 7 a.m. - 8 p.m.

### **Mail-In Ballots**

I can already hear you saying “*But November 7th is a Tuesday. I have to work*”. I get it, I do too, and I’m angry about it. Would making Election Day a federal holiday help fight the ongoing problem of voter suppression in the US? Definitely.

In fact, 12 states and territories have already made it a civic holiday...but not Pennsylvania. Luckily, we in PA can get a mail-in ballot, no justification required. [There’s still time to request a mail-in ballot](#) (until Oct 31<sup>st</sup>). If you have a PA Driver’s License, it’s a very easy online form. If not, you’re still eligible, but you’ll have to mail in a paper application. The deadline to return mail-in ballots is 8 p.m. on Nov 7<sup>th</sup> (Election Day).

### **Okay, so who’s on the ballot?**

#### PA Supreme Court

- Daniel D. McCaffery (D)
- Carolyn Tornetta Carluccio (R)

#### PA Commonwealth Court

- Matt Wolf (D)
- Megan Martin (R)

#### PA Superior Court

- Jill Beck (D)
- Timika Lane (D)
- Maria Battista (R)
- Harry Smail Jr. (R)

## **Tricks, Treats, and Bully Breeds**

By: Carli King

Every October is [National Pit bull Awareness Month](#) – a month dedicated to celebrating pit bulls. The “pit bull” is term commonly used to refer to a group of dog breeds that share many physical characteristics, including the American Pit Bull Terrier (APBT), American Staffordshire Terrier, Staffordshire Bull Terrier, the American Bully, and pit bull mixed breeds. This awareness campaign is aimed at addressing

misconceptions, promoting responsible pet ownership and adoption, ending breed-specific legislature, and advocating for these bully breeds.

We can all do our part in advocating and celebrating these breeds – from volunteering to donating to educating. I will admit to being biased when it comes to



**Carli's Pitt Bull, Belle**

these dogs, as I am the proud owner of an American Pit Bull Terrier, Belle. I love sharing Belle's adoption story and how she has undoubtedly changed my life for the better (if you have a furry best friend, I know you know what I am talking about!). The judgements you receive from individuals who have fallen to the misconceptions and myths surround these breeds can be overwhelming, but the love and happiness you get daily from adopting a bully breed is unmatched.

If you are interested in adopting a pit bull breed, volunteering with these breeds, or seeing adorable pictures of adoptable pit bulls, I

highly recommend following *Pitties Love Peace* (based in Elizabethtown, PA) on Facebook for local events and information.

## **This Season in Science** ***Keeping Yourself Bright During Darker Days***

By: Grace Wilkowski

As Autumn begins, the days get shorter and the opportunity to enjoy the outdoors lessens. Maybe you find yourself not going out as much, feeling tired, or lacking motivation to be involved like you used to be. Some may call this phenomenon the winter blues. The “winter blues”, or seasonal affective disorder (SAD) is a common disorder throughout the United States, affecting one in every twenty individuals, with higher rates in women. SAD is a type of depression that occurs during certain seasons, typically in the fall and winter. SAD can last for about 40% of the year or about five months. While some biological components play a role in experiencing SAD, it is usually thought to be due to shorter days and less sunlight triggering a chemical change in the brain.

You can combat feelings of SAD! While daylight gets shorter, you can use a special light to mimic the sun, to help you feel brighter. Using light therapy while you work at your desk can supplement the lack of sunlight. Additionally, holding yourself to realistic goals

can help remove unnecessary pressure during the season change. It may be beneficial to set up regular times to hang out with friends or join a fitness class to encourage yourself to get out of the house and do something fun! Eating well-balanced meals, with plenty of seasonal veggies will also help your body adjust to the changing weather. If you feel your emotions are stronger than just the change of seasons, help is available!

To learn more, please check out the links below:

[NIH SAD Fact Sheet](#)

[SAMSHA SAD](#)

[SAMSHA National Helpline](#)

[PSU Office for Professional Mental Health](#)

## ***Stop and Smell the Humus: How Fall Gets its Characteristic Scent***

By Laura Odom

If I ask you what the “scent of fall” is, what first comes to mind? For me, it would be the pumpkin spice candles that I spend half my stipend on. While we liven up our homes with notes of pumpkin, apple, and cinnamon, nature is manufacturing its own autumnal perfume. The ingredients may be less appetizing, but the result is the original scent of fall: decomposing leaves! To understand how we get this sweet scent, we'll first need to follow the terminal stages of the leaves' life cycles.

As the days get shorter and the air gets drier, leaves change color from the monochrome greens of spring and summer to dazzling shades of yellow, orange, and red. This transition is owed to decreased levels of the key components of [photosynthesis](#): sunlight, water, and chlorophyll. [Chlorophyll](#) is a green pigment that absorbs sunlight, facilitating the complex conversion of photons to glucose. As sufficient sunlight and water are required for chlorophyll production, Fall's diminishing sunlight and water supplies cause leaves to produce declining levels of chlorophyll until production ceases entirely. With chlorophyll out of the picture, pigments like [anthocyanins](#) and [carotenoids](#) are produced in greater quantities, coloring leaves shades of red and orange, respectively.

To prevent water loss in the drier fall months, the veins and [stomata](#) of leaves begin to close, trapping previously synthesized sugars within the vasculature of the leaf. Broad, flat leaves can weigh down trees when frozen, so these "[broadleaf](#)" tree species shed their sugar-laden leaves in the fall to survive until the following spring. This purging process is how leaves reach [decomposers](#) like fungi, bacteria, and insects that hide away in the earth, patiently awaiting a sweet snack – they don't even have to go trick-or-treating!

Fallen leaves form a layer of leaf litter that contributes to the [humus](#) of the forest floor (slightly less tasty than *hummus*, unless



**Fall colors at Hersheypark.** Even if you don't ride rollercoasters, you have to appreciate that view!

you're a slime mold or earthworm). Humus is the soil layer formed by decomposers as they digest plant and animal matter. This soil layer retains nutrients and moisture for flora and fauna alike, earning it the title of "[soil's life force](#)." During [humification](#), the formation of humus, the physical breakdown of fallen leaves by decomposers releases previously trapped sugars into the air. You likely know this sweet aroma well if you've ever frolicked through a leaf pile, crushing fallen leaves underfoot in a manner surprisingly similar to the nibbling done by decomposers. Therefore, the "scent of Fall" is released when decomposers munch (and feet crunch) on sweet fallen leaves.

P.S. – You can find a weekly "Fall Foliage" report on the [Visit Pennsylvania website](#). This report is updated weekly to predict when the best fall colors will be visible in

each county. According to the current report, Dauphin County should expect to see the best fall colors between October 26<sup>th</sup> and November 8<sup>th</sup>.

## *Mitigate Your Risk of Vitamin D Deficiency This Fall*

By: Shakila Shah

Now that summer's warmth has turned to crispy Fall days and hues of burnt orange, deep reds, and golds have rolled into the surrounding mountains and valleys of Central PA, it's easy to forget that dark and dreary days of winter are not far off. Many people are likely to spend the long, cold winter months almost exclusively indoors, resulting in what's often dubbed the 'winter blues'. Sunlight can work wonders to improve the mood! In the autumn months, as the northern



hemisphere tilts away from the sun, regions [above the 37<sup>th</sup> parallel](#) stop receiving enough direct sunlight for our bodies to produce adequate vitamin D, placing a large portion of the northern population at risk for vitamin D deficiency. [Vitamin D plays an essential role in human health.](#)

Vitamin D is required to absorb calcium, the primary component of our bones, making it essential to bone growth and repair. It is also important in supporting muscle function, brain cell activity, and cell growth. Vitamin D also plays a role in reducing inflammation and improving immune function. Often called the ‘sunshine vitamin’, vitamin D is produced in humans when the skin is exposed to the sun’s ultraviolet B (UVB) waves. UVB converts the precursor 7-*Dehydrocholesterol* to vitamin D<sub>3</sub> (aka *cholecalciferol*), which is then carried to the liver and then kidneys to transform it into active vitamin D (aka *calcitriol*). During this process, vitamin D picks up extra oxygen and hydrogen

molecules in the liver to become 25-hydroxyvitamin D, or 25(OH)D. This is the chemical that is measured to determine whether an individual has a deficiency.

[Vitamin D deficiency](#) is generally defined as a blood level of 25(OH)D lower than 20 ng/mL. Vitamin D deficiency is often associated with poor bone health, including osteoporosis and osteomalacia in adults, and rickets in children. While usually asymptomatic, clinical studies have found associations between vitamin D deficiency and higher rates of cancer, autoimmune diseases, cardiovascular and metabolic disorders. Vitamin D deficiency has also been connected to muscle weakness, mood disorders, fatigue, impaired wound healing, increased risk of infections, cognitive impairment in adults, depression (especially in the elderly), and severe asthma in children.

A variety of social determinants of health such as low socio-economic status, lack of awareness about the importance of vitamin D, dark skin, and a physical environment

that is not conducive to outdoor activities, such as urban areas with limited recreational space, are factors known to increase the risk of vitamin D deficiency. Obesity can also cause low vitamin D, as the fat-soluble vitamin is extracted from the blood by fat cells,

decreasing its release into the circulatory system in those with a BMI of 30 or more.

Increasing vitamin D in your [diet](#) (from foods like salmon, milk and dairy, egg yolks, mushrooms, tofu, tuna, and foods fortified with vitamin D), getting exposure to the sun, and taking vitamin D supplements as advised by a doctor can help increase vitamin D levels in the blood.

This fall and winter, beat the ‘winter blues’ by increasing your dose of vitamin D; visit the vast outdoors! Central PA offers walkable cities and towns, many with quaint eateries and boutique shops, and there are abundant farms offering fall festivals, activities, and pick-your-own produce. For all levels of enthusiasts (including those who must be dragged along by much more enthusiastic friends), local and state parks offer many hiking trails, campgrounds, stocked fishing spots, scenic excursions. [PA Dept of Conservation and Natural Resources](#) offers many ways to enjoy the outdoors this season.



**The 37<sup>th</sup> parallel.** North of this line, there is not enough sunlight in the winter to produce adequate vitamin D

## *Sustainability Tips for the Research Lab*

By: Savannah Moscon

1) The air cycling of your lab’s fume hood uses the same amount of energy as 3.5 homes! Shut the sash when the fume hood is not in use to save immense amounts of energy.

2) Avoid using sterile pipettes for measuring things that do not need to be sterile – I'm looking at you, researcher who uses a sterile pipette to measure milk or BCA for your western blot. Graduated cylinders are not a thing of the past!

3) Keep -80 and -20 freezers organized to limit time spent with the door open. Defrost freezers yearly and make sure dust does not build up on the coils behind the freezer to maintain efficient functioning. For bonus points, raise your -80 to -70 to save energy while maintaining sample integrity. See [this list](#) of samples at CU Boulder that have been kept at -70 for years without loss of integrity. Finally, participate in the My Green Lab [freezer challenge](#) to get points for your responsible freezer maintenance habits!

4) Do not discard non-biohazardous waste into red bags! All red bag waste undergoes an energy intensive autoclaving and grinding process so its processing is very energy intensive. Save energy by correctly sorting your waste.

5) Take advantage of material take-back programs from vendors. The best example is the [Polystyrene take back program](#) from Millipore Sigma.

6) Purchase items from the on-campus supply center to reduce material transportation.

## Science in the News

### *The Importance of Basic Research: a COVID Story*

By: Paige Elizabeth Bond

The 2023 Nobel Prize in Physiology or Medicine has been jointly awarded to Dr. Katalin Karikó and Dr. Drew Weissman for RNA research that led to the rapid development of the COVID-19 vaccine<sup>1</sup>. Drs. Karikó and Weissman met at the University of Pennsylvania where they found a common interest in the genetic molecule RNA<sup>2</sup>. Throughout decades of collaboration, the two made very important discoveries regarding the immune response to RNA. All the way back in 2005, they discovered that a modified nucleotide of uridine, a building block of RNA, prevented an inflammatory immune response caused by other *in vitro* RNA molecules<sup>1</sup>. The publication based on this finding was rejected by top journals *Nature* and *Science* but was eventually published in *Immunology*, a still-reputable journal but with a much lower impact factor<sup>1</sup>. Lack of recognition did not stop in the publishing world. The two

struggled to obtain funding for their ongoing work, partially because they were performing basic science that did not have an immediate application to human health. This lack of recognition reached a peak when Dr. Karikó, who was not tenured faculty, was forced into retirement from the University of Pennsylvania<sup>2</sup>. She was immediately offered a role as vice president of research by BioNTech, a company now famous for its production of the mRNA vaccine in response to the COVID-19 pandemic<sup>2</sup>.

Vaccines work by inducing an immune response to a particular pathogen, so that the immune system can quickly defend against future infections. Vaccines historically induce an immune response by exposing part of a virus, such as a surface protein, or by inducing the production of said protein through genetic vectors within cells. Compared to traditional vaccines, mRNA vaccines encode for a portion of a



Katalin Karikó

Prize share: 1/2



Drew Weissman

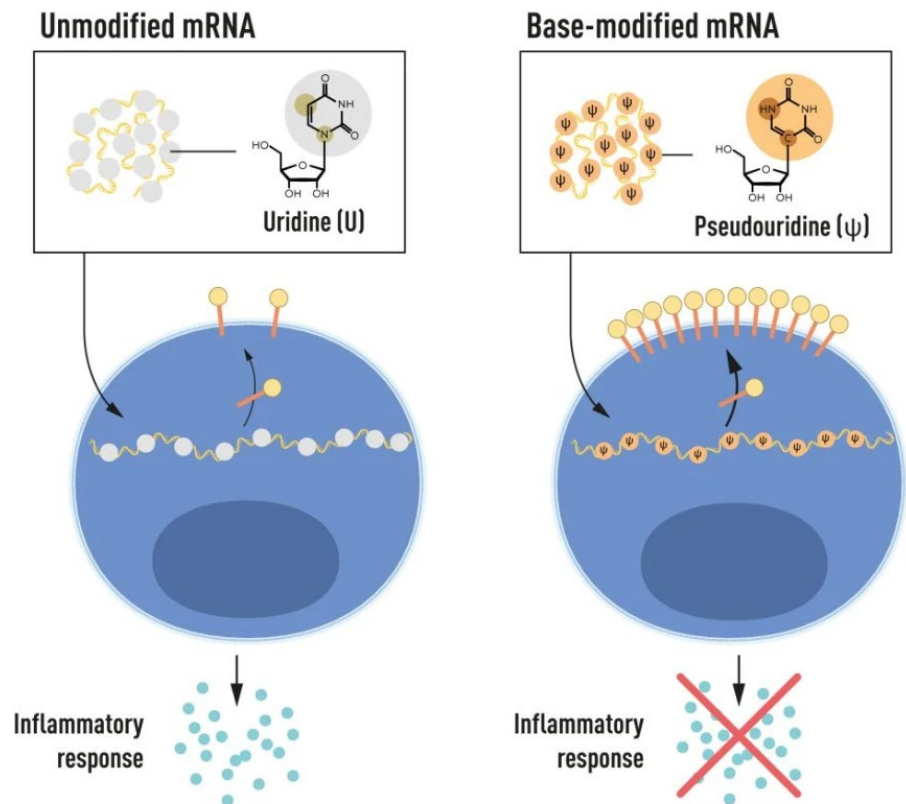
Prize share: 1/2

III. Niklas Elmehed © Nobel Prize Outreach



virus and utilize the cell's own machinery to translate the mRNA into a protein that corresponds to that virus portion. This then induces an immune response like that of a traditional vaccine, but mRNA vaccines do not require large-scale cell culture and can be modified quickly<sup>1</sup>. As evident in the COVID-19 pandemic, modifying a vaccine is important to combat the emergence of new virus variants. A huge hurdle for mRNA vaccines was the inflammatory immune response from *in vitro* mRNA synthesized in a laboratory. This is not a huge surprise, as one major goal of our immune system is to keep DNA and RNA of foreign pathogens from producing more virus particles that spread throughout the body. To overcome this, Drs. Karikó and Weissman produced mRNA with modified nucleotide bases. The building blocks of RNA are these nucleotide bases; however, modifications are often performed on these bases to direct them toward a particular part of the cell or so that they are not recognized as foreign genetic material. They determined that replacing uridine with base-modified pseudouridine significantly reduced the inflammatory immune response, a discovery that was essential for making the COVID-19 vaccine (Figure 1)<sup>1</sup>. In addition to decreasing inflammation, this modified RNA also increased protein production, which was another hurdle for RNA vaccines.

Despite funding difficulties, Drs. Karikó and Weissman continued



**Figure 1: Base-modified mRNA with pseudouridine does not produce an inflammatory response compared to unmodified RNA with uridine.** This crucial discovery was made by Dr. Karikó and Weissman in 2005, about 15 years before COVID-19.

to explore immunity and mRNAs because it was an idea that they both fervently believed in<sup>1</sup>. Their eventual success and recognition highlight the importance of basic research. It is important that scientific research is beneficial to society because most research utilizes tax dollars; however, the importance of scientific discoveries, especially from basic research, is not always obvious. Today's academic culture of "publish or perish" pushes academic researchers to focus on the topics most likely to gain funding and quick publications. We have lost the importance of studying the physical mechanisms of the world around us just to

simply understand them. Instead, every research project, especially in the biomedical sciences world, must be applicable to an immediate societal issue. There is nothing wrong with application-based research; however, this story shows just how important basic research truly is.

And to all my scientist friends out there, I will leave you with a quote from Nobel-Prize Winner Dr. Karikó herself, "I wish all of you to persevere...and have fun. Do not give up that easily"<sup>2</sup>.

## *The Importance of Diversity in Medicine*

By: Savannah Moscon

If asked to guess some of the most significant variables that affect a patient's postoperative outcome, many in the non-minority population would likely fail to predict that the race or sex of the operating physician is on the list. A [recent study](#) has highlighted that these factors play a very significant role in one's risk of post-operative complications including death. This study of over a million patients found that those operated on by male physicians had a 24% higher risk of death in the year following the surgery than those operated on by females. It makes you wonder how many people would ask for a female surgeon knowing it would decrease their risk of postoperative complications so dramatically! But how easy would it be to just ask for a female physician? Maybe not shockingly, the study had almost 7 times as many male physicians compared to female physicians, further highlighting the severe need for more women in the medical field. This study, published in the Journal of the American Medical Association (JAMA), sent shockwaves through the medical fields regarding the importance of diversity in medicine. Its impact was amplified further by [another JAMA study](#) showing that regions with more Black physicians have a longer life expectancy, with a lower life expectancy disparity between

White and Black populations. The significant life expectancy disparity between Black and White people has always been present and has, unfortunately, minimally improved over time. On average, Black men have a [50% higher risk of death](#) after elective procedures than White men. These studies show there are clear benefits in having the racial and gender backgrounds of doctors in an area correspond to the backgrounds of the population they are treating. Part of this can be due to increased sense of understanding of, and hence increased empathy for those of the same race. Further, medical decisions are made by physicians based on their OWN background, beliefs and daily practices so a lack of awareness of different cultures can hinder their treatment decisions. The full reason for the health disparity is highly complex and multifaceted; however, women and racial minorities have always been underrepresented in medicine and we are only beginning to quantify the real cost in terms of human lives. The benefits to public health and life expectancy are clearly very profound when women and minorities are accurately represented in the operating room. If we prioritize human life, we must prioritize women and minority representation in medicine

## PSU Spotlights

### *Uttara Seshu*

By: Grace Wilkowski



Uttara is a second-year Doctoral student in the Public Health (DrPH) program. Her concentration is in health organization systems and policy. Uttara's research focuses on Maternal Health Outcomes during COVID-19 in Pennsylvania. Uttara's research work is with Dr. Kristin Sznajder and her project with the Department of Health. Before attending PSU, Uttara received her Master's in Sustainable Development Practice with a specialization in women's health from The Energy Resource Institute (TERI) in India. Uttara was brought to the public health field after working in the sexual and reproductive health field in India. After working within this space, she wanted to establish Academic grounding in Public Health. She chose to apply to Penn State due to current projects within the women's health field at PSU that caught her attention. Additionally, Penn State has a dedicated center for Women's Health Research at

the College of Medicine that attracted Uttara. Uttara elected to apply for her DrPH after working within various levels of government in India, especially the Department of Health. She feels it felt like a natural turn of events to study health policy. She was intrigued by the processes involved in public health and policy, especially advocacy, which is what led to her wanting to receive another degree.

Uttara is highly involved on campus. She is the Co-president of PHASE (Public Health Association for Service and Excellence), which is a student-led public health organization that focuses on facilitating conversations around public health. PHASE works with community-based organizations to facilitate volunteer activities for them. Uttara is also engaged in multiple global health activities. She is the current Campus Representative for CUGH (Consortium of Universities for Global Health), and works with the Burnet Institute, on a Bangladesh-based Menstrual Health Project.

Outside of school, Uttara loves to cook and host parties with friends at Penn State. She is a trained Indian classical dancer too! She enjoys meeting new people and engaging in thought-provoking conversations. She is a feminist, and you will often find her yapping about women's empowerment and women's health issues! She states that she is a conversationalist, and if you ever want to complain about men, she is your person! A fun fact about her is that she has

a bad sense of humor, and is often cracking horrible jokes. One piece of advice she has never forgotten is “walk the talk!”.

## *Natasha Morales*

By: Mindy Johnson

Natasha Morales came to the College of Medicine in 2020 from Boston, Massachusetts to pursue a PhD in Anatomy. Prior to her arrival in Hershey, PA, she earned her BS in Behavior and Health and BA in Psychology from Boston University. She found her passion for anatomy while serving as a Human Anatomy Lecture Learning Assistant during her undergraduate career.

I feel incredibly privileged and proud to call Natasha my colleague. She is an incredibly hard worker, reliable co-TA, and remains humble and poised throughout the trials, tribulations,

and victories we students experience.

Natasha wasted no time becoming fully engaged in research activities as a graduate assistant upon joining the lab of Dr. Julio Fernandez-Mendoza, working on her dissertation examining the impact of the circadian rhythm on obesity-related cardiometabolic outcomes in youth. Furthermore, she was awarded the American Heart Association Predoctoral Fellowship, has published three first-author papers to date, and has attended and presented at numerous conferences. These accomplishments underscore Natasha's development as a graduate student, specifically her high standards and expectations for excellence in research.

Natasha's ability to balance and give 100% to both research and teaching is exemplary. She is



**Natasha Morales**



committed and dedicated to being the best educator that she can be, and to showing up to aid in the success of her students. I always knew that I could rely on Natasha and trust that she was giving her teaching duties her full attention. She is always prepared, professional, and maintains a calm demeanor (which are crucial traits during weeks where we would spend more time inside the anatomy lab than outside of it with multiple student cohorts!).

Her teaching efforts are recognized and overwhelmingly supported by not just myself, but medical, physician assistant, and graduate students, and faculty as well. For example, Dr. Craig Goodmurphy, professor in the Department of Radiology, director of Ultrasound Education and Associate Director of Human Structure Education comments, "She is kind, gracious, astute, hard-working, and reliable. Interactions with her always include the three P's of: Professional, Prepared, and Pleasant. Indeed, she is a bright star amongst stars..."

Laura Odom, a 3<sup>rd</sup> year Anatomy PhD candidate expressed, "Natasha is one of the most dedicated people I know. She has taught hundreds of students since arriving here at the College of Medicine, all while generating an extensive body of noteworthy research. Even with numerous responsibilities on her plate, Natasha is unceasing in her kindness and altruism. Natasha is someone you can seek out for

*assistance, for advice, or if you just need an interaction to brighten up your day."*

In addition to other TAs, students who have had Natasha as their TA are always incredibly appreciative of her efforts and dedication to their success. Jordan Tanner, a 2<sup>nd</sup> year Anatomy student comments, "Natasha is an amazing TA. She is very patient and excels at helping students by meeting them at their individual level of understanding of the material. Despite being one of only two TAs for 3 different programs, Natasha would always work to provide review sessions whenever students would ask. In addition to being an excellent TA, Natasha has also been heavily involved in her academic research by presenting at numerous symposiums and receiving a fellowship." In addition, Louise Blaha, a 2<sup>nd</sup> year Anatomy student, stated that, "Natasha stands out as a TA for her positive attitude, incredible work ethic, and patience. She was always willing to take the extra time to help struggling students and never made me feel stressed or worried about learning."

Natasha was recently recognized as part of the Exceptional Moments in Teaching program of Penn State Health and Penn State College of Medicine. Additionally, she was selected as a recipient of the 2023 Excellence in PA Teaching Award as part of the Physician Assistant Program, and together Natasha and I were selected by the Graduate Student Association to be recognized by

the Leaders Celebrating Leaders program.

In summary, I cannot speak highly enough of Natasha. She is everything that you would hope for in a researcher, educator, colleague, and most importantly, friend. Penn State College of Medicine is very lucky to have her as she is a transformative role model in research and teaching for other students. I look forward to witnessing all that she accomplishes during the remainder of her time at the College of Medicine and in her future career endeavors.

## *Dr. Andrea Rigby*

By: Grace Wilkowski



Dr. Andrea Rigby is an associate professor in the Department of Minimally Invasive Surgery and a licensed clinical psychologist. She is an alumnus of The Pennsylvania State University's where she studied Individual and Family Studies. She went on to

receive her Master's of Education from Penn State Harrisburg. Dr. Rigby wears multiple hats in her career, including clinical practice, research, and teaching. For Dr. Rigby, it was a natural fit to transition into working for the College of Medicine. She feels it is an honor to be part of Penn State Health; the opportunity to teach and conduct research alongside her clinical work is particularly rewarding. Outside of work, Dr. Rigby can be found walking her puppy, golfing, reading, traveling, playing with her granddaughter, and enjoying Penn State Football (of course!).

Within her clinical practice, she focused on bariatric surgery and weight management where she performs pre-surgical psychological evaluations and testing. Additionally, she provides individual and group therapy for weight management. Dr. Rigby's research is focused on social determinants of health which include food security, weight bias, interventions for sustaining a healthy lifestyle, and dysregulated eating, such as binge eating, food cue reactivity, night eating, and grazing. The best parts of her work include working with weight management patients over the long-term; both pre- and post-bariatric surgery. It is gratifying to see patients achieve their goals over time and to be part of their journey.

As an educator, Dr. Rigby supervises predoctoral interns as part of the psychological internship program, acts as course

director for Social Determinants of Health 577, and facilitates biweekly meetings supporting medical students during clerkship. As a graduate faculty, she also serves on dissertation committees for students in the DrPH program. She feels working with students is incredibly rewarding stating that while her role is to teach, she is also learning from the students. She has enjoyed the opportunity to collaborate with multiple researchers and has had the privilege of working with amazing colleagues.

Dr. Rigby prioritizes a work-life balance through self-care ensuring she finds time to exercise, sleep, and maintain healthy eating habits that allow her to prosper within her work. She has also found her strategies for handling stress such as walking and reading help clear her mind. She finds this is easy because she loves what she does and can't imagine not being a psychologist!

Her one piece of advice for graduate students is "stay present." During her master's degree, she would visualize herself at graduation before every class. During her doctoral program, she decided to adopt a mindset of staying focused on and appreciating the present, enjoying the path, not the destination. She feels it helped her deal with the stress of the doctoral program and kept her more engaged in her coursework. Dr. Rigby encourages students to reach out to her regarding her research, especially if they have an interest in eating

habits, weight, and related psychological issues and social determinants.

## **Brittany Waite**

By: Julia Lesperance

**Department:** Pediatrics

**Position:** Administrative Support Coordinator 3

**Years in position:** Just over 1 year



**How would you describe your role and how it relates to research/academia/medicine?**

I help in coordinating purchase orders for the research labs and ancillary groups such as the social workers and Cancer Oncology group, processing reimbursements, hiring staff and onboarding, scheduling seminars and booking speakers for our Pediatric Cancer Seminar Series. My role is the point person behind-the-scenes to help the labs run smoothly.

**What is the most challenging or frustrating part of your job?**

Waiting on approvals from various departments regarding funding. Since I'm still relatively new, I'm learning how to handle various scenarios that arise on a daily basis, from invoices that need paid with urgency to hiring and securing Visa's for new and existing employees.

**What is one thing that surprised you about your job?**

How imperative the funding is to continue not only the science aspect but also hiring adequate staff to run the labs. I didn't realize how quickly folks come and go in the labs. Everything comes back to money!

**What is one thing that researchers can do to make your job easier?**

I have a great group and I feel lucky they are so self-sufficient. The lab managers are great and everyone (for the most part) is very responsive which makes my job much easier.

**What did you do before you were an Administrative Support Coordinator?**

I was an Administrative Associate in Pediatrics for 6 years and prior to that I was in customer service at Penn State for 11 years.

**If you could have any job, real or imaginary, what would it be?**

I would say caring for animals in some aspect. Maybe running a rescue.

**What is your favorite way to cheer up after a bad day?**

I would say getting some fresh air or laughing with my family. More times than not, food often times solves any frustrations I have.

**What is your go-to Starbucks order?**

I have two. Hot vanilla latte with an extra shot and a shaken espresso with ristretto and blonde espresso roast, 2 pumps of caramel and sweet cream cold foam.

**If you could magically have the answer to any unknown scientific question, what would it be?**

Sticking with the cancer theme, what causes cancer and how can we fix it.

**Things Colleagues have to say about Brittany:**

My job would be so much harder without Britt's support! She is always willing to take the time to help with problems and frequently goes above and beyond to explain the administrative side of processes and resolutions. Her kind demeanor makes it less intimidating to reach out, and working with someone so friendly and helpful makes the department feel more welcoming and connected. (Julia, RPM, Pediatrics)

**Fall Recipes:**

***Oven-baked Sweet Potato Fries***

By: Elise Shealy

Makes 2 servings

**Ingredients**

- 1 large sweet potato
- 2 Tbsp olive oil
- 1 tsp garlic powder
- 1 tsp paprika
- 1 tsp salt
- ½ tsp black pepper

1. Preheat oven to 400 degrees F. Line a baking tray with aluminum foil for easier cleanup. (If you choose to not use foil for increased crunch, make sure to grease the tray.)
2. Cut the sweet potato in half hot-dog style with a sharp knife. (If the sweet potato is too hard, try pressing the point of the knife into the potato, then sliding the knife to make the cut.)
3. Lay flat sides of the potato on the cutting board. Slice into long fry shapes, ½ inch to an inch thick. (don't worry about fry shapes that are too different.)
- 4) Pour olive oil over cut fries, stir to coat. Add spices and place on tray.
- 5) Bake for 20 minutes @ 400F
- 6) After 20 minutes, flip the fries with spatula or fork to make sure both sides get crispy.
- 7) Return to oven 10-15 minutes, remove tray, and remove fries from tin foil.
- 8) Enjoy! Best served out of oven; fridged leftovers are more flavorful but do not retain their crispiness.



# Apple Cinnamon Coffee Cake

By Natasha Morales

Makes 8 servings



## Ingredients

### Batter:

- 2/3 cup white sugar
- 1/2 cup unsalted butter, softened
- 2 eggs
- 1 1/2 teaspoon vanilla extract
- 1 teaspoon ground cinnamon
- 1 1/2 cups all-purpose flour
- 1 3/4 teaspoon baking powder
- 1/2 cup milk

### Apple Filling:

- 1/3 cup brown sugar
- 2 teaspoons ground cinnamon
- 1 apple, peeled and chopped into cubes
- 1 lemon
- 1 cup of water

### Instructions:

1. Preheat oven to 350F.
2. Grease an 9x5-inch baking pan; set aside.

3. Mix softened butter until it lightens and becomes creamy, then add the sugar.

4. In a separate bowl, sift the flour and baking powder, and set aside.

5. Once the sugar is incorporated, add the two eggs, followed by the vanilla extract and ground cinnamon.

6. Take turns adding the dry mixture (flour and baking powder) and the milk into the batter.

7. In a separate bowl, stir the brown sugar, 2 teaspoons of cinnamon together, and apples.

8. Pour half of the batter into the baking pan, then add half of the apple filling and repeat.

9. Bake in the center of the preheated oven until a toothpick inserted into the center comes out clean, about 40 minutes. Let cool to room temperature, about 30 minutes, before slicing and serving.

## *The White Rustlin': A Fall Variant of the White Russian*

by Anthony Habib Rahawi

Pumpkin pie spice (aka “pumpkin spice”) is a classic flavor that is almost synonymous with Fall. While the spice itself contains no pumpkin, the blend of cinnamon, ginger, nutmeg, allspice, and cloves can be added to almost any drink or dessert to put you in the mood for crisper weather, falling leaves, and flannels. Of all the pumpkin spice recipes, nothing is more classic than the Pumpkin Spice Latte (PSL).

The PSL is one of the most iconic ways to wake up on a Fall morning. The decadent spice blends perfectly with the coffee and cream, giving you some much-needed flavor to go with your morning fuel. However, what if you want to enjoy that same flavor after a long day of studying or running experiments? In comes the White Rustlin’.

When trying to create a cocktail that would exemplify the tastes of Fall, I thought of the White Russian as a starting point. The White Russian is a classic cocktail that mixes two parts vodka, one part coffee liqueur, and a splash of cream to create the taste of a boozy latte with no caffeine. From there, I came up with the idea of the White Rustlin’, using pumpkin spice creamer to give it the vibe of a PSL. If you’re looking for the the taste of a PSL with alcohol at the end of a long day, try making this simple drink!



**The White Rustlin'** a Fall-inspired mixed drink concocted by Anthony Habib Rahawi

## Ingredients

- 2 oz vodka
- 1 oz Kahlua
- Pumpkin Spice Creamer
- Cinnamon sugar
  - Cinnamon stick

## Instructions

1. First, take a flat plate and spread cinnamon sugar onto it. Then, fill a small bowl with water. Dunk a short glass upside down into the bowl of water to moisten the edges. Take the glass and dunk it upside down onto the plate with cinnamon sugar. Rotate the glass to pick up as much cinnamon sugar as you can.

2. Once the cinnamon sugar rim has been created, fill the glass with ice.

3. Pour 2 ounces (approximately 1 shot) of vodka.

4. Pour 1 ounce of Kahlua.

5. Fill the rest of the glass with pumpkin spice creamer. If you can't find pumpkin spice creamer, pour in 1 tsp of pumpkin spice extract, then top off the glass with any non-flavored creamer.

6. Add a cinnamon stick for garnish.

Optional: Add whipped cream and additional cinnamon sugar to the top of the drink right after adding the creamer for a little extra sugar!

7. Enjoy!

I would like to thank Brandon Buss for acting as my taste tester for the cocktail.

Thank you for reading the Fall edition of the Lion Ledger! If you have something you would like to contribute to the next edition, or if you're interested but don't know quite where to start, email us at [lionstalkscience@gmail.com](mailto:lionstalkscience@gmail.com).