The Lion Ledger

Fall 2026



Fall Cover Art by Natale Hall, 4th year Biomedical Sciences PhD Student

Note from the Editors:

Spooky, scary skeletons may send shivers down your spine, but the Fall Lion Ledger is all treats, no tricks! While this edition is full of articles perfect for pairing with a warm cup of apple cider, Natale's piece on how climate change has affected this season's apple crop might have you looking at your next mug a little differently. Next up, Habiba tells us all about a newly discovered species of wild cat, and Elise dives into the science behind this year's Nobel Prize winners. On a more personal note, Jay shares all about the reality of when your PI decides to move institutions in the middle of your graduate school career. Need to take a break from long hours in lab? Katie rounds up the best happy hours in Hershey sure to take your mind off of your Western Blots! And if you need ideas for what to bring to an upcoming Friendsgiving, Paige, Natale, Jenny, and Ceyda have you covered with four fall-inspired recipes guaranteed to have your friends going back for seconds. Have an idea for a future Lion Ledger piece? Reach out to us at lionstalkscience@gmail.com — we'd love to feature it in our next edition!

Featured Articles

This Season in Science

How Do You Like Them Apples? by Natale Hall 3

Science in the News

Meet the Tilcayo: A New Wild Cat That Was Hiding in Plain Sight by Habiba Abdelhalim 4

The Nobel Prize 2026: How Microbes are Transforming Medicine (Again) by Elise Kersten 5

Get Involved

Don't Panic: How to Handle Your PI Moving Institutions by Jay Kang 6

Reviews & Recommendations

A Grad Student's Guide to Happy Hour in Hershey by Katie Kimbark 8

Fall Recipes

Good Soup: Apple and Lentil Soup Perfect for Fall by Paige Bond 9

Butternut Squash Mac and Cheese by Natale Hall 9

Overnight Oats: Fall Edition by Jenny Lausch 10

A Cozy Fall Favorite: Homemade Mulled Wine by Ceyda Yalcin 11

This Season in Science

How Do you Like Them Apples? Climate Change Comes for Pennsylvania's Orchards

By: Natale Hall



Figure 1: Apple tree stages from dormant to fruit.

As a Florida-born Pennsylvania transplant, one of my favorite parts of the fall season is the apple harvest. Every year I set aside at least one full day for apple picking followed by cooking and baking every apple-based treat I can conceive of. So, when I saw the first patch of orange-red appear in the trees this year, I hopped on Google and searched "u-pick apples near me." What I found was website after website with the same message: "Due to a spring freeze, there will be no apple u-pick this season." I was disappointed, but I was also curious. What was this freeze? And how could one cold night in the spring wipe out apples in the fall? The answer, it turns out, has a lot to do with climate change.

Warm Winters, Late Freezes

The average surface temperature of the Earth has increased by about 2°F since the beginning of the 1900s, which has resulted in long-term alterations in global and regional climate patterns. Among many other effects, climate change causes hotter summers, milder winters, and even shifts in the timing of the seasons themselves. Across the Northern Hemisphere, spring has been showing up earlier. One study that tracked the first signs of spring warmth from 1955 to 2002 found that leaves and blossoms were appearing roughly a day earlier each decade. That may not sound like much, but for plants like apple trees that take their cues from the weather, a few days can make all the difference.

On apple trees, apples grow from special buds on fruiting branches, and all winter those buds lie dormant to preserve energy (Figure 1, Panel 1). Like the rest of us, the buds need their beauty rest. Most apple varieties need around 1,000 hours of "sleep" at temperatures below 45°F before they are ready to wake up. This is the tree's internal clock: once it has logged enough cold hours, the tree knows winter is mostly behind and spring is on the way. To begin the blooming process, the tree waits for a second signal: a stretch of warmer weather above 45°F. Only then do the fruiting buds start to swell and open, moving through a series of stages that passes through full bloom (Figure 1, Panel 7) before bearing fruit.

The trouble is that each step toward bloom leaves the potential fruit more vulnerable. When the fruit is dormant, it can withstand temperatures well below freezing. However, in full bloom, the delicate flower can suffer significant damage starting around 30°F, which can ultimately impair or even kill the fruit itself.

Scientists at Cornell University looked at decades of orchard records from the northeastern United States and found that apple trees were blooming about a week earlier in 2001 than they were in 1965. Here in Pennsylvania, researchers found that

the temperatures in March and April matter most: the warmer those two months are, the earlier the trees bloom. The catch is that the last frost of the year hasn't moved up to match these warmer days. In central Pennsylvania, the final freeze still typically occurs sometime between late April and mid-May. So, the trees are waking up earlier, but the danger period ends at about the same time it always has. Together, the combined effect of warmer winters and a late freeze could mean catastrophic consequences for apples…and is exactly what happened this past spring.

The Fallout

Following the larger trend towards earlier blooms, this past spring, apple trees across Pennsylvania erupted into full bloom in mid-April after several days of record high temperatures and sunshine. Then, on the night of April 21st, temperatures plummeted into the low 20s, when the trees were at their most vulnerable. As farmers across the state assessed their crops, they quickly recognized telltale signs of irreversible damage: dark brown tissue in the center of the immature fruit, indicating the fruitlet has died (Figure 2).



Figure 2: Healthy (L) versus damaged (R) apple fruitlets. Across Pennsylvania the morning of April 22nd, 2026, hundreds of farmers inspected their crops to discover damaged fruit.

As the day progressed, it soon became clear just how staggering the loss was. It is estimated that between 70 and 95% of the apples were lost in Pennsylvania, with upwards of 60 farms reporting a total crop loss. Statewide, the Pennsylvania Department of Agriculture says this amounts to a combined loss of $150-$200 million for Pennsylvania fruit growers. In fact, the freeze event was so catastrophic that it was declared a natural disaster, and the USDA's Farm Service Agency was ordered to extend emergency loans to the farmers who suffered extreme losses.

Nothing can bring back the apples and other fruit lost on the night of April 21st. Similarly, no single orchard can stop the shifting seasons behind these early blooms and unpredictable freezes. Farmers can prepare for the next cold night, for example by stockpiling tinder and fuel to light controlled fires that keep their orchards just warm enough. But for now, most are scrambling to optimize their summer harvest to make up for the lost revenue. In the meantime, local orchards could use your support, so stop by for pumpkins, squash, or whatever produce managed to escape the freeze.



Science in the News

Meet the Tilcayo: A New Wild Cat That Was Hiding in Plain Sight

By: Habiba Abdelhalim

When you picture the discovery of a new species, you probably imagine a tiny beetle or a strange deep-sea creature, not a cat. Cats are among the most studied mammals on the planet, yet a new study reveals that one has been slipping under the radar all along. By reading the complete genomes of South America's tiger cats, researchers uncovered a brand-new species, the first new cat species described in over a century!

Tiger cats are small, spotted wild cats, roughly the size of a house cat, that live in forests and savannas across Central and South America. For decades, scientists have argued over how many species tiger cats actually represent. These cats look strikingly similar, with only subtle differences in coat pattern and body proportions, making them a classic example of a cryptic species complex: a group of animals that look alike but may be genetically distinct. Adding to the confusion, the original tiger cat, *Leopardus tigrinus*, was named in 1775 from a single illustration of an animal from French Guiana. Because no DNA had ever been collected from tiger cats in the Guianas, scientists could not tell which living population was the "true" *L. tigrinus*. To settle the debate, the researchers analyzed the complete

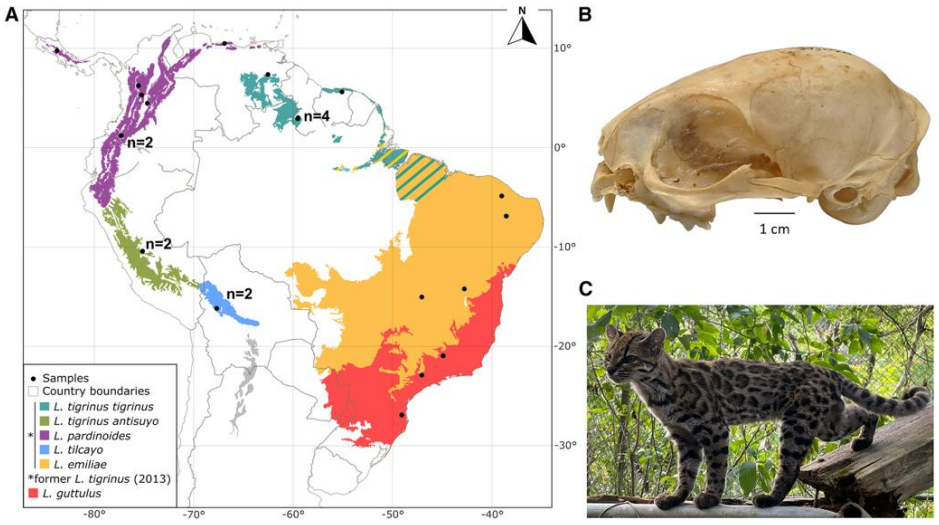


Figure 1: (A) Map of Central and South America showing where each tiger cat lineage lives and where the genome samples were collected. (B) Skull of a museum specimen from Guyana; researchers collected tiny fragments of inner-ear bone through the ear canal to extract DNA without damaging the skull. (C) A live tilcayo (*Leopardus tilcayo*), the newly described species from the Bolivian Yungas. Adapted from Lescroart et al., 2026.

genomes of 38 cats from the genus *Leopardus*, a group of small South American wild cats that includes tiger cats along with relatives like the ocelot and margay. More than two dozen of these were tiger cats from eight countries. Because tiger cats in the Guianas are so rare, the team turned to museum collections, extracting DNA from the bones and skins of specimens that had been sitting on shelves for decades (Figure 1).

The genomes told a clear story: tiger cats are not one species, but five! Scientists can tell groups are separate species when their genomes show they have been evolving on their own paths for a long time, with little mixing between them. Each of the five tiger cat groups formed its own distinct branch on the family tree. Cats from the cloud forests of the Bolivian Yungas, long assumed to belong to the same species as their northern Andes neighbors, turned out to be a distinct lineage that split from its relatives about 1.4 million years ago. The researchers named this new species *Leopardus tilcayo*, after "tilcayo," the name local communities in the Bolivian Yungas already use for this cat. It doesn't stop there; tiger cats from Peru's Yungas forests were not most closely related to their Andean neighbors, but to tiger cats living thousands of kilometers away in the savannas of the Guiana Shield. Because these two populations split roughly half a million years ago, the team described the Peruvian cats as a new subspecies, *Leopardus tigrinus antisuyo*, named after Antisuyu, a region of the Inca Empire. The genomes also revealed past hybridization, when two different species mate and have offspring, mixing their DNA, and mitochondrial DNA, which is inherited only from the mother and is often used to identify species, frequently told a different story than the rest of the genome. This helps explain why tiger cats confused scientists for so long.

Why does this matter beyond the name tags? Conservation protections are largely built around species. Until now, the International Union for Conservation of Nature (IUCN) Red List assessed most of these cats together as a single "vulnerable" species, which can mask how much trouble each population is actually in. The genomes also showed that tiger cat populations have been shrinking over the long term, with some lineages dropping by as much as 80% between the Ice Age and today, and all of them carrying low to moderate genetic diversity compared with other wild cats. Each of the five species now needs to be evaluated and protected on its own.

The study is a powerful reminder that even among the animals we think we know best, there is still hidden diversity waiting to be discovered. And sometimes, the key to finding it has been sitting in a museum drawer all along!

The Nobel Prize 2026: How Microbes are Transforming Medicine (Again)

By: Elise Kersten

In recent years, the Nobel Prize has repeatedly gone to scientific discoveries catalyzed by humble microbes. In 2015, the Nobel Prize was awarded to a novel anti-parasitism therapy derived from a strain of soil bacteria discovered near a Japanese golf course. In 2020, the Nobel Prize went to CRISPR, a technology that is revolutionizing biotech based on hijacking a bacterium's own adaptive immune system. Most recently the development of the mRNA vaccine, enabled by the bacterial T7 RNA

polymerase, won in 2023. This year is no different: the 2026 Nobel Prize in Physiology or Medicine was awarded in early October to Karl Deisseroth, Peter Hegemann, and Georg Nagel for their discoveries in optogenetics, a breakthrough technology powered by microbes.

This time, the key discovery was microbial rhodopsins, a family of light-sensitive proteins found in bacteria, viruses, and archaea. The biological roles of microbial rhodopsins are diverse, but most convert light into energy which the organism can consume, or into environmental signals to which the organism can respond. One particularly useful class of rhodopsin, channelrhodopsin, was discovered by Peter Hegemann and Gerog Nagel (Figure 1) in the single-celled *Chlamydomonas* algae. In the natural world, channelrhodopsins function as ion channels that allow algae to swim towards sunlight. But in the laboratory, Karl Deisseroth converted this simple algae director into a cell manipulator through his new technique he coined "optogenetics" in 2006.

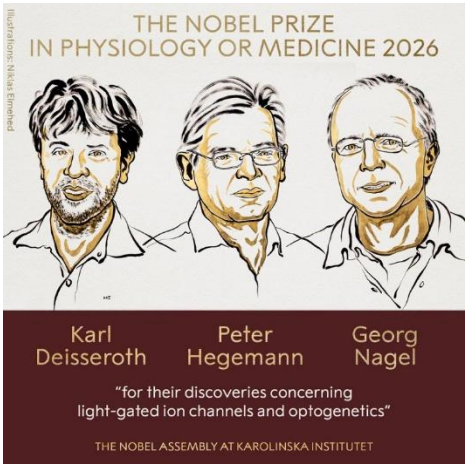


Figure 1: 2026 Nobel Prize Laureats in Physiology or Medicine.

Essentially, optogenetics uses light to precisely control cell membrane potential, primarily in neural circuits, and rhodopsin proteins hold the key to optogenetics' transformative power. Scientists can customize rhodopsins for a wide range of purposes. Shining light on these proteins opens or closes surface channels, letting researchers control cellular activity with high precision. For example, one study fine-tuned channelrhodopsins to exactly match the excitability of auditory neurons in the ears of mice. This technology provides a targeted alternative to the electrical stimulation devices typically used in deaf patients. Optogenetics has also been used in several other exciting ways, such as inducing cell death by controlling intracellular pH both spatially and temporally, and reversing neurodegenerative phenotypes in flies and human cells. Additionally, optogenetics is starting to make its way into clinical trials, most notably with retinitis pigmentosa, a genetic disorder where retinal cells slowly break down over time. By injecting channelrhodopsin-carrying vectors into patients' eyes and stimulating the channelrhodopsins with engineered goggles, researchers were able to partially recover sight in these patients through these "Seeing Eye" algal proteins.

Because of their precise control over intracellular activity, optogenetics can be applied to limitless biological challenges and has huge potential for eventual therapies. So be careful not to overlook even the most seemingly insignificant life forms! If the Nobel Prize is any indicator, modern medicine is being built on the microscopic—but capable—backs of microbes.



Get Involved

Don't Panic: How to Handle Your PI Moving Institutions

By: Jay Kang

In April of 2025, my PI made the difficult decision to move from Penn State College of Medicine to the University of Virginia (UVA) in Charlottesville, VA. When she told us of the decision, she gave us the choice of whether to go with her or stay at Penn State. I found myself stuck between a rock and a hard place. I love the community at Penn State and made so many good friends here. I had pride in being accepted to Penn State's PhD program and wanted to make sure my degree came from Penn State. Most of all, all my friends and family were in Pennsylvania. However, I had fallen in love with my project and was just beginning to come out of my shell as a scientist under my PI's guidance. Something I wished I had was a mentor to help me with this decision, and I hope that this piece helps someone else in a similar situation.

The Cons

A not-so-well-known secret about moving institutions is that your salary increases to match the stipend payout at your new institution. UVA pays their graduate students more, and my own salary increased to match it. However, that is just about

the only logistical benefit to moving institutions.

In Hershey, I lived with my parents, saving myself hundreds of dollars on rent. Charlottesville is not a cheap town: 1-bedroom apartments easily cost over $1200, which was just not affordable with my current financial situation. Luckily, my lab technician had also chosen to move, and we were fortunate that we made good roommates. My rent for a 3-bedroom apartment is a little under $1000, not including utilities.

Additionally, I had to find new healthcare providers. As someone who relies on medicine, I was fortunate enough to continue my care with one of my doctors at PSCOM. The only downside was the medicine I needed, which was free at the Penn State College of Medicine pharmacy, now costs money. For my primary care, dental, and vision, it was simple enough to find new providers, but as Charlottesville is a small town with only one hospital to serve a large population, the wait times were considerable.

As someone who has almost always lived in Pennsylvania, living nearly 200 miles away was a scary decision. I eventually contacted family members who were willing to provide financial assistance during my last few years as a PhD candidate to help with these unexpected changes. Despite the logistical difficulties, there were plenty of upsides to my decision.

The Pros

When my PI told me that we would be moving to Charlottesville, the first thing I did was look up the town's reputation. One of the first things I saw was the 2017 "Unite the Right" rally where white supremacists gathered to protest the removal of the Robert E. Lee statue. As a gay, non-binary, Asian person, that was a pretty rough revelation.

The reality is that Charlottesville, like all towns in the United States, has its mix of all sorts of people. Yes, there is probably a group of white supremacists around, but I do not see them in my day-to-day. The people I do interact with have been extraordinarily friendly, welcoming us into our new lab space with open arms. I've talked to physicians, physician-scientists, guest lecturers, and new colleagues about their research. There is an air of collaboration with our colleagues. Despite only being here for a year, our lab has already been pulled into multiple collaborations, excited about the new perspective we bring to the table.

Not to mention, despite being a transplant, I've been adopted into the larger UVA graduate program. While I do miss our BMS seminars, I do get exposed to all sorts of research here through neuroscience and immunology seminars. I've been invited to happy hours and coffee chats to mingle with other PhDs. UVA has a great student culture, and it made the moving blues easier to deal with.

Outside of lab, there is plenty to do. The Downtown Mall is a pedestrian mall filled with all sorts of bookstores, coffee shops, and art galleries to look around (Figure 1). Every so often, my roommate and I go to a local cidery to participate in a silent book club where we read and drink really great ciders. I've gone rock climbing, went to a kitten yoga session, and played drag bingo (Figure 2). Charlottesville is an incredibly vibrant town, and being active in the community made the pain of being so far from home a little easier.



Figure 1: The Downtown Mall: A pedestrian mall in downtown Charlottesville, VA.

The Conclusion

Choosing to move with your PI is no easy decision. I had roots in PA, and to choose to uproot into a new and strange place was scary. However, what helped my decision was thinking about the hundreds of students who travel across the world to attend school in the US. Moving with my PI, unpacking the lab, and helping the lab find their own niche in the community was what was necessary to climb in my field. It took time, but after a year of living in Charlottesville, I feel confident that I made the right decision for myself.



Figure 2: Jay and the Queens after a session of Drag Bingo.



Reviews & Recommendations

A Grad Student's Guide to Happy Hour in Hershey

By: Katie Kimbark

As the days get shorter and the chill in the air starts to settle in, it's easy to fall (pun intended) into the same old routine: lab, home, sleep, repeat. Take this as a sign to switch things up, get out of the lab, and enjoy some well-deserved time with friends! Whether you're celebrating a successful experiment, a recent publication, or just simply surviving the week, a local happy hour is a great excuse to step away from the bench, unwind, and socialize. The Hershey area has no shortage of great restaurants, so take advantage of these deals to explore the local food + drink scene on a grad student budget.

Tried and true:

Hidden Still Spirits (Figure 1): This is my friends' and my go-to spot! Their happy hour menu is limited to 4 appetizers, but all are divine. We usually order at least one of each for a nice little spread – the ahi tuna nachos are my personal favorite. Highly recommend!

Drink deals: ½ priced cocktails; $3 off wine and draft beers

Food deals: ½ priced select appetizers

Hours: Monday-Thursday 3-6 PM, Friday-Saturday 3-5 PM & 8-10 PM, Sunday 1-4PM



Figure 1: Hidden Stills Spirits Happy Hour flyer.

Fire and Grain: This is a great spot inside the Hershey Lodge with a cozy but upscale vibe. Although the food is slightly more expensive, they have some really yummy Hershey-themed chocolate martinis and delicious flatbreads that are worth a visit!

Drink deals: ½ priced cocktails

Food deals: ½ priced small plates and flatbreads

Hours: Daily, 4-6PM

The Mill: If you're in the mood for a fun fall-themed cocktail, this is your place – Apple Butter Mule, Pumpkin Pie Old Fashioned, Dirty Pumpkin Chai – need I go on? Bonus: they also do brunch! They also have some fun mocktail options for anyone who doesn't drink.

Drink deals: ½ priced select signature cocktails (don't worry, the apple butter mule is on there); $6 house wines; $2 off draft beers

Food deals: discounted select small plates

Hours: Wednesday-Friday 4-6PM, Saturday 4-5PM, Sunday 3-5PM / bartops only

Iron Hill Brewery: Welcome back to Hershey, Iron Hill! We're happy to have you (and your Philly cheesesteak egg rolls) back.

Drink deals: $2 off all beer, wine, and cocktails

Food deals: $7 bar bites

Hours: Monday-Friday 4-6PM; Saturday-Sunday 2-5 PM

New to town:

Hershey Social Restaurant + Bar: The Hershey Social opened in March of 2026 (RIP Houlihan's) and is a great new spot to, you guessed it, socialize. With local sports on the TVs (Penn State games included), plus trivia nights and dart boards, there's no shortage of ways to unwind and channel your competitive side.

Drink deals: $2 off draft beers; $6 house wines or Bloody Marys; $8 select cocktails; $7 Well Drinks and zero-proof cocktails

Food deals: Discounted select starters and appetizers

Hours: Monday-Friday 4-6PM, Saturday-Sunday 1-3PM / darts, bar, and high top tables only

Upscale eats:

Devon Seafood + Steak: I don't know about you, but I am certainly not frequenting Devon's on a grad student budget. That being said, I am pleasantly surprised at their happy hour offerings and encourage you to try it out and report back!

Drink deals: $2 off beer; $6 house wines; $5 mocktails; $11-13 select cocktails

Food deals: discounted select appetizers; $2 each for oysters

Hours: Monday-Friday 4-6PM, Saturday-Sunday 3-5PM



Fall Recipes

Good Soup: Apple and Lentil Soup Perfect for Fall

By: Paige Bond



Image Credit: David Malosh for The New York Times

It's peak apple season, which means it's also the time of homemade apple sauce and apple pie. However, here I present to you a savory apple recipe that will fill you up while also leaving you warm and fuzzy inside. This adapted Lentil Soup With Smoked Sausage and Apples recipe is quick, leaves great leftovers, and creates minimal dishes, making it ideal for a weeknight dinner. For more flavor, you can cook the turkey sausage on the stovetop, so it retains a slight smokey flavor and crunch. The recipe calls for hard apple cider, but this can easily be replaced with nonalcoholic cider or veggie broth. This one-pot recipe makes enough for an entire week!

Ingredients:

- 2 Tbs of unsalted butter
- 1 large yellow, finely chopped
- Kosher salt and black pepper (to taste)
- 3 apples of your choice, peeled and chopped
- 3 celery stocks, chopped in ½ inch pieces
- 6 garlic cloves, finely chopped
- 1 tsp of dried sage
- 1 tsp of dried thyme
- 12 ounces of hard cider (can replace with chicken or veggie stock)
- ¾ pound of turkey sausage, sliced into 1/2- inch-thick coins
- 1 ½ cups (10 ounces) of small green lentils
- 1 tsp of ground nutmeg
- 2 tsp of cider vinegar
- ¼ cup of sour cream
- 2 Tbs of Dijon mustard

Instructions:

1. Melt the butter in a large Dutch oven over medium-high heat.
2. Add onion, season with salt and pepper, and cook until translucent (~5 minutes).
3. Add chopped apples and cook until soften (~5 minutes).
4. Add celery, garlic, sage and thyme, and stir to combine.
5. Pour in the cider and let it come to a bubble.
6. Add in sausage, lentils, nutmeg, and 4 cups of water, and let the soup come to a boil.
7. Decrease the heat to maintain a low simmer, cover the pot and cook until the lentils are tender (35-40 minutes).
8. Turn off heat, add vinegar.
9. Combine Dijon mustard and sour cream in a separate bowl and then add to the soup.
10. Enjoy!

Butternut Squash Mac and Cheese

By: Natale Hall



One of my favorite ways to usher in the fall season is to incorporate as many seasonal dishes into my weekly meal rotation as possible. This butternut squash mac and cheese is one recipe that I bring back year after year. A perfect balance of salty and sweet, this dish will have everyone in

your household savoring every last bite!

Ingredients:

- 1 large butternut squash
- 2 tablespoons & ¼ cup olive oil
- ½ cup butter
- 2 tablespoons flour
- 1 lb pasta, any shape
- 1 ½ cup reserved pasta water
- 1 ½ cups whole milk
- 2 shallots, roughly chopped
- 2 teaspoons balsamic vinegar
- 2 teaspoons salt
- 2 teaspoons ground black pepper
- 1 teaspoon onion powder
- ½ teaspoon garlic powder
- ½ teaspoon ground sage
- ¼ teaspoon nutmeg
- 6 ounces grated sharp cheddar cheese
- 6 ounces grated gruyere cheese
- 1 ½ ounces grated Pecorino Romano cheese
- ½ cup plain Panko-style breadcrumbs

Instructions:

1. Preheat oven to 425°F.
2. Cut butternut squash in half lengthwise.
3. Drizzle squash with olive oil, season with salt and pepper, and place cut side down on a parchment paper-lined baking sheet.
4. Bake squash for 45 minutes until soft.
5. When squash is nearly done baking, heat a large pot over medium heat and bring a second pot of water to boil. Once the water reaches a boil, add pasta and cook according to instructions, being sure to reserve pasta water before draining.
6. In the empty pot, melt butter and add flour. Mix to combine
7. Whisk butter-flour mixture constantly for about 2-3 minutes until bubbling.
8. Add milk to butter-flour mixture and heat.
9. While milk is heating, remove squash from oven and set oven to a broil. Spoon out 2 – 2 ½ cups of cooked squash and add to a blender.
10. Add chopped shallots, pasta water, balsamic vinegar, olive oil, salt, pepper, onion powder, garlic powder, sage, and nutmeg to the blender and blend until smooth.
11. Add blended squash mixture to heated milk, stirring to combine.
12. One handful at a time, add the sharp cheddar, gruyere, and pecorino romano cheese until fully melted and the sauce becomes thick.
13. Stir pasta into cheese sauce.
14. Pour pasta into the prepared oven-safe dish.
15. Sprinkle bread crumbs and olive oil mixture over pasta.
16. Broil for 3-10 minutes, until breadcrumbs become browned.
17. Remove from oven and let sit for 5-10 minutes before stirring.
18. Enjoy!

Overnight Oats: Fall Edition

By: Jenny Lausch



Image Credits: The Food Network

I literally eat overnight oats every single day for breakfast because they are just that amazing, versatile, and easy to prep for a healthy meal. The key is to make them at least one night before so that they are the best consistency. Overnight oats are so simple and customizable, so I hope you enjoy this high-protein fall-themed edition!

Ingredients:

- 2/3 cup of rolled oats (this is my favorite brand)
- 1 tsp of chia seeds
- 1 tsp of flax seed
- 1 scoop of protein powder (bonus points if you use a fall themed favor, but if not, you will want something neutral like vanilla)
    - Apple Pie
    - Pumpkin Spice
- ½ cup of 2% Greek yogurt
- ½ cup milk (2%, almond, water, etc.) to consistency—this is a bit personal! I like mine to have a good amount of milk so that they are not too dry in the morning
- 2 tbsp of apple butter or pumpkin puree
- 1 tsp maple syrup
- 1 tsp cinnamon
- 1 tsp nutmeg
- ½ chopped apple

Instructions:

1. In a glass bowl, add oatmeal, chia seeds, flax, protein powder and give it a good mix
2. Add wet ingredients: yogurt, milk apple butter or pumpkin, and maple syrup
3. Stir and add milk or water to right consistency (slightly liquid-y, but not swimming)
4. Add spices and chopped apples, one last stir
5. Cover and leave overnight
6. In the morning, enjoy!

A Cozy Fall Favorite: Homemade Mulled Wine

By: Ceyda Yalcin



As the temperatures drop and the days get shorter, there's nothing quite like a warm drink to make a chilly evening feel a little cozier. Whether you are spending the evening with friends, enjoying a movie, or taking a well-deserved break after a long day in the lab, mulled wine is a perfect seasonal treat. It is easy to prepare, makes your kitchen smell wonderful, and is perfect for sharing!

Ingredients:

- 1 bottle of red wine (one on the cheaper end is fine as we are adding all the flavor)
- 1 apple, sliced
- 1 quince, sliced
- 1 orange, sliced (including its juice)
- ½ lemon, sliced
- 1½ cups (300 mL) water
- 4 tablespoons sugar (I like brown sugar better but can be adjusted to taste)
- Around 15-20 whole cloves
- 4–5 cinnamon sticks
- 1 whole nutmeg, preferably grated to taste
- 2–3 cardamom pods
- 2 star anise

Instructions:

1. Prepare the fruit. Wash and slice the apple, quince, orange, and lemon, removing any seeds but leaving the peels on for extra flavor.
2. In a large saucepan, add the sliced fruit, water, sugar, cloves, cinnamon sticks, nutmeg, cardamom pods, and star anise.
3. Heat the mixture over medium-low heat and allow it to simmer gently for approximately 15 minutes. This helps release the flavors and aromas of the fruit and spices.
4. Reduce the heat to low and slowly pour in the red wine. Stir gently to combine.
5. Allow the wine to heat gently for another 10–15 minutes, making sure it never reaches a boil. You want it warm enough to serve while preserving its flavor and aroma.
6. Strain the mulled wine into mugs or heatproof glasses. For an extra festive touch, garnish with an orange slice, a cinnamon stick, or a star anise.



Thank you for reading the Fall 2026 Edition of the Lion Ledger! If you have something you'd like to contribute to the next edition, email us at lionstalkscience@gmail.com

- The LTS Team: Paige, Jay, Natale, Zoe, Jenny, Katie, Habiba, & Ceyda!