# CELL AND MOLECULAR BIOLOGY STUDENT NEWSLETTER

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## IN THIS ISSUE



## LETTER FROM THE EDITORS

Dear CAMB students, faculty, and alumni,

Welcome to the 2019-2020 academic year! In this issue of the CAMB Student Newsletter, we share some thoughts about the grad school experience from current CAMB students and a quick guide to Philly eating, attractions, and transport. We also highlight how we can "green" our labs. Finally, we catch up with alumnus Dr. Rinho Kim about his career abroad in Germany.

For additional articles, past publications, and to learn more about the CAMB Student Newsletter team, visit our blog at cambnewsletter.wix.com/blog. Current students interested in contributing to the CAMB Student Newsletter can contact us at camb.studentnews@gmail.com. We hope you enjoy the August 2019 Issue!

Sincerely,
Somdutta Mukherjee and Sylvia Stankov
Editors-in-Chief

## FROM US TO YOU

# Perspectives from Current CAMB Students

*Corey Holman, James Gesualdi, Steph Sansbury, Gleb Bazilevsky*

**W**hether you are just beginning your graduate school career or are nearing the finish line, here are some perspectives from fellow students in the CAMB program.

1st Year: Corey Holman

Welcome to Penn!!! I'm a first year CPM student in the Seale Lab who loves studying brown adipose tissue and metabolism. I took a couple years off to work as a tech before coming to Penn. Taking time off was the best decision for me - I got to discover what area of science really fascinated me, knew exactly which labs I wanted to rotate in, and gained life experience working for a couple years before going back to school. However, I have to say, the transition from working life back to school was difficult. I had never struggled in classes before but getting back into the studying mindset was harder than expected, especially in areas I had never encountered in undergrad. To those who took a couple of years off - don't forget that you now have classes that are important as well. Do not be afraid to ask CAMB for a free tutor! To those who did not take time off - I highly suggest putting lots of thought into your choice of rotations, especially if you do not know what area of science really interests you. Go to all the beginning of the year faculty talks, follow up with professors, be bold, and assert yourself.

Most importantly, really get to know your fellow students. Eat lunch together. Plan things to do on weekends. Get together each week and watch a show. In my year, "Bachelor night," where we order Thai food, watch The Bachelor, and catch up on the week's happenings is by far the best night of my week. The friends you make the first year are many of the friends you will have for your entire PhD. After classes end in May, working in a lab across campus from your fellow classmates can feel very isolating, but do not let it be! Make the effort to hang out. Oh, and don't forget to exercise!

2nd Year: James Gesualdi

Hi everyone. I'm a second year student in the MVP program and I began studying at Penn just after finishing undergrad. Like Corey mentioned, there are definitely pros and cons that come with this decision. For me, the hardest part was choosing which labs to rotate in and ultimately join given my relative lack of full-time research experience compared to some of my peers who had spent a couple years working before matriculating. Luckily, Penn provides a great environment for making these decisions: attending seminars and chatting with faculty and older students was instrumental to my thought process, and I would strongly encourage first year students to do the same. Don't be afraid to set up meetings with PIs and definitely don't shy away from exploring research areas that don't necessarily line up with your previous experiences. Interdisciplinary work is huge here, and you should take advantage of it.

Of course, choosing your rotation and thesis labs are just the first steps of your degree, and as you enter your second year, the spectre of your preliminary exam will be on your mind constantly. There's no two ways about it, this exam will be one of the most stressful experiences of your academic career thus far. However, it's important to keep your head up as you go through the process of preparing. Your prelim committee will not be "out to get you", and your program wants you to pass just as much as you do. Personally, I found that seeking feedback from members of my own lab, as well as faculty and students in unrelated fields, was extremely helpful for putting together both the oral and written portions of my proposal. Practice is your best friend throughout this process, so take every opportunity to meet with friends or lab mates to sure up your talk and become more comfortable answering questions. All that said, it's crucial not to let your exam take over your life. Of course, your prelim is important, but it's a mistake to let it get in the way of your health or your relationships, so be sure to continue to make time for yourself and your friends, even as test day approaches. No one will fault you for taking a couple personal days in the weeks before.

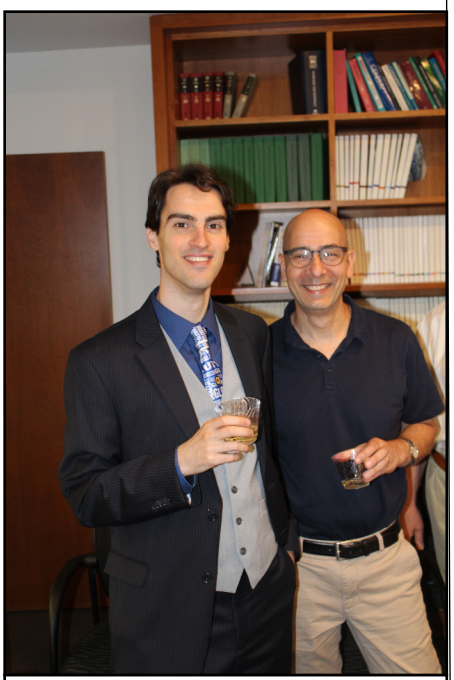
Mid Year: Steph Sansbury

After cresting the hill of prelim, the average PhD student – eyes closed and fists extended triumphantly in the air – will unwittingly tumble down the hill in front of her and land in the third year slump. The third year and beyond is not, as your newly formed thesis committee might have you believe, a time of consistent productivity punctuated by moments of clarity or bouts of inspiration. You do not emerge into your third year as a markedly more developed and confident scientist, having passed the last major exam of your academic career. (And if you did, I don't want to hear it.) For most of us, it marks the beginning of the hard but important work of figuring out how to nurture your own curiosities, and take responsibility for pursuing them efficiently and intelligently. Eventually you'll stop waking up in a cold sweat, but not because you've suddenly figured out how to be a good grad student, as you think your peers and mentors define it. Instead, you come to a realization: *you* are the one who will get you to your thesis defense. This will liberate you from the obligation of trying to act like a good grad student, and will instead motivate you to answer questions – which, conveniently, actually *does* make you a pretty good grad student.

Based on my extremely well-powered study (n=4, author included), 100% of mid-program PhD candidates question their life decisions one or more times a week. But with some self-compassion, a lot of humility and persistence, and a few good mentors and friends, you'll do what we all came here for: to observe something about our universe for the first time, and expand the boundaries of human knowledge. If you ask me, it's worth it.

Graduating: Gleb Bazilevsky

Dear friends, estimable fellows, and most battle-hardened trench-mates, you know yourselves that the way is long, difficult, dark. Yet, here we are! We survived! We're stronger for it!



*Gleb Bazilevsky (G&E) celebrating his thesis defense with Dr. Ronen Marmorstein.*

The graduate student has a thousand faces. There will be the one who finishes in four years. You will admire them and envy them and wonder whether you should have joined their lab instead. There will be the one who disappears and reappears, like a candle's flame, warm and welcome when so long missing. Where did they go since you saw them in your Prelim writing class? There will be the workhorse, consistent and prolific and indefatigable. You see them at seminars, in GAPSA, and perennially rotating into the elevator bank preview reel. You will at times meet them all. You will at times feel like them all. The graduate student has a thousand races to run.

Yet, there will be at least one spectacular moment. *The* moment. The *groundswell. The flood.* Your notebook will fill to bursting. Quantity will sublime to quality. Your story, it's come. A year or two after you

# A Grad Student's Guide to Philly

*The Newsletter Team*

## Center City

Restaurants/Bars

- Center City is a go-to for any type of food: quick bites at the crowded stalls in Reading Terminal Market, Philly classics like Federal Donuts, and special occasion establishments like Vernick Food and Drink.
- Barbuzzo: Modern Mediterranean food. Save room for the salted-caramel budino that can be spotted at almost every table.
- Bob and Barbara's: Local favorite with live jazz music on the weekends and the original home of the CityWide Special.
- Parc: French Bistro and a Rittenhouse classic (also try the Caribou Cafe!).
- Sampan/Graffiti Bar: Asian fusion cuisine. Follow the alleyway to find yourself at the outdoor Graffiti Bar.
- Tio Flores: Trendy Mexican restaurant with $1 tacos every Monday night.

*Rittenhouse Square*

Adulting

- Reading Terminal Market: Bustling market that is great for fresh, local produce and meats. Don't be afraid to ask questions either, the people behind the counters take pride in their products and love seeing others enjoy them too.
- Rittenhouse Farmers Market, Saturdays 10am-2pm: Another great place for fresh local produce and other goods.
- The Italian Market: Make your way to 9th and Christian any day of the week to find affordable produce (and plants!).

Events

- Center City Restaurant Week: A number of restaurants offer a fixed menu for $35. This is a great opportunity to try out different places!
- Center City Sips (Summers only): A host of bars put together a big outdoor happy hour with reduced prices on popular drinks and food every Wednesday from 3-7pm.

Other

- Schuylkill Banks and River Trail: A nice place to sit along the river and a convenient trail for walking, running, or biking.
- There are tons of intramural sports you can play through Philadelphia Sports Leagues. It's a super affordable and fun way to make some new friends around town.

## West Philly/University City

Restaurants/Bars

- Franklin's Table: This food hall has stalls from some of Philadelphia's most beloved (and famous) restaurants. Can't snag a reservation at Zahav? Try their falafel sandwich or salad at Goldie, affectionately known as "Baby Zahav."
- Loco Pez: $1 tacos on Tuesday, Wednesday, or Thursday every week (they announce it the day of @locopeztacos).
- Renata's kitchen: Cozy Mediterranean and a killer brunch.
- Tacos Don Memo: Try a 0.6 kg burrito that will make you salivate like Pavlov's dogs. Look for the food truck weekdays on 38th and Spruce St. and Saturdays in Clark Park.

Adulting

- Everyone is moving and selling or dumping their spectacular housewares from May to August. Now is the time to get the bread-maker you've always wanted to try.
- Grocery options: The Fresh Grocer, Supreme Shop n Bag, and International Food and Spices are West Philly staples for produce, meat and hard-to-find items.
- Clark Park Farmers Market, Saturdays 10am-2pm: You can find fresh local produce and other goods, which you can then enjoy in the park! This is a great way to spend Saturdays mornings!

Events

- The Baltimore Dollar Stroll: Find great cheap mango lassi.
- Clark Park hosts lots of fun events! Catch a movie screening (see https://www.universitycity.org/events/movies) or watch some Shakespeare in the park. Or simply enjoy some time outside (and do some dog watching)!

Other

- There's a group of cowboys who occasionally ride horses up and down 42nd St. *Go figure*.

## Graduate Hospital

Restaurants/Bars

- Brunch Spots: Swing by Honey's Sit n' Eat or Ants Pants for a cozy atmosphere.
- Bars: Sidecar and Grace Tavern are great neighborhood bars that have many different food and drink options

Adulting

- Grocery options: South Square Market and Rittenhouse Market are great options, also Fresh Grocer and a new Giant Heirloom Market that are a bit more affordable. You can also make your way to Trader Joe's on Market (technically Center City).
- During the summer months, the PHS pop-up beer garden on South and 15th street offers a reprieve from city life, with natural gardens, meadow-like plantings, and cold beer!

Events

- Bloktoberfest, Plazapalooza
- Odunde Festival (largest African American street festival in US).

### Fishtown

- Take the Market Frankford Line (MFL) towards the Frankford Transportation Center and hop off at Girard Station.
- Barcade: Whether your a fan of craft beers, vintage video games or both, this place offers it all.
- Frankford Hall: This biergarten sports over a dozen beer options at any given time. Don't forget to bring a healthy dose of competition for a round of Jenga or Cornhole.

### Public Transport

- Trolley: Weaves mostly below Market Street in Center City and into University City. This option is great for your daily commute and there's a stop right by Trader Joe's!
- TransPass: Penn offers several transportation passes at a discount for students and employees. Semester-long passes can save you a lot if you're using public transport 2 times a day every day.
- SeptaCard: Fill with a weekly, monthly, or rolling balance.
- Busses: There are a bunch of bus lines that run throughout town. From Grad Hospital or Center City, the 40 is probably your best bet with stops all along Lombard Street, over the South Street Bridge, and onto Penn's campus. It's usually about a 15 -20 minute trip. For folks living further north in Center City, the 21 and 42 run along a similar route; you can catch them on Walnut Street.
- Biking: Philly is a pretty good town for cycling! Most streets - especially in University City - have bike lanes that motorists tend to respect. It's a great way to save some time and money on your commute, and to sneak a bit of exercise into your day. Keswick cycles at 41st and Locust is a great place to shop for a bike or get yours tuned up just off campus. Firehouse Bikes in West Philly, and Via Bicycle or Breakaway Bikes in Center City are other affordable spots to patch up a tire or grab some new equipment.


*15th Street SEPTA station (left) and a bike share station in Center City (right)*

### Coffee

- For a quick cup, try Good Karma Cafe, Joe Coffee Company and Old City Coffee.
- For a special afternoon pick-me-up, check out Miel Patisserie, Parc or Gran Caffe L'Aquila.

# Greening Our Labs

***Felicia Peng***

In our personal lives, it is easy to list ways in which we can become "greener." We can use reusable grocery bags, carry our own utensils and straws, hang our clothes out to dry, and so on. Although reducing our energy consumption and trash production is not always convenient, it is often relatively simple to implement these changes in our lives. As scientists, however, the path to being eco-friendly is less clear. We are all familiar with the piles of plastic and styrofoam we generate in our labs on a daily basis, but it can be easy to justify our waste or see it as inevitable. Elicia Preston, manager of the Murray Lab in the Department of Genetics at Penn and driving force behind Penn's Green Labs, urges us to challenge this thinking and take action in reducing the environmental impact of our research labs.

Green Labs is an initiative run through the Penn Sustainability Office that strives to make the labs on Penn's campus more environmentally friendly. Preston recalls that when they first learned of Green Labs it was "only a website and checklist of things you can do in your lab to make it more sustainable." Although Green Labs was a part of Penn Sustainability, there were no official staff members dedicated to it. That changed in 2015 when Preston applied for a Green Fund grant to purchase reusable glass petri dishes for their lab. Sensing an opportunity to make an impact with Green Labs, Preston then founded the Green Labs Working Group, which meets quarterly to discuss ways in which researchers can make their labs more sustainable. While Preston highlights that these meetings are particularly useful for lab managers, researchers at all levels are welcome to participate. Green Labs has two main goals: 1. to work with the Penn Sustainability team to push for better campus-wide

policies related to lab sustainability and 2. to encourage labs to integrate sustainability into their work.

Beyond turning off lights and lab equipment when they are not needed, Preston shares a few other easy ways in which we can reduce the environmental footprint of our labs. Instead of throwing away plastic bags, film, or packaging that lab materials come in, these plastics can be taken to a Lowe's recycling center or saved for Penn's annual ReThink Your Footprint plastic bag take-back. There are even options for styrofoam packaging; vendors such as Sigma-Aldrich and New England Biolabs have mail-back recycling programs, with instructions and prepaid postage included on their styrofoam boxes. Although more impactful practices can be costly in terms of both money and labor, Preston emphasizes that such practices are "absolutely worth it to protect the earth, even a bit." For example, reusable glassware can be used in place of plastic, and, when feasible, biohazardous plastics can be bleached and cleaned for recycling. Labs can also try to buy biodegradable or recycled materials.


Preston believes that "outreach and bureaucracy are the two biggest challenges facing Green Labs." The Green Labs Working Group is not able to access campus-wide announcements or send out large-scale email blasts, and paper posters tend to be ineffective at grabbing attention (and cause waste!). Thus, spreading the word about Green Labs and sustainable lab practices is another important way to help bring about change on campus. Preston also notes that bureaucracy has made it difficult to implement relatively simple changes that could have widespread impact. For instance, they have been struggling to obtain and distribute signs that would instruct researchers on what lab materials can be recycled. Part of the issue is that administrators are concerned researchers will not appropriately clean or process lab materials before recycling them. Ultimately, this qualm serves as a reminder that as scientists we need to take more personal responsibility in understanding proper lab safety and sustainable practices. In order to make our labs "greener," we have to be active and responsible participants.

In both life and lab, Preston urges us to remember the following: Reduce, Reuse, Repair, Repurpose, and Recycle.

To learn more about Green Labs and sustainable lab practices, visit: https://www.sustainability.upenn.edu/penn-community/green-labs.

## WHERE ARE THEY NOW?

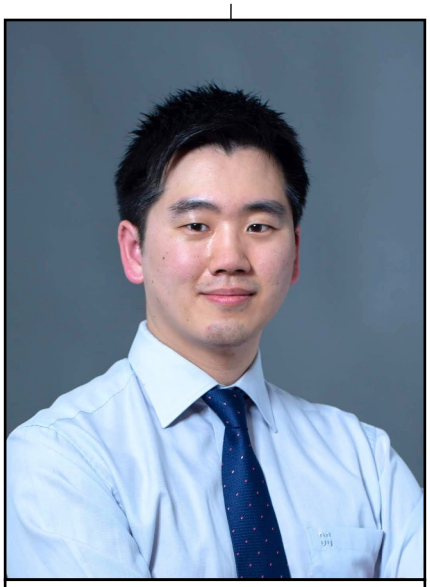
# Rinho Kim

*Aishwarya Pawar*

**D**r. Rinho Kim started his PhD in the Fall of 2010 as part of the Genetics and Epigenetics graduate group. He joined Dr. Klaus Kaestner's lab for his thesis work in studying the epigenetic regulation of intestinal stem cell differentiation. Dr. Kim was always interested in Next-Generation Sequencing (NGS) technologies and started working on developing his wet and dry lab skills in the field early on in his thesis project.

After graduating in the fall of 2016, Dr. Kim wanted to apply his skills to human disease research. He also wanted to explore opportunities in Europe, having spent the previous 8.5 years in the US after moving here from South Korea. He took to the internet for job search and came across multiple positions on the European epigenetics consortium-Epigenesys. After sending applications along with his resume and cover letter to professors via email, he interviewed via Skype at first and then traveled to multiple cities in Europe for on-site interviews. He got an offer from the Institute of Functional Epigenetics at Helmholtz Zentrum München/ German Centre for Environmental Health (HMGU). The institute, which specializes in large-scale projects focused on diabetes, allergies, and lung diseases, was looking for an NGS expert for their diabetes and obesity research. Dr. Kim accepted the offer since the project involved working with patient samples which excited him.

At HMGU, Dr. Kim spearheaded his own project as a postdoctoral researcher, analyzing patient derived adipocytes to find epigenetic signatures of metabolic complications. Additionally, he was in charge of NGS training and support for his group and collaborators at HMGU. Dr. Kim says that his job was very rewarding and led him to find a new position at the NGS core facility at the Max Planck Institute of Biochemistry in Munich, where he will lead a small service group to support NGS needs of other investigators, such as library preparations and Illumina sequencing.



*Dr. Rinho Kim (G&E)*

Dr. Kim says that life in Germany allows for a great work-life balance: 30 paid vacation days, at least a dozen national holidays per year, child benefits, and family health insurance. International post-doctoral candidates in Germany, like him, work with a specialized work and residential permit called the Blue Card. Blue Card holders can become eligible for permanent residency within 2-3 years, and generally without any complications. Dr. Kim also emphasizes that while the locals know conversational English, picking up conversational German is not tough. For the traveler in all of us, you can visit multiple countries like France, Italy, the Netherlands, and Belgium easily by car or train and enjoy the multitude of carnivals and music festivals.

While at Penn, Dr. Kim attended the 2015 FASEB meeting-Gastrointestinal Tract XVI and the 2016 Keystone Symposium in Chromatin and Epigenetics. He also received an AGA-Horizon Pharma Student Abstract Prize from the American Gastroenterological Association for an abstract submitted for their Digestive Disease Week® (DDW). He recommends that students keep an open mind and an eye out for internship and exchange opportunities in Europe and explore options like the EMBO short-term fellowship (http://bit.ly/2xr9xHq) or Epigenetics@HMGU/PENN (https://bit.ly/2NgHJjL).

While at Penn, Dr. Kim started the Korean Basketball Club with his friends and served as the Vice president of the Korean Graduate Students Association for the year 2011-12. He believes that the support and training he got from the outstanding faculty and wonderful program coordinators at Penn helped him develop the necessary skills for his post-doctoral work. He implores all students and mentees to make good use of the facilities at Penn and BGS to explore all future career options, and emphasizes how useful he found the Penn Biomedical Career Fair for this purpose.