CAMB Student Newsletter

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In this issue

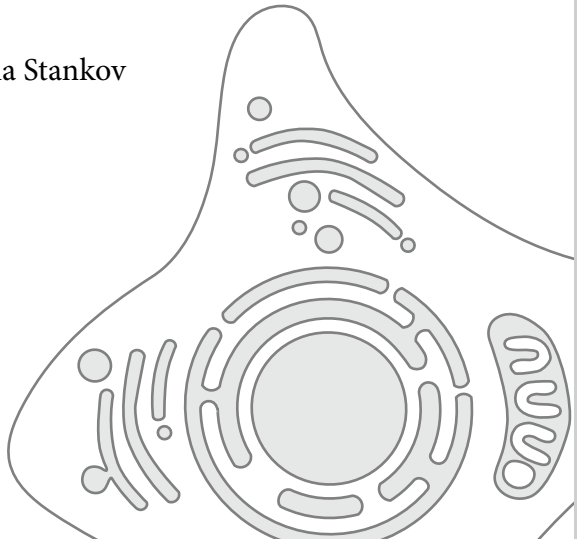
Letter from the Editors

Dear CAMB students, faculty, and alumni,

Welcome to the start of an unusual Fall semester! In this (newly redesigned!) issue of the CAMB Student Newsletter, we provide advice for the incoming class of CAMB graduate students, advertise the new Peer Support Network, and share tips for a 2020 research life. We also highlight new faculty member Kellie Ann Jurado in the department of Microbiology, and chat with Jenea Adams about her initiative, The Black Women in Computational Biology Network. Finally, we provide updates on several ways to become involved with community outreach during the COVID-19 pandemic.

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 2020 issue!

Sincerely,
Hannah Kolev and Sylvia Stankov
Editors-in-Chief



Chris Montgomery, Unsplash

Our Advice to the Class of 2020
Adjusting to a Virtual Graduate Experience

Sarah Campbell and Maria Vogel

Congratulations and welcome to Penn! As you begin a new and exciting chapter in your scientific journey, we understand the uncertainty that may come with it. In the midst of a global pandemic, all of you will face the unique challenge of adjusting to a semi-virtual first year. But, have no fear! We are here to help ease your doubts and guide you through this transition. Below, you'll find a compilation of expert advice brought to you by current BGS students who want to support you and help you succeed. Thank you to all of those students who contributed their thoughts and perspectives. Welcome, Class of 2020!

General Advice

Take the time to learn what kind of work-life balance is effective for you. Use this first year as a time to form friendships that will get you through your PhD. As one student notes, "when times are hard (experiments not working, issues with your lab or mentor, etc...), community is EVERYTHING." The BGS orientation will be an opportunity to meet your cohort and upperclassmen during student panels, virtual happy hours, and other events. Engage early in external hobbies to avoid burnout and build a community. BGSA and GAPSA are great resources to find both science and non-science-related events and graduate student organizations to join (think local music groups and intramural sports). Also, don't neglect your mental health as you navigate this process - take advantage of Counseling and Psychological Services (CAPS) at Penn (caps.wellness.upenn.edu).

There will be times when you'll need to advocate for yourself. Importantly, everyone here wants you to succeed. There are many support networks available to address your concerns: your program chair, CAPS, teaching assistants (TAs), and eventually, your thesis committee members. Communicate openly and honestly about your needs, especially if they aren't being met. Remember, people "cannot help you if they do not know what you need." And of course, "talk to grad students in the years above you. They've done a lot of this before and are always happy to help."

As Penn moves forward with a hybrid model for the fall, take this time to set up your home workstation. You'll need this space for virtual classes and remote research. Designate an area where you can easily focus, that is comfortable, and that is free of distractions. Invest in an ergonomic chair - it will be better for your back and help you avoid working on your nap-trap sofa and bed. Make use of your @pennmedicine.upenn.edu email to get a free 6-month trial to Amazon Prime. Buy all your essentials and have them delivered to your home for free. Then use that email to switch to the Spotify Premium Student subscription for $5 per month!

The Virtual Toolbox

Stay on top of the literature conveniently from home. Check out the free Researcher App and PubCrawler to track the latest publications or get PubMed notifications sent straight to your inbox whenever a paper with a chosen keyword is published. Even better, get ahead of the publication backlog by frequenting the pre-print server, BioRxiv (see our May 2020 issue). Reviews are a great starting point for broad topic overviews, and they provide extensive references for more in-depth research. Take an active approach to reading; some students create an Excel spreadsheet or OneNote file to concisely summarize and catalog papers (e.g. title, author, year, key methodologies and findings, open questions, etc.), and it's a great habit to start early!

Want to go paperless? Consider investing in a tablet and stylus to read, highlight, and markup articles to take with you on the go. Helpful apps include Adobe Reader Touch for Windows tablets or PDF Expert for iPads. For PC, Foxit Reader is great for reading papers (the typewriter tool is nice for making margin notes). If you're able to, invest in a laptop that can accomodate your data storage needs, and always keep a backup hard drive. PRO-TIP: to avoid a cluttered computer, keep an individual hard drive for storing literature and your citation manager library. Pending safety on campus, you may be able to obtain hard copies of your favorite papers: hike up the stairs to the CAMB office (Anatomy/Chemistry Building, RM 404), and print your paper for free. Don't forget to say hi to Meagan, Anna, Kathy, and Christina! They will distribute the office schedule as soon as it's available.

Grad students love the Mendeley citation manager. Set up the Citation Plugin for Word and Chrome extension to quickly add citations from the web to your library and insert them directly into your document as you write. EndNote also has a great online user interface; their Word plugin plus the CiteWhileYouWrite tool makes writing papers much easier. Zotero is free, reliable, and syncs everywhere (the "Zotfile" extension automatically standardizes PDF file names and allows you to extract annotations as an attached note). You can also combine Paperpile and Google Docs for an excellent citation manager.

Virtual Classes

Many classes this fall will continue to be online, in some capacity. Professors are prepared and have adjusted to the new format, and they will do their best to bring you an in-person classroom feel.

For live online sessions, remember to ALWAYS mute the mic. As one student advises: "The worst, most noisy stuff always happens when your mic is on. That's just facts." Also, don't let your questions go unanswered during class. Many professors will insist that you unmute yourself and interrupt. If you're mic-shy, you can write questions into the chat box and return to them before class ends. In discussion-based classes, your professor may encourage everyone to keep their cameras on to provide facial cues and give the class a more "natural" feel. Don't worry about your background, especially if you own a pet - everyone loves a cat or dog cameo!

If the class is recorded, adjust the playback speed while you study to speed up or slow down the material to match your pace. While pre-recorded classes offer a lot of flexibility, be wary of falling behind. Partner up with another classmate to watch the lectures virtually together and hold each other accountable. Remember to be kind to yourself, respect your time, and establish an end to your work hours.

Also, get with the times of time management and let your calendar do the work! Sync your class BlueJeans links, either manually or from PennInTouch, directly into your Outlook calendar and set reminders. To

After months of remote learning, graduate programs have finally realized the best way to keep students engaged in class is to have puppies give the lectures.

break down class work, one student suggests: "To-do lists and short-term goals (think weekly) are extremely helpful to keep you on track and make sure you don't fall behind."

Don't hesitate to reach out for help as you would in any in-person class when you are struggling with a topic. The majority of students agreed that their most helpful resource was forming study groups and scheduling virtual hangouts to work through problems. As one student attests: "Just talking with someone else about the topics can really put into perspective how you are doing and where your strengths/weaknesses are with the material." The TAs are also a great first-line resource and are often more available than professors.

A unique challenge of virtual classes is undoubtedly the difficulty to stay engaged and awake. Have your coffee or energizing snack at your disposal, and keep your camera on to hold yourself accountable. Write notes as you go and avoid distractions at all costs. Silence your phone and put it in another room, and don't try to multitask when you're in class to avoid the dreaded re-watch. Work smarter, not harder!

Remember that going virtual does not have to be isolating! Stay connected through popular message platforms: "Lots of graduate group students have GroupMe chats for students in your year or program." You can also join the BGS-wide slack channel @upennbgs.slack.com. Attend virtual Happy Hours to keep yourself sane. Virtual hangouts will be awkward at times, but it's important to touch-base, as one student notes: "It was harder to keep track of assignments because the students didn't talk to each other at the beginning of class like they would in person. We started a weekly virtual happy hour which really helped to talk about when things are due."

Feel free to reach out and connect beyond just academics! Read more about maintaining a healthy social life in the following article "**Tips for a 2020 Research Life**."

Virtual Rotations

You may start your fall semester with a virtual lab rotation as the University continues its phased research resumption plan (https://research.upenn.edu/resources/resumption/). As you identify and meet with faculty, ask about work that can be done remotely, or suggest a project that matches both of your interests. Take a deep dive into the literature with your PI and labmates and ask about any writing opportunities to practice your skills (e.g. contribute to a review article, write a T32 training grant proposal). You could undertake a more computationally-oriented project to learn R or Python and learn how to analyze data that has been collected but yet to be processed. BONUS: CAMB offers free, annual subscriptions to MATLAB and GraphPad for analyzing data and creating professional figures (be on the look-out for an email from BGS admin with details to sign up for an annual subscription).

While virtual research may not be comparable to in-person bench work, it is nonetheless an opportunity for students to sharpen their communication and time-management skills, which are indispensable in your ongoing career. One student shared, "[Virtual research] requires more communication… a lot of time management and discipline, but there are also less distractions and interruptions so you can get a lot of reading done and think about things deeply. It's a good chance to practice skills like reading, writing, and presenting that are usually put second when doing in-person science." Another stated, "The virtual meetings with my PI were actually more effective in my opinion because you just want to get things done and can't digress from the main conversation as easily."

As mentioned before, manage your time well and enforce boundaries between coursework and research. Everyone's situation is different, so find a communication strategy that works best for you and your PI. Schedule meetings frequently and make the time to get to know other lab members as well! One student notes, "Set up 1-on-1 meetings with more than just the PI of the lab. This sounds like a drag but is necessary because if it's just you and the PI, then you could feel isolated and [learn little about the actual] lab environment." This engagement may also include lab meetings, journal clubs, and happy hours. Your virtual lab might become your thesis lab, so take the time to establish connections with lab members. Depending on the safety of the lab, readiness of the PI, and your ability and/or willingness to volunteer, you may also have the opportunity to shadow in-person to gain a feel for the lab environment.

The pace and nature of the work may change as your virtual project moves forward, so tell your PI if you need more assistance to resolve any bumps in the road. Remember that it's completely understandable to feel overwhelmed or uncertain at times: PI's are here to help and guide you. However, remember that they, too, are learning to adapt to these unprecedented circumstances; you might even meet their partners or children during your meetings. Be mindful and patient as you go forward.

Finally, if you know there is a lab that you absolutely want to work with that doesn't have any options for remote work, it's okay to bookmark the rotation for when benchwork does become a possibility and plan accordingly with the PI.

And remember, "Your job is STUDENT and your goal is [your] education and training. You have nothing to prove to anyone; your seat in this program is yours. No one makes it anywhere alone, a lot of invisible hands helped pave the way for the people we admire today."

Best of luck and welcome to Penn!

The Peer Support Network

Transitioning to graduate school (mind you, during a pandemic) is tough, but you don't have to do it alone. The BGS Peer Support Network (PSN) is here to help! By providing confidential one-on-one counseling sessions and town hall-style group discussions, the PSN aims to help students adjust to graduate school and navigate emotionally difficult situations. PSN volunteers, consisting of fellow BGS students and alumni, are trained by Penn's Counseling and Psychological Services (CAPS) and work in consultation with BGS administration to ensure that students' needs are met. For more information and to connect with a volunteer, see the PSN website!

Tips for a 2020 Research Life

Corey Holman

Basic science research on the best day is not easy. Basic science research with restricted access to lab space and resources during a pandemic is simply onerous. While this is an uncertain, unprecedented time, Penn PhD students are resilient and can still make lemonade while wearing a mask, either at home or in lab. We all simply have to come together and support one another to tame this uncharted beast of pandemic research life. Here are some tips to help you navigate the PhD life with limited time at the bench. This article is peppered with quotes from current students - the CAMB newsletter thanks all of the amazing students for their contributions!

Plan, plan, and plan some more!

It is imperative that you plan out each week. When are you allowed in lab, and what experiments will you do each day? How long will your procedures take and are there specific core facility hours that you need to plan around? Do you need assistance from a labmate and are they willing to go over their experimental technique tips virtually ahead of time? Even if you plan beautifully, chances are that your lab productivity will be decreased compared to normal. Do not fret and just keep doing what you can. Always, and especially during this time, do not measure your success by the success of your experiments. Work hard, but "try to disconnect your self-worth from your research/presentation/grant success as much as possible both to safeguard your mental health as well as avoid bias that might prevent you from improving your work." And one very important point - if you have opted out of research resumption, you are still valued. You can be just as productive at home by doing a deep dive into sequencing data, learning computational skills, exploring the literature, or rigorously planning experiments you can do once back on campus.

Write those grants!

Even though your time in lab is limited (and for some, still on hold), this is a fantastic opportunity to get ahead on some writing. Whether it's a grant application, the introduction to a future paper, or a creative piece to occupy the nights that would otherwise be spent at a happy hour, you can do it now. Keep in mind that you don't need to be an expert on grant writing - especially if this is your first grant, so, reach out for help via email or set up a BlueJeans meeting with an experienced writer if you are struggling. Asking for help is always better than grappling with words by yourself at home. Call on your fellow classmates, a post doc, your PI, your program chair; someone will always be more than happy to chat, especially now. "Have as many people with different backgrounds/areas of expertise and levels of scientific literacy as possible proofread and give feedback on your work!" Get started early and write often. "The first draft is always the hardest. Don't try and make it perfect. Be kind to yourself; it'll get there." It is also key to observe some universal grant etiquette: don't wait until the last minute to write, send out drafts for editing, or ask for letters of recommendation. Give your supporting cast at least a month heads-up, and make sure to thank them afterwards. Once we get back on campus, thank them in person too - a little gratitude goes a long way!

Jess Bailey, Unsplash

Participate during your lab meetings, journal clubs, and seminars

Virtual science is difficult for everyone, but try to stay involved and maximize your academic engagement. Make virtual seminars interesting for everyone by asking questions in the Q&A chat or by sending a follow-up email to the speaker. In lab meetings, don't be scared to add a comment or question (whether insightful, clarifying, or basic); everyone will be more engaged and the discussion will be more captivating. You alone can direct how to get the most out of your development as a scientist while life is in this unusual, virtual format; make your voice heard! "Start to build relationships with students, post docs, and faculty members in your everyday life, so you can reach out to help when you need it. You must be your own advocate - do not wait until you are struggling to begin to seek out help." And as a general tip, make sure your BlueJeans video is professional: have a tidy background (even if you're calling in from your basement like Dr. Ben Prosser :P), have some light in front of you instead of behind (to avoid backlit and washed out videos), oh, and MUTE YOURSELF if you are not talking!

Hang out with your friends! (In a socially distant and/or virtual manner)

These times are especially isolating but do not cut yourself off from people! Schedule a video chat to catch up with your friends using Google Hangouts or Zoom. Set up a movie night through Netflix Party, Prime Video Watch Party, or YouTube Party. Plan a weekly BlueJeans happy hour with your lab, or try a virtual game night with your cohort. Try a smaller scale hangout and just FaceTime your friend or labmate. With public places starting to open up and lockdowns starting to ease, have a picnic in Rittenhouse Square, along the banks of the Schuylkill River Trail, or at Penn Park. There is plenty of outdoor space to hang out in while social distancing! And don't forget to wear your masks and follow distancing guidelines!! "Wear a mask because this pandemic isn't over, and vulnerable populations are not disposable populations."

Here at the CAMB Student Newsletter, we wish everyone the best during this trying time. Good luck to all students who are faced with grants, papers, prelims, and just everyday life this coming year. Remember, you are all still learning and can always reach out, no matter if it is in person or virtually. We're all in Grad School, not Grad You Already Know Everything. Even in 2020, no one has 20/20 vision of the future; we can only make the most of what life gives us in the present. So, seize the day! Be flexible, be resilient, and support each other within CAMB and beyond.

Some additional resources

Page dedicated to valuing grad students,
upenn.edu/pages/valuing-grad-students

Counseling and Psychological Services (CAPS),
https://caps.wellness.upenn.edu/CAPS

Self-care page with helpful tips and exercises,
https://caps.wellness.upenn.edu/selfhelp/

Student Intervention Services,
https://www.vpul.upenn.edu/intervention.php

Graduate Student Center,
www.gsc.upenn.edu/resources

Biomedical Graduate Student Association (BGSA),
http://www.med.upenn.edu/bgsa/

Vice Provost for University Life (VPUL),
https://www.vpul.upenn.edu/

Faculty Spotlight
Kellie Ann Jurado

James Gesualdi

I recently had the opportunity to chat with Kellie Ann Jurado, an Assistant Professor in the Microbiology Department. Kellie's group is interested in antiviral immunity and is particularly focused on recently discovered or newly emerging pathogenic threats. Below is a paraphrased transcript of our discussion of some of the challenges academics at all career levels are currently experiencing.

JG: The pandemic has pretty much turned the typical university structure on its head. How have you and your lab fared with the challenging transition to remote work and staggered schedules?
KAJ: Unfortunately, being a new lab that mostly does wet lab research, remote work was almost impossible! So, as with a lot of groups, this pandemic really impacted our progress. But, since I work on emerging viruses, I decided to come into lab about a month into the pandemic to help out. Then with time our group started our own small SARS-CoV-2 project, so we have continued to be in lab for a bit now. Staggering schedules isn't so bad given that we are still quite small and are lucky enough to be surrounded by some extra space that we can stretch into.

JG: This is certainly a trying and potentially traumatizing time for both trainees and mentors. What are some ways that you think faculty can support trainees (and vice versa) in the current context?
KAJ: I think it is super important for faculty to recognize and to go as far as to directly state that a trainees physical and mental safety are top priority right now. We all need to be flexible and to accept that most things are going to have delays and that the new normal is still going to be quite peculiar.

JG: What is your take on virtual rotations - love them or leave them?
KAJ: I wish it was so clear-cut. I think virtual rotations are what you make out of. For my lab, a virtual rotation is tough because we primarily do wet lab research and have not gotten to the point of having enough data where data analysis/mining is an option. But with that said, I had a rotation student during the pandemic, and we made the most of the situation. We met weekly and came up with thesis projects and experiments. We read and discussed. It was great. So, I really think it is what you make out of it and we were able to work together to make it fruitful.

JG: Do you think the process of selecting rotation (or thesis) labs will be fundamentally different for 2020 matriculates? For future classes?
KAJ: Oh absolutely. Honestly it is uncharted grounds all around, but I think that is why it is so important to do some deep digging into what about a lab environment is important to you and make sure that the lab you are interested in joining has those qualities. This will likely necessitate virtually interacting with both the PI and current lab members, and potentially asking some difficult questions to each party.

JG: Pandemic or not, what do you think are some characteristics that are important for graduate students to be successful during their PhD?
KAJ: Perseverance for sure. Everyone's project tends to require a lot of optimization, so it's important to continue to show up and maintain enthusiasm during some of the more tedious steps. It's also important to maintain an open mind: negative data can still lead to interesting conclusions, so we can't get too married to one particular hypothesis.

Another important thing to consider is that, of course you should be working on a project that is interesting to you, but the mentorship you experience during your PhD is potentially even more important than your project itself. You're learning how to develop and answer scientific questions, not necessarily determining exactly what you will study for the rest of your life. Your PhD mentor is going to be a critical connection for the rest of your career, so you need to find someone who will advocate for you.

JG: What qualities did you look for in your thesis mentor?
KAJ: Everyone is different and needs different things from their environment in order to thrive. For me it was important to have an advisor who was involved, inclusive, supported my outreach activities, and pushed me to grow.

JG: Given the current nationwide reckoning with institutionalized racism, I think we can all agree that inclusivity is an important discussion right now. What exactly does inclusivity mean to you?
KAJ: Many people think diversity and inclusion mean the same thing. But they don't. Diversity is about representation, whereas inclusion is about involvement. So, in essence, diversity means getting invited, but inclusion means being encouraged to participate. This encouragement can come in many forms. It could be as intentional as being asked to lead a project or contribute to a discussion, but it can even be as simple as a smile.

JG: One of the obstacles to an inclusive environment is a general tolerance of 'normalized' forms of discrimination like microaggressions, which have been a subject of discussion in academia of late. Have you experienced microaggressions and how did these instances impact you?
KAJ: Yes, I am very familiar with microaggressions and the weight that comes with them. Microaggressions are tough. They are situations that can be "justified" by changing the context and because of this it is often easier to do just that. But, even when one can try to protect themselves in this way, over time, these events become very heavy. The best way to deal with microaggressions is to share them. Respectfully call out the individual who made the comment; maybe they did not recognize the weight of their comment. Make sure they do. If unable or uncomfortable, then share with an ally who can. Inaction only allows it to happen again. As a community, we need to do a better job of disrupting and disarming microaggressions through educating/enlightening, promoting bystander intervention, and increasing dialogue. But if action feels like too much, then that is okay too. Self-care and coping should be your central value, so at minimum seek social support to share and don't let microaggressions weigh you down.

JG: Could you please elaborate on bystander intervention?
KAJ: Want to be an ally? Want to make a difference? Step in and speak up for someone when you recognize a microaggression. Make the invisible visible and educate the offender. Bystander intervention can be an ally's most supportive action because they take the work off of the wounded and initiate dialogue about and/or enlightenment regarding offensive words and actions.

JG: On a lighter note, one of the silver linings of my quarantine experience has been trying lots of different local take-out places with housemates. Do you have a favorite pandemic take-out meal?
KAJ: Hands-down: Love and Honey Fried chicken (with honey mustard).

JG: Let's say you're back in February 2020. What is one thing you should have done pre-pandemic?
KAJ: Took a vacation to visit my parents, and I should have bought all of the good-smelling hand sanitizer at the last semi-annual Bath and Body Works sale.

Student Spotlight

Jenea Adams

Sarah Campbell

Jenea Adams is a rising 2nd year GCB PhD student in the Xing lab and the founder of ***The Black Women in Computational Biology Network*** *(blackwomen-compbio.org), a thriving online networking platform designed for Black women and non-binary people working towards a career that combines computational and quantitative sciences with biology. We met up virtually to talk about her exciting initiative and ambitious plans for the future.*

The following transcript has been condensed and edited for clarity. Check out the blog to read the full, extended version of this interview.

SC: What motivated you to create The Black Women in Computational Biology Network?

JA: As a first-generation student, I found it really difficult taking the leap into my first year of grad school, trying to reach out to people in my field that looked like me. It's easy to find people who care, and allies and non-Black scientists who are doing a great job, but sometimes you just need to see people that look like you, doing what you are really passionate about, and it was nearly invisible. I realized the easy thing to do is to reach out and try to find people. At first, it was just a Google Doc that I was asking people to fill out, but I realized because there wasn't something else out there like this, I definitely wanted to make it a bigger platform and I didn't want to limit myself to people in the U.S. I wanted other people to be able to use this Network wherever they were and however they could. So that's how it started. Seeing people's reaction when they join The Network, it's a sigh of relief for a lot of people because it's like, 'Wow. There's something out there specifically for me, and there's people I can connect to'.

SC: What is The Network's main mission?

JA: I think the main purpose is to continue to support the people and The Network however we can. This includes providing scholarships and grants to

members for when they're applying to graduate school. That's a big barrier in academia in general, so it would be great for people to have financial support to do that. And because we are global, we're not necessarily going to have a physical hub just yet, but we could support people who want to provide outreach programming to make computational biology a little bit more seen. The outreach goal for me, working with youth or more early career scientists, is to open up their minds to see how well computer science, math, engineering, and biology can work together. [Another important component of the Network is] being that representation and example of an underrepresented group actually working towards equity within academia. We have a collaboration now

with PLOS Computational Biology, and we've been working with the editors there to provide an early reviewer program for our members. This is a really solid example of working towards equity in academia, because we know that editors decide what is important in a journal and what they want to hear. But of course, there is a lack of diversity of women in these roles, and definitely lack of diversity of Black women in these roles – I have yet to find a single Black woman editor for a computational science journal. [Finally, we aim to have] true inter-generational tiered mentorship within The Network. Having a good mix of faculty all the way down to undergrads, and different people at different stages of their professional careers is really important. Everything we do is through a global perspective, so we engage in conversations and create spaces for programming that caters to Black scientists across the diaspora.

SC: Can you talk about the significance of the language on your platform, specifically your use of the word, 'womxn'.

JA: From the beginning, I wanted to make sure the platform was welcoming and inclusive for all Black women or non-binary people; I wanted to set that standard. All the verbiage on the 'Who We Are' page speaks to how unapologetic I want the platform to be: a symbol of all Black women or non-binary people, wanting them to be welcomed, and our successes to be celebrated. Because first and foremost, it is a Black space, and it's a space we have to protect. And 'woman-ness' will not be defined by the pronouns you choose to use or how feminine you choose to present yourself.

SC: You encourage members to upload a professional headshot to the website. Why is this important to you?

JA: When you go on the website's 'Connect' page, my breath is taken away every time. Because one, you can see everybody that's there, but you can see people that look like you. You can see people with natural hairstyles and still being professional. In academia we definitely have a lot of anxiety around how you have to present yourself, but seeing people come as themselves, and their smiles, I think that's really important. You scroll through and see just how many people there are from so many places, you can connect people and their successes, and connect the CV to a real human face. It helps to build communities, since most of our events will be virtual. Maybe you won't ever meet everyone in The Network but seeing that these people actually exist is very important.

SC: Broadly, what role do you hope The Network will play for Black women in science?

JA: I hope that it's a springboard. A very small pebble on people's journeys in science. I really want the platform to be representative of the voices and need for diversity and equity within STEM. I'm still encouraging members to share their blogs about their journeys on the website just so people can get a better understanding that they're not alone in whatever struggles they're going through or highlight some issues within the computational biology field. A big part of computational biology is genomics, which is genetics and has a controversial history. [It's important that we] continue to unpack the ethical past and the role that we can play as Black scientists in the overall philosophy of our fields, biomedically research focused or not. I want us to be a part of a larger conversation of changing the landscape of STEM. And that doesn't necessarily mean having a seat at the table because, really, that saying implies that there's ownership of a table. We're actually just trying to create our own table; we want to create our own seats. It's completely

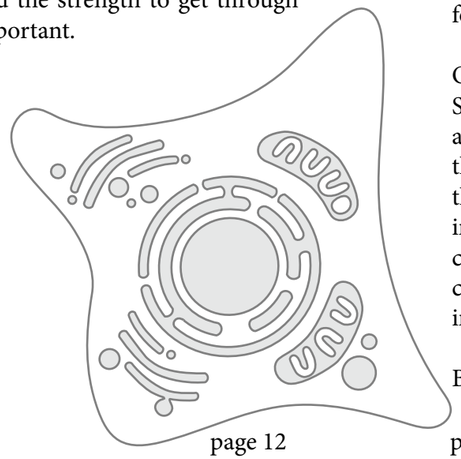
separate – we don't need to have a spot at a table that wasn't initially created for us to thrive.

SC: On the website, you gave the option to join as an ally for those who do not identify as a Black woman or non-binary person. What role do you hope that allies will play for The Network?
JA: I think it definitely starts with taking the initiative to connect, but first let's talk about allyship. A lot of people, when they become an ally to something, may not necessarily understand what that means. A big part of allyship means listening to the marginalized group you've aligned yourself with. But that's the thing, you have to listen to them and understand their needs, and not necessarily impose what you think could be helpful to this marginalized group. And a part of listening to us is citing us, Retweeting us, or sharing the work that we do. But most importantly, citing our work as scientists. A lot of Black women are being left out of people's references, their ideas and their hard work is paraphrased. As allies, be open to not just mentorship in terms of, 'I can help guide you through this', but 'I genuinely want to collaborate with you, I want to share a scientific opportunity with you'. Understand the amount of work that we can do together and be open to whatever we need. I think the platform opens itself to that. That's my hope for allies: listen to us and cite us, but be open to collaborating as a two-way street since many members in The Network are actually established scientists.

"Everything we do is through a global perspective, so we engage in conversations and create spaces for programming that caters to Black scientists across the diaspora."

SC: What is your vision for the future of The Network? Any plans to expand the community?
JA: Yes, it would be great for us to have an annual conference for global Black people in computational biology or bioinformatics, and related quantitative biology fields. Bringing together Black people across the diaspora, across the world, who are doing really cool research, to connect, not only to share cool research, but to collectively work towards making sure STEM is continuing to serve us and other marginalized groups. That type of collaboration, but also being able to come together in a physical space post-pandemic, is definitely going to be the goal over the world. Ambitious, but that's what I want it to turn into.

SC: Do you have any parting words of wisdom for younger Black women that want to get into science?
JA: Something that's really important is the ability to use your voice, and advocate for yourself. I'm thinking back to high school, when I first realized that I was even interested in biology – and this was in my AP biology class – I actually had to petition to get into the class. I was told that I would not do well in it because I hadn't taken honors biology or honors chemistry before, and I had to literally fight my way into the course. And yes, it was difficult. I almost didn't make it through, but I had to definitely advocate for myself to get in, advocate for myself to get help, and advocate for myself to end up with an 'A'. And then coming through college and being told not to apply to Ivy league universities because they're not very nice to 'people like me' – I have a hard time listening to stuff like that now because I know how to speak up for myself, and I know my own potential, my own passion, and my own limits. Getting through those types of obstacles – and there will definitely be more – and that self-awareness and the courage and the strength to get through that is definitely most important.



How to get involved

Community Outreach Opportunities

Hannah Kolev and Sylvia Stankov

United Nations Covid-19 Response, Unsplash

As the Penn community transitions to a "new normal" in lab, classes, and extracurricular activities, we reflect on the growing needs of our wider Philadelphia community. Below, we've highlighted ways to become involved in coronavirus contact tracing, blood donation, the fight against homelessness, and ensuring food security in our own neighborhoods.

Penn Contact Tracing Team

By now you've probably heard about "contact tracing" - the effort to systematically track where and how coronavirus patients become infected. The primary goals of contact tracing are to first identify anyone who may have been exposed to the novel virus and then warn them to self-isolate for 14 days. While many of us weren't familiar with this practice until several months ago, contact tracing has been widely used in the public health setting for decades.

One of the most challenging aspects about tracing SARS-CoV-2 infections is the amount of spread by asymptomatic carriers. Public health experts estimate that we'll need thousands of tracers to adequately track the virus' movements. Volunteers at Penn, led by Kevin Volpp, David Asch, and Carolyn Cannuscio, began contact tracing back in April. As our university and the country continue to reopen, the need for contact tracing has only increased.

Becoming involved with contact tracing doesn't require a special degree. Indeed, Penn's team is mostly made up of students in public health, social policy and social work, nursing, and medicine. Even more, states within the U.S. are retraining employees for work as contact tracers, and companies like Apple and Google are supplementing traditional manual contact tracing approaches with new digital tracing apps.

Efficient contact tracing requires clear lines of communication and patient trust. A volunteer calls a patient who recently tested positive for SARS-CoV-2 to determine their contacts up to 48 hours before symptoms developed. Then, a second volunteer reaches out to the contacts to inform them about their potential exposure. This process requires both detective work and empathy. Contact tracers support patients not only by informing them about self-isolating procedures but also by inquiring about their well-being and whether they feel supported by their community.

Contact tracing, together with social distancing, good hygiene, and frequent testing, is a critical component in the fight against COVID-19. If you would like to learn more about or collaborate with our local contact tracing efforts, visit the Penn Contact Tracing Team page on the BGS Career Development website.

Local Community Service Organizations

Beyond contact tracing, numerous opportunities remain available for those looking to help fellow Phil-

adelphians during the COVID-19 pandemic. The American Red Cross is in need of healthy volunteers to donate blood and help ensure a stable blood supply. As of April 7th, 15,000 blood drives had already been canceled, resulting in 450,000 fewer blood donations. Any breakdown in a hospital's blood supply can be devastating for patients relying on blood transfusions for surgery, car accidents, and other emergencies. Importantly, there have been no cases and there is no evidence of coronavirus transmission through blood transfusions. Healthy volunteers looking to donate blood can book appointments at redcrossblood.org or using the Red Cross Blood Donor App.

Multiple organizations within Philly are also in need of donations and volunteers to help support our most vulnerable communities. Project HOME seeks to empower adults, children, and families to break the cycle of poverty and homelessness by providing their clients with services such as affordable housing and access to employment opportunities. To help support their mission during the COVID-19 pandemic, Project HOME is asking for monetary donations, as well as donations of critical supplies, such as new jeans or shoes, non-perishable food, toiletries, surgical masks, soap, and Clorox wipes. Donations can be shopped directly through the Project HOME Amazon wish list.

Philabundance, which was designated an essential business at the outset of the pandemic, is currently building and delivering emergency food boxes across a nine county area. To support their work, consider donating to help cover the cost of as many food boxes as possible. Healthy volunteers can also sign up for a shift at the Hunger Relief Center to sort and pack food to be delivered through the Philabundance agency network. Interested in a more direct, socially distanced interaction with others in our community? Volunteer at the Hub of Hope Dinner Meal Service to help serve those experiencing homelessness. Your responsibilities may include seating and serving guests, making food plates, and packing and distributing items. Sign up for a shift here.

In addition to the pervasive food insecurity faced by many Philadelphians, workers within the local restaurant industry have struggled throughout the stay-at-home order. To address this difficulty, Fuel the Fight put almost $450,000 back into the restaurant industry by raising money to pay local restaurants to make and deliver meals to hospitals, such as CHOP, HUP, Jefferson, Temple, and Bryn Mawr. By delivering more than 50,000 meals across Philadelphia, Fuel the Fight not only supported local restaurants, but also provided frontline workers in hospitals, public transportation, and nursing homes with catered meals, helping to alleviate some stress during these troubled times. Use this form to learn more about Fuel the Fight and their mission to orchestrate a number of community service projects. Finally, consider supporting the staff at your favorite restaurant or bar by donating through the Philly Virtual Tip Jar. This online document provides a list of Philly service industry workers and their Venmo or PayPal accounts, offering a mechanism to directly donate to restaurant workers in need.

These organizations represent a fraction of the opportunities available to serve our communities during the ongoing pandemic. For a more comprehensive listing of outreach and service opportunities, click here!

Additional Resources

Tom Avril. What is 'contact tracing' and why is it back in vogue for tracking coronavirus? (April 2020). The Philadelphia Inquirer. https://www.inquirer.com/health/coronavirus/coronavirus-covid19-contact-tracing-new-cases-exposure-20200424.html

Erica Brockmeier. Can contact tracing stop the spread of COVID-19? (June 2020). Penn Today. https://penntoday.upenn.edu/news/can-contact-tracing-stop-spread-covid-19

The American Red Cross. The health of communities depends on donors - schedule an appointment to give in the weeks to come (April 2020). https://rdcrss.org/31kXA6e

Thank you for reading.

For any questions, comments, concerns, or if you're interested in joining our team, please feel free to contact us at:
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