

# 2025 Pathobiology Newsletter



## A MESSAGE FROM THE DIRECTOR

Dear Pathobiology students, faculty, staff, and alumni,

This new year I've been focused on small moments of joy. There continue to be many uncertainties and known as well as unknown challenges ahead, and the anxiety can feel paralyzing. With the changing of the year, I've tried to be more intentional in my dedication to celebrating every "win", big or small. While it may not feel like it at every moment of the day, we are lucky to be scientists, doing the thing we love, fueled by the possibility of new discovery and improving global health. I feel lucky to be working alongside all of you, part of this shared mission, learning as much as I am teaching and mentoring. Thank you all for being in community together.

As you'll once again see in our newsletter, our program continues to have a lot to celebrate, and I encourage you all to join me in spending a few minutes focusing on all this good news. I have been working with the Ubuntu committee and Ashley Vaughan to plan some social events this winter and spring, so be on the lookout for some announcements. I hope to see you all at our upcoming events (spring symposium, dissertation defenses, and graduation!), as well as at some social events. Thank you again for all that you do, and I hope that 2026 brings new opportunities, connections, and discoveries for you all.

Jenny Lund

Jennifer Lund, PhD ([jlund@fredhutch.org](mailto:jlund@fredhutch.org))

# PROGRAM INFORMATION

Welcome to our new first-year PhD students!



Bryce Inman



Tanaya Sheth



Torrey Brownell



## Congratulations to our 2025 graduates!

**Sean Windle, PhD** (mentor: John Aitchison)

**Caroline Duncombe, PhD** (mentor: Sean Murphy)

**Orlando Cervantes, PhD** (mentor: Kristina Adams Waldorf)

**Austin Haynes, PhD** (mentor: Tom Hawn)

**Crystal Chhan, PhD** (mentor: Andy McGuire)

## UPCOMING

- **Feb 2-3:** Open House Recruitment for Autumn 2026
- **Feb 6:** PhD Student Winter Quarter Symposium
- **March 12:** Irene Cruz Talavera - PhD dissertation defense
- **June 5:** PABIO PhD Student Spring Quarter Symposium & PABIO 1st Year PhD Student Talks
- **June 12:** DGH Graduation & Reception
  - 5:30 - 7:30 pm Kane Hall, Room 120 (Seattle Main Campus)
- **Oct 24:** PABIO Retreat (tentative)

## Welcome to our new 2025 Pathobiology Training Faculty!



Suzanne McDermott



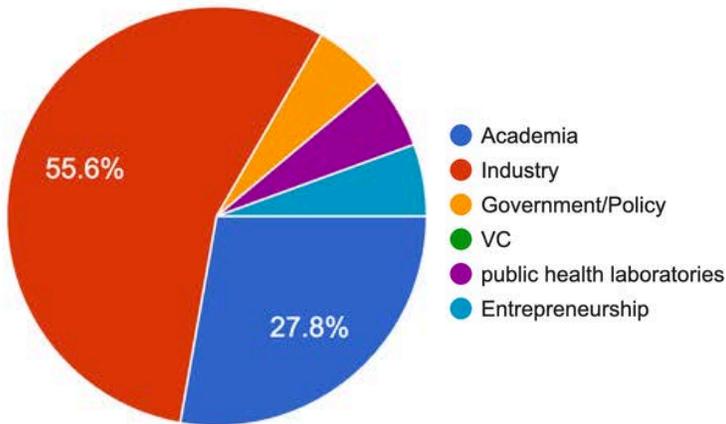
Megan O'Connor

**30 current  
Pathobiology  
Students**

**83 total  
Pathobiology  
Training Faculty**

**UW Department of Global Health**

## Current student career interests



## Fellowships & Job opportunities

**ASTDA** summer fellowship program for students or recent graduates:

<https://www.astda.org/summer-fellowship-program/>

**APHL** fellowship for post-docs:

<https://www.aphl.org/Career-Pathways/fellowships/Pages/Application.aspx>

**ITHS TL1 Training program:**

<https://www.iths.org/education/graduate/tl1/>

**Alexis Kaushansky** is looking to hire a post-doc with experience in cell death/cell signaling work.

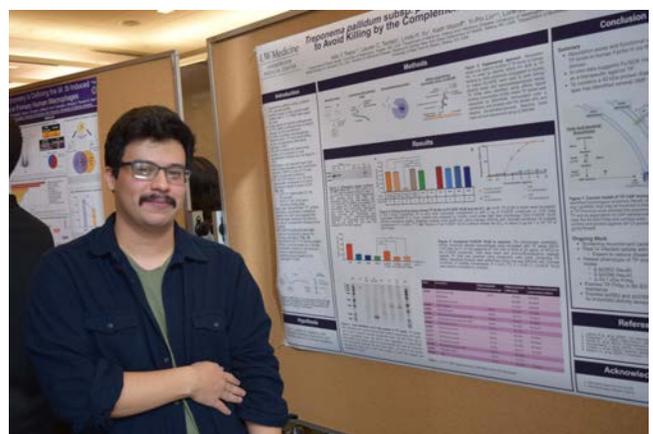
<https://careers.seattlechildrens.org/us/en/job/SEASCHUSR251342OEXTERNALENUS/Postdoctoral-Fellow-Kaushansky-Lab>

## OUTREACH OPPORTUNITIES

- **Rebecca Villa** is reviving the School of Medicine LGBTQIA+ affinity group. If anyone is interested in helping as a co-lead please reach out to them
- **Volunteer Opportunities:**
  - Bailey-Boushay House: <https://www.baileyboushay.org/>
  - Seattle Public Library Homework Help: <https://www.spl.org/programs-and-services/learning/student-success/homework-help>
  - Husky Science Communication Initiative: <https://huskylink.washington.edu/organization/husciorg>
- If you'd like to get involved during the midterms this year, consider joining Stance on Science! Stance on Science is a nationwide grassroots, \*non-partisan\*, scientist-led project that will help bring science policy into the public conversation during the 2026 midterms. We're currently looking for volunteers to help us reach out to campaigns, write questionnaires, review & share responses, and/or organize town halls - no prior experience in advocacy/policy is needed! Learn more & sign up here: <https://forms.gle/XTpvcsCJrvisJjz99>. Let **Becca Blyn** know if you have any questions!
- Anyone who is interested in science policy should check out SNAP (Scientist Network for Advancing Policy): <https://snapcoalition.org/>. It's a group of early career researchers who engage on science policy initiatives and try to bridge the gap between scientists and the public. You can sign up for the SNAP newsletter and/or sign up to get more involved as a SNAP organizer here: <https://forms.gle/79Wfd9WxfCAQMPWKA>. People can reach out to **Becca Blyn** for more info as I am currently a SNAP member!

# HONORS, AWARDS & ACHIEVEMENTS

- **Lakshmi Warriar** & **Ashley Krakauer** attended the AAI Computational Immunology course
- **Aldo Trejos** gave a talk at the 2025 ISSTD conference and at the Gordon Research Seminars - Biology of Spirochetes, held in Pomona, CA.
- **Molly Kanagy** gave a plenary presentation at Tuberculosis Keystone
- **Riley Zielinski** received the SEATRAC Awardee support grant
- **Nhi Ho** received the American Heart Association Predoctoral fellowship
- **Olivia Kern** presented at the Gordon Research Conference on Viruses and Cells in Barcelona
- **Anthony Reynolds** gave a poster presentation at the Tuberculosis Keystone and an oral presentation at the NIAID Systems Biology for Infectious Diseases Symposium
- **Lakshmi Warriar** received an excellent score on her F31 application and is waiting to hear about funding decisions from the NIH
- Pathobiology Retreat poster winners: **Aldo Trejos**, **Tonny Owalla**, and **Anthony Reynolds!**
- **Caroline Duncombe** started working as a postdoc at Stanford University



## PABIO T32 TRAINING GRANT

### Students on the grant:

- Molly Kanagy (Mentor: Benjamin Gern)
- Olivia Kern (Mentor: Ram Savan)
- Aldo Trejos (Mentor: Lorenzo Giacani)

### Post-docs on the grant:

- Harrison Dulin (Mentor: Keith Jerome)
- Annabel Olson (Mentor: Behnam Nabet)
- Joy Twentyman (Mentor: Lakshmi Rajagopal)

# PUBLICATIONS

- **Gern, B. H.**, Klas, J. M., Foster, K. A., **Kanagy, M. E.**, Cohen, S. B., Plumlee, C. R., Duffy, F. J., Neal, M. L., Halima, M., **Gustin, A. T.**, Stull, S. M., Wilson, J. J., Diercks, A. H., Aderem, A., **Gale, M., Jr**, **Aitchison, J. D.**, Gerner, M. Y., & **Urdahl, K. B.** (2025). Early and opposing neutrophil and CD4 T cell responses shape pulmonary tuberculosis pathology. *The Journal of experimental medicine*, 222(10), e20250161. <https://doi.org/10.1084/jem.20250161>
- Smith, J. R., **Kern, O. C.**, Mishra, G., Gokhale, N. S., Etzyon, N., Somfleth, K., Schwerk, J., Nakamichi, K., Pugliano, C. M., Lindbloom-Brown, Z., **Gale, M., Jr**, & **Savan, R.** (2025). CELF2 suppresses endogenous RNA ligands that activate RIG-I-mediated interferon induction. *bioRxiv*, 2025.03.27.645787. <https://doi.org/10.1101/2025.03.27.645787>
- **Duncombe, C.J.**, Sen, N., **Watson, F.N.** et al. Androgens inhibit protective CD8+ T cell responses against pre-erythrocytic malaria parasites in mice. *Nat Commun* 16, 5172 (2025). <https://doi.org/10.1038/s41467-025-60193-7>
- **Duncombe, C. J.**, Hergott, D. E. B., Staubus, W., Balke-Buijs, M., Kublin, J. G., Duffy, P. E., Healy, S. A., Talley, A., Jackson, L., Sim, B. K. L., Hoffman, S. L., Sauerwein, R. W., Roestenberg, M., & **Murphy, S. C.** (2026). Sex-based differences in Plasmodium infection in the control groups of controlled human malaria infection trials in malaria-naive populations in the USA and the Netherlands: a pooled analysis. *The Lancet. Microbe*, 7(2), 101265. <https://doi.org/10.1016/j.lanmic.2025.101265>
- **Peters, Q.**, **Prlic, M.** Six degrees of TGF $\beta$ . *Nat Immunol* 26, 1221–1222 (2025). <https://doi.org/10.1038/s41590-025-02201-y>
- **Bourgeois, N. M.**, Wei, L., **Kaushansky, A.**, & **Aitchison, J. D.** (2025). Exploiting host kinases to combat dengue virus infection and disease. *Antiviral research*, 241, 106172. <https://doi.org/10.1016/j.antiviral.2025.106172>
- **Giacani, L.**, Romeis, E., **Haynes, A.**, Molini, B. J., Tantaló, L. C., Xu, L. H., **Trejos, A. T.**, Keane, J., Mohamed, Z., Armstrong, T. D., Wieland, B. A., Phung, Q., Vyshenska, D., **Campbell, V. L.**, Godornes, C., **Koelle, D. M.**, **Reid, T. B.**, Wang, Y., Vorobieva, A. A., Wald, A., ... **Greninger, A. L.** (2025). Immunization with full-length TprC variants induces a broad response to surface-exposed epitopes of the Treponema pallidum repeat protein family and is partially protective in the rabbit model of syphilis. *Vaccine*, 61, 127406. <https://doi.org/10.1016/j.vaccine.2025.127406>
- Wilcox-King, A., Wan, Y. H., Scharffenberger, S. C., **Chhan, C. B.**, Davis, A. R., Homad, L. J., Seydoux, E., MacPhee, K. J., Siddaramaiah, L. K., Melo, M., Dosenovic, P., Irvine, D. J., Hyrien, O., **Stamatatos, L.**, & **McGuire, A. T.** (2025). Priming VRC01-precursor B cells with non-envelope immunogens disfavors boosting with HIV-1 envelope. *NPJ vaccines*, 10(1), 185. <https://doi.org/10.1038/s41541-025-01235-5>
- Hardy, S., **Chhan, C. B.**, Davis, A. R., & **McGuire, A. T.** (2025). Viral Entry. *Current topics in microbiology and immunology*, 10.1007/82\_2025\_300. Advance online publication. [https://doi.org/10.1007/82\\_2025\\_300](https://doi.org/10.1007/82_2025_300)
- MacLean, F., Zemek, R. M., Tsegaye, A. T., Graham, J. B., Swarts, J. L., Vick, S. C., **Potchen, N. B.**, **Cruz Talavera, I.**, **Warrier, L.**, Dubrulle, J., Schroeder, L. K., Elz, A., Sowerby, D., Saito, A., Thomas, K. K., Mack, M., Schiffer, J. T., McClelland, R. S., Jerome, K. R., Chohan, B. H., ... Kinga Study Team (2025). Genital herpes shedding episodes associate with altered spatial organization and activation of mucosal immune cells. *JCI insight*, 11(1), e197491. <https://doi.org/10.1172/jci.insight.197491>
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## CURRENT STUDENT SPOTLIGHT

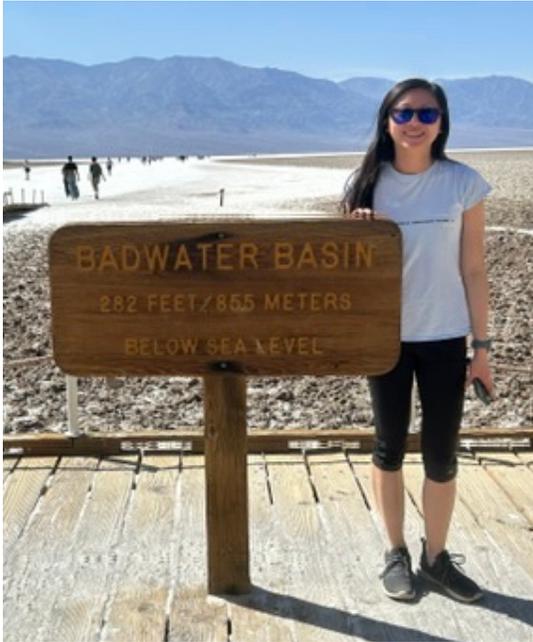
### Sophia Chima



- **Year entered and lab joined:** I joined the PABIO program in 2023 and I study fetal innate immune responses to Zika virus in the Adams Waldorf lab.
- **Favorite part about grad school:** Meeting other graduate students and learning about their thesis projects. There's so much research and some really incredible break-throughs that are happening at UW at any given time. It's exciting to be part of it!
- **Favorite grad school memory:** Going camping near the Columbia River Gorge during wildflower season with some friends from the program. We hiked Mosier Plateau to see the wildflowers and Multnomah Falls. Hot take: everything tastes better when you're camping.
- **Best UW resources:** The UW Counseling Center and Food Pantry are two resources that really helped me when times got hard. Also, when I can get over there, the IMA is an incredible space and they do free roller skating on Friday nights!
- **Advice you would give your past self:** Learn to speak kindly to yourself because on the hardest days, you're often your harshest critic. Also, enjoy the moment with the people you love because time is a nonrenewable resource in grad school.
- **What would be your alternative career path:** Probably something involving using art/design to tell peoples stories, whether that's through textiles, illustration, or animation. I also really enjoy collaborating with other artists or professionals so probably would've started my own fabrication studio or artists collective. Creating is my passion and thankfully it's a translatable skill!
- **What is your favorite hobby:** I like to enjoy my rent, so most of my hobbies involve painting, gardening, and cooking while listening to true crime podcasts. Sometimes when I'm not feeling like being a couch-potato, you can catch me in the city at a food walk, night market, game night, or concert. My new favorite spot for playing board games is the Blue Highway Games store in Queen Anne!

# ALUMNA SPOTLIGHT

## Amy Lu



- **What year did you graduate:** 2023 and I was in the Gale lab, and my dissertation focused on understanding the impact of Zika virus replication kinetics on cell-intrinsic innate immune responses, particularly RIG-I and type I interferon signaling
- **Favorite Pathobiology memory:** I don't have a particular favourite memory, but I really enjoyed the Pathobio potlucks and events with my cohort
- **Best UW resources:** Past and current students

- **Current position:** Senior Scientist at Merck. I serve as the lead cell-banking subject matter expert on early- and late-stage vaccine and biologics programs. I ensure that our cell banks and upstream drug substance materials are free from adventitious agents (bacteria, fungi, viruses) and are characterized in accordance with regulatory guidelines. I also author regulatory documents and support responses to questions from regulatory/health agencies.
- **If you did not pursue science, what would you be doing?** Probably a doctor or baker
- **Favorite hobbies:** I don't have a favourite but I love hanging out with my cats, hiking, baking/cooking, reading, and exploring my new home state of Pennsylvania
- **Advice for current Pathobiology students:** Know when to ask for help – it may be tempting to want to accomplish everything in your project alone and learn as much as possible but building interpersonal and soft skills and learning to collaborate across multidisciplinary teams are just as important as mastering technical skills. Try to enjoy grad school as much as possible and make time to take care of your physical and mental health.

## FACULTY SPOTLIGHT

### Steve Polyak



- **Research focus:** My laboratory studies virus-host interactions, including work on flaviviruses (hepatitis C virus and Zika virus), filoviruses (Ebola and Marburg, arenaviruses (Lassa, Junin, and Pichinde), and more recently, coronaviruses and alphaviruses.
- **How did you become interested in research?** I loved learning about cell biology: transcription, translation, etc, in high school. Then I took molecular biology in my junior year and virology in my senior year at University. So, that spawned my interest in viruses and cells. After undergraduate, I wanted to use my Biology degree but didn't want to go into bioscience sales or work in someone's lab, so I went to grad school. It was there that I became interested in research.

- **Favorite Pathobiology memory:** I have several. My first is establishing "Beer Thirty", to bring students and faculty together for socializing. My second is a retreat about 8 years ago at Pac Forest where I was pleasantly surprised to learn that Lee Ann Campbell plays guitar and sings. My third is re-establishing the Pabio Seminar series at SLU that included several years of socializing with the speaker and students at nearby SLU restaurants after their talk
- **What advice would you give to students:** Take full ownership of your learning experience. Establish your own peer, faculty, friend and family support network. Be professionally persistent in engaging with faculty. Advocate for yourself. Get outside, regardless of the weather. Use sunscreen. Take a mindfulness class.
- **If you did not pursue science, what would you be doing now?** Realistically: education; Fantasy: moderately successful working musician
- **Favorite hobbies:** Physical pursuits: hockey, hiking, backpacking, kayaking, walking, Orangetheory, traveling, occasional cycling (road & mountain bikes). Artistic pursuits: playing guitar & singing, collaborative song writing and playing music. Good for my mind & soul pursuits: hanging out with my family, my cat, relatives and friends; finding the best microbrew with friends who are similarly motivated; volunteering for and donating to causes I care about

# SHOWING OUR APPRECIATION

*Anonymous shout-outs to any students, alumni, faculty, or staff that have been especially supportive, helpful, kind, etc. in 2025*

- Thank you to **Ernie** for keeping everything organized for the program
- Thank you to all the Pathobiology faculty for your dedication to the program, and special shout out to faculty who serve as thesis advisors, committee members, instructors and members of the Pathobiology committees
- Shout out to **Lakshmi** for leading the 2025 recruitment
- Thank you to **Erin** for serving on the admissions committee this year
- Thanks to **Shawn** for serving as the student representative this year
- Thank you to **Guoyue** for putting this newsletter together
- Shout out to the **Ubuntu Committee** for promoting a sense of community in our program
- To **Nhi** for hosting a welcoming dinner for all international students when the funding cuts and travel ban news first hit
- To **Sophia's** leadership in organizing multiple Ubuntu committee events
- To the **second year cohort** for being the most supportive through everything
- To **Nolawit** for being so active with the Union and doing her part to make sure our rights are protected
- To **Tom Hawn** and **Rhea Coler** for their active engagement in PABIO pods
- Thank you to **Sophia** who is a source of positivity when I feel really out of sorts
- Shout out to **SO** and **Jenny** for being so kind and helpful this year
- Shout out to **Ashley Vaughan** for being a kind PI and creating a wonderful work environment
- Thanks **Guoyue** for being the glue that holds our cohort together
- Shout out to **Don Sodora** for taking me in as a temporary grad student
- The Giacani lab needed to purchase a fraction collector for Aldo's protein purification experiments. Although it was no problem to buy, instead of spending several thousands dollars for this machine, Aldo decided to use a small fraction of the lab budget to 3D-print the entire instrument and get the needed electrical and electronic component on amazon. Now the lab has a perfectly functional autonomous fraction collector that he can even program (see picture). Chapeau to **Aldo's** ingenuity, resourcefulness, and parsimony!



# 2025 SNAPSHOTS

A glimpse of our community together outside of school

