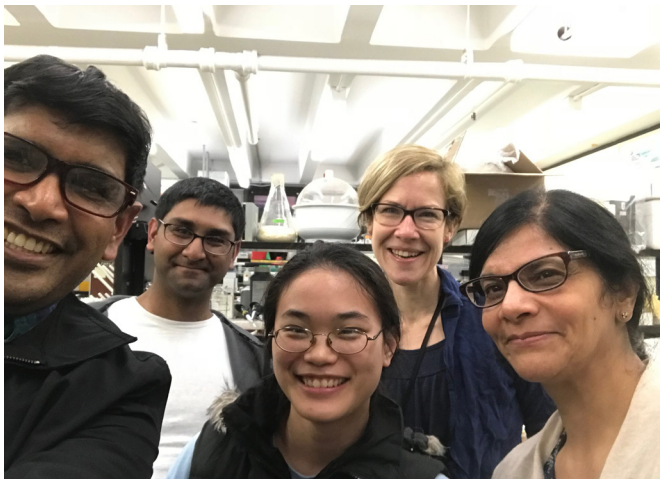
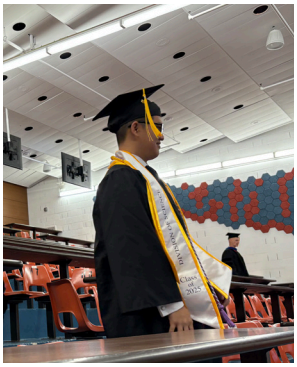
BIOLOGY

DEPARTMENT NEWSLETTER

2024-2025 | Issue #13





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Ways to Get Involved with
THE DEPARTMENT OF BIOLOGY

ECOLOGY AND EVOLUTIONARY BIOLOGY

MOLECULAR,CELLULAR & DEVELOPMENTAL BIOLOGY

NEUROBIOLOGY

CCNY's Division of Science Student Council

The Division of Science Student Council (DoSSc) brings together leaders from biology, chemistry, earth and atmospheric science, mathematics, physics and sustainability.
We aim to enrich the City College student experience with the following key points:

- Accessibility: Information and opportunities
- Collaboration: Interdisciplinary events & Achieve shared goals
- Connection: Networking internally and externally
- Mentoring: Cultivating a community for personal and professional growth

Want to get involved with the council? Email us!
DoSStudentCouncil@ccny.cuny.edu

Want to Learn More About Women in Science?

OUR EVENTS AND PROGRAMS INCLUDE:
WOMEN MAKING HISTORY PANEL
WINS MENTORING PROGRAM
CAREER PLANNING WORKSHOPS
MAXIMIZING RESOURCES WORKSHOP
AND SO MUCH MORE...

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CCNY WinS
WOMEN IN SCIENCE
Building a better world by improving the individual

BRINGING SCIENCE TO LIFE!

The Biology Club's mission is to provide access to information and opportunities to students both on and off-campus. Increase professional networks and collaborations. Learn how to market yourself through professional development events.

CCNY BIOLOGY CLUB
BRINGING SCIENCE TO LIFE

Want to get involved as a club e-board leader, club member, or collaborate for an event, email us at

BIOLOGYCLUB@GTEST.CCNY.CUNY.EDU

Beta Beta Beta (Tribeta)

National Biological Honor Society gives students majoring in biology, along with other science majors, opportunites to advance themselves in knowledge, research, and future careers by building a supportive network of peers and professionals in biology.

Since its founding in 1922, more than 200,000 persons have been accepted into lifetime membership, and more than 626 chapters have been established throughout the United States and Puerto Rico.

THE INSTALLATION OF THE CCNY TRIBETA CHAPTER, CHI NU CHI TOOK PLACE ON FEBRUARY 25TH, 2021

WANT TO GET INVOLVED, EMAIL

B3HONOR@GTEST.CCNY.CUNY.EDU

Faculty SPOTLIGHT

Dr. Shubha Govind

Dr. Shubha Govind joined The City College of New York (CCNY) in 1994 after finishing her postdoctoral fellowship at Princeton University. At Princeton, she studied how animals make early developmental decisions, including how an embryo determines which side of the developing body will become the bottom, or the ventral side, and which side will become the top, or the dorsal side of the insect. She used fruit flies, a popular and powerful genetic model organism, to examine this question. Her research contributed to understanding how genes and proteins controlling these decisions interact and function in the embryo to set up the bottom/top body axis.

Working on the same genes that set up the front/back in fruit fly embryos, Dr. Govind's lab at CCNY discovered that in addition to their role in early development, these genes control blood cell development, blood cell differentiation, and host defense against parasites (yes, fruit flies have blood cells, or hemocytes, some of which are similar to ours!). It turns out that these genes and pathways also control our first line of defense against viral and bacterial infections!

"At CCNY, we're helping individual students while also building an intellectual infrastructure that, in the long run, trickles down and helps everyone in society."

These early studies led her lab to study wasp parasites of fruit flies, about which little was known at that time. Many students who joined the lab in these early years were fascinated by the host-parasite system, and in the subsequent years the Govind lab made many discoveries in fly hematopoietic development, inflammation, and parasite virulence. Dr. Govind has shared this host-parasite model and related techniques developed in her lab with researchers and educators around the world.

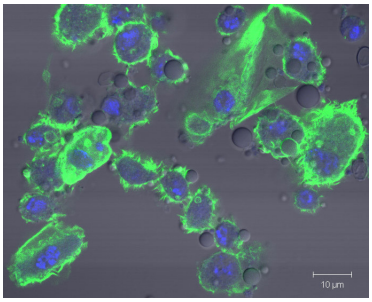
In 2018, Dr. Govind's lab sent her fruit flies and their parasites to the International Space Station on the SpaceX-14 mission. Lab members examined the samples returned to Earth and discovered that the expression of the same genes involved in front/back patterning, hematopoiesis, and anti-parasite immunity are strongly impacted by space travel. Flies had a harder time surviving in space than their parasites! The team discovered mutant strains in the progeny of space-travelling parasitic wasps.

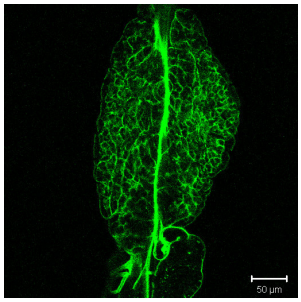
Dr. Govind believes that scientific research is fueled by curiosity, collaboration, and the ability to raise research funds. As a principal investigator, she continues to play many roles required to keep a lab productive and joyful, encouraging her team members to follow their passions while they pursue their tailor-made projects, individually or in collaboration.

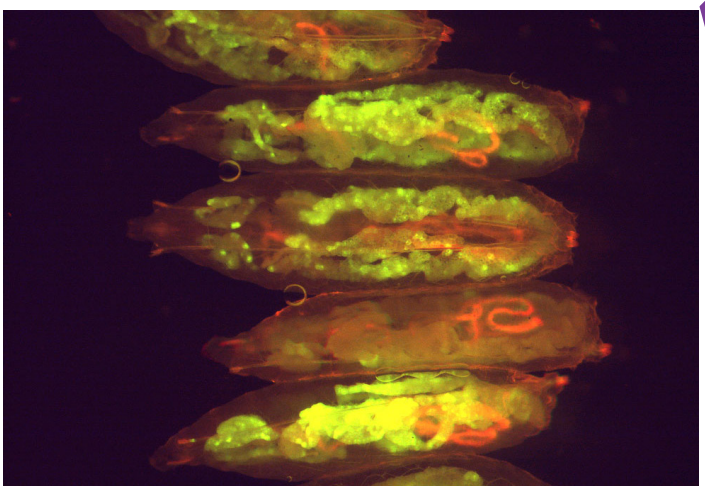
Dr. Govind approaches teaching and mentoring with the same excitement and seriousness as she does research. Since becoming a faculty member at CCNY, she has witnessed numerous discoveries in the field of biology and advancements in technology. She has taught undergraduate and graduate genetics at CCNY, and in doing so, she strives to bring these latest discoveries to the classroom. Dr. Govind finds supporting the growth of future scientists, physicians, and healthcare professionals rewarding. She says "at CCNY, we're helping individual students while also building an intellectual infrastructure that, in the long run, trickles down and helps everyone in society."

Dr. Govind has taught ~ 2500 students in her classes and mentored more than 85 trainees including postdoctoral fellows and students in her lab. Many of her mentees are successful doctors, researchers, and mentors themselves. Dr. Govind spends considerable time writing and reviewing grants and scientific papers. Dr. Govind also contributes to the department and the City College community through service by participating in committees such as the Curriculum Committee and the Academic Integrity Committee.

Dr. Govind attributes her success to her strong work ethic, and a sense of commitment to the College mission, students, and colleagues. She believes that new technologies including artificial intelligence are rapidly reshaping scientific research. This shift calls for innovation not only in research but also in education, so that students and educators can drive discovery and tackle real world challenges.







Publications

Dr. Robert Anderson

Blair ME, EA Noguera-Urbano, JM Ochoa-Quintero, A Paz, C Lopez-Gallego, MÁ Echeverry-Galvis, J Zuloaga, P Rodríguez, L Lemus-Mejia, P Ersts, DF López-Lozano, ME Aiello-Lammens, HM Arango, L Buitrago, S Chang Triguero, CA Cruz-Rodríguez, JF Díaz-Nieto, D Escobar, V Grisales-Betancur, BA Johnson, JM Kass, MC Londoño-Murcia, C Merow, CJ Muñoz-Rodríguez, MH Olaya-Rodríguez, JL Parra, GE Pinilla-Buitrago, NS Roach, O Rojas-Soto, N Roncancio-Duque, E Suárez-Valencia, JN Urbina-Cardona, J Velásquez-Tibatá, CA Zapata-Martinez & RP Anderson. 2024. Software codesign between end users and developers to enhance utility for biodiversity conservation. *BioScience* **74**: 867-873. https://doi.org/10.1093/biosci/biae097

Dr. Ana Carnaval

Akabane TK, CM Chiessi, PE De Oliveira, J Watling, AC Carnaval, V Hanquiez, DJ Bertassoli Jr, TA Silva, MH Shimizu & AL Daniau. 2025. Vegetation and fire regimes in the Neotropics over the last 21,000 years. *EGUsphere* **2025**: 1-43.https://doi.org/10.5194/egusphere-2025-1424

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French CM, RP Damasceno, MM Vasconcellos, MT Rodrigues, AC Carnaval & MJ Hickerson. 2025. Elevational range impacts connectivity and predicted deme sizes from models of habitat suitability. *Molecular Ecology* **34**: e17593. https://doi.org/10.1111/mec.17593

Mascarenhas R & AC Carnaval. 2025. Investigating the relative role of dispersal and demographic traits in predictive phylogeography. *Ecography* **2025**: e07149. https://doi.org/10.1111/ecog.07149

Dr. Jay Edelman

Azadi R, AO Holcombe & JA Edelman. 2024. Hypometria of saccadic eye movements to targets in rapid circular motion. *Journal of Vision* **24**: 2. https://doi.org/10.1167/jov.24.1.2

Edelman JA, TA Ahles, MC Estelle, I Mohr, Y Li, R Melara & JC Root. 2024. The effect of cancer and cancer treatment on attention control: evidence from anti-saccade performance. *Journal of Cancer Survivorship.* https://doi.org/10.1007/s11764-024-01711-2

Melara RD, JC Root, JA Edelman, MC Estelle, I Mohr & TA Ahles. 2025. Effects of breast cancer treatment on neural noise: A longitudinal design. *Archives of Clinical Neuropsychology* **40**: 52-62. https://doi.org/10.1093/arclin/acae066

Dr. Mark Emerson

Patierno BM & MM Emerson. 2025. Enhanced transcriptional activation in developing mouse photoreceptors. *Investigative Ophthalmology & Visual Science* **66**: 54. https://doi.org/10.1167/iovs.66.1.54

Dr. Fardad Firooznia

Firooznia F & J Morillo. 2024. Plant essential oils as natural insecticides against *Callosobruchus maculatus*: Looking at the biochemistry of a greener alternative. In: Boone E and Thuecks S, eds. *Advances in biology laboratory education.* **44**:8. https://doi.org/10.37590/able.v44.art8

Dr. Shubha Govind

Chou J, MZ Li, B Wey, M Mumtaz, JR Ramroop, S Singh & S Govind. 2025. Venomous cargo: Diverse toxin-related proteins are associated with extracellular vesicles in parasitoid wasp venom. *Pathogens* **14**: 255. https://doi.org/10.3390/pathogens14030255

Dr. David Lohman

Braby MF, NE Pierce & DJ Lohman. 2025. Molecular phylogeny of the tribe Luciini (Lepidoptera: Lycaenidae): Systematics and life history evolution. *Systematic Entomology.* https://doi.org/10.1111/syen.12667

Badon JAT, JM Tan-Sumagaysay & DJ Lohman. 2024. New host plant records for *Ragadia luzonia* and *Acrophtalmia yamashitai* (Lepidoptera: Nymphalidae: Satyrinae) from Negros Island, Philippines, with a global summary of spike moss-feeding butterflies. *Journal of the Lepidopterists' Society* **78**: 261-265.

Leong JV, P Matos-Maraví, R Núñez, R Nunes, W Liang, MF Braby, T Doleck, K Aduse-Poku, Y Inayoshi, Y-F Hsu, N Wahlberg, D Peggie, AB Mohagan, DP Mohagan, JA Genaro, AR Perez-Asso, K Kunte, DJ Martins, S Sáfián, AY Kawahara, NE Pierce & DJ Lohman. 2025. Around the world in 26 million years: Diversification and biogeography of pantropical grass-yellow *Eurema* butterflies (Pieridae: Coliadinae). *Journal of Biogeography* **52**: e15107. https://doi.org/10.1111/jbi.15107

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Dr. Bao Vuong

Shawraz S, T Thavornwatanayong, S Guillaume, K Reyes, S Zheng & B Vuong. 2024. The DEAH-box helicase RHAU regulates immunoglobulin class switch recombination. *The Journal of Immunology* **212**: 1268_5240-1268_5240. https://doi.org/10.4049/jimmunol.212.supp.1268.5240

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Sadia N. Rahman, Demetrios Neophytou, Siboney Oviedo-Gray, Bao Q. Vuong, and Hysell V. Oviedo. Non-canonical role of DNA mismatch repair on sensory processing in mice. *BioRxiv.* February 17, 2025. https://doi.org/10.1101/2025.02.13.638164

Invited Presentations

Dr. Robert Anderson

Anderson, R. P. 2025. Biodiversity in a dynamic, patchy world: theory, analysis pipelines, and software for predictive biogeography. Department of Biology, City College of New York, City University of New York, New York, New York. 24 February 2025.

Dr. Ana Carnaval

Flynn C, B Starinchak, L Maracahipes, PM Brando & AC Carnaval. 2024. Integrating remote sensing of functional traits with community-assembly models in southeastern Amazonia. AGU24.

Dr. Mark Emerson

Emerson, MM. 2025. Transcriptional control of cone photoreceptor genesis. Invited Seminar, University of Colorado, Anschutz Medical Campus, Colorado, 22 November 2024.

Dr. Shubha Govind

Govind, S. 2024. Research directions in the Govind laboratory. Invited presentation at High School for Math, Science, and Engineering at City College, March 6, 2024

Govind, S. 2024. A novel in vivo shRNA feeding method to examine venom protein function Invited presentation at Gordon Research Conference, Venom Evolution, Function and Biomedical Applications, University of Southern Maine, Portland ME, 14 August, 2024

Govind, S. 2024. The one and many toxins of Drosophila hemocytes. Invited presentation at New Directions in *Drosophila* Blood Cell Biology Conference, Institute for Stem Cell Science and Regenerative Medicine, Bengaluru, India, September 23, 2024

Govind, S. 2024. Unusual extracellular vesicle-like venom secretions in parasitoid wasps of Drosophila. Invited presentation at Entomology Society of America, Symposium: Enigmatic Bridge of Exo-Endo: Extracellular Vesicles in Arthropod Physiology & Control, Phoenix AZ, September 12, 2024

Dr. David Lohman

Lohman, DJ. 2025. Islands as natural laboratories of evolution: A butterfly perspective. Annual Sigma Xi Lecture. Lehman College, Bronx, New York, 8 May 2025

Lohman, DJ. 2025. Dispersal drives butterfly diversification in Asia and Australasia. Invited presentation, Prince of Songkhla University, Hat Yai, Thailand, 23 January 2025

Accolades

Cross-lab paper (Anderson and Carnaval Labs) was a top-cited article for those published in 2023 in Ecography (based on citations in 2023 and 2024). The first four authors were CCNY graduate students:

Kass, J. M. (Ph.D. student, CCNY/CUNY), G. E. Pinilla-Buitrago (Ph.D. student, CCNY/CUNY), A. Paz (Ph.D. student, CCNY/CUNY), B. A. Johnson (master's student, CCNY/CUNY), V. Grisales-Betancur (visiting scholar, CCNY/CUNY), S. I. Meenan (undergraduate student, CCNY/CUNY), D. Attali, O. Broennimann, P. J. Galante, B. S. Maitner, H. L. Owens, S. Varela, M. E. Aiello-Lammens, C. Merow, M. E. Blair, and R. P. Anderson. 2023. wallace 2: a shiny app for modeling species niches and distributions redesigned to facilitate expansion via module contributions. *Ecography*, 2023: e06547. https://doi.org/10.1111/ecog.06547

Ph.D. student Andrew G. Gaier (Anderson Lab) awarded 3-year NASA FINESST Future Investigator Fellowship, for the project "Predicting species composition and extinction risks for montane mammals across dynamic patchy environments".

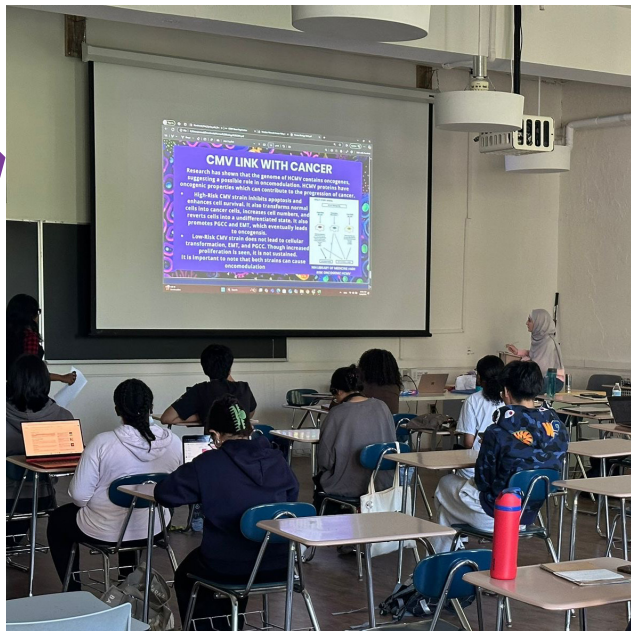
Ph.D. student Andrew G. Gaier (Anderson Lab) selected for the 2025 Horner Award from the American Society of Mammalogists (for the highest-ranking proposal to the Grant-in-Aid of Research program).

Anderson, R. P. Web of Science Highly Cited Researcher, 2024.https://www.webofscience.com/wos/author/record/1904673 For production of multiple papers ranking in the top 1% by citations for field and year of publication over preceding decade (overall, approximately 1 in 1000 researchers appear on the list; In 2024, 141 researchers appeared in the Environment and Ecology section, for publications from 2013 to 2023). https://clarivate.com/highly-cited-researchers/

Sameah Algharazi ('23) from (Edelman lab) received a Jonas Salk Award. She will be starting medical school in August at SUNY Downstate.

Student SPOTLIGHT

Wroud Saleh



Wroud Saleh, an Adjunct Lecturer at City College, has always been drawn to the world of science. Originally of Jordanian and Palestinian heritage, she moved to the United States at the age of 14. After completing high school in the states, she continued her studies at SUNY New Paltz with a major in biology and minor in chemistry. When thinking of where to pursue her master's degree, she found interest in the molecular science program at City College because of the robust curriculum and courses. Now after graduating, Wroud is taking the next step in her academic journey as a PhD student in pathology at New York Medical College. While pursuing her interest in science, her career goal is to work in the design and development of novel vaccines.

As an Adjunct Lecturer, Wroud teaches Biology 102 and Human Biology courses at City College. What she loves the most about it is the chance to meet the new generation of biologists and learn about their interests that make them feel passionate about science. She also enjoys having conversations with her students about soccer, which she oves to watch in her free time. When reflecting on her successes throughout her life, education, and career, Wroud attests to her disciplined organization, support system, and communication skills. It is normal for her to plan out her daily schedules by the hour to ensure the completion of her responsibilities, such as planning for class lectures, her own studying regime for her PhD, and even social activities. But she does remain flexible by scheduling what she likes to call "free hours" in her calendar, for unplanned events. In moments when things may not go according to plan, Wroud is grateful for her support system of family and friends that surround her to provide physical and mental strength, and an ear to listen when she needs it. She also credits the networking opportunities that have been offered throughout her college years for her success. "Getting to meet other people in the field through college events is key for a successful career," Wroud says. Attending these events have allowed her to meet new people and learn about new academic and professional opportunities. She always advises her students to reach out to their networking circle whenever they can, starting with their professors, because they never know what hidden opportunities that can come of constant communication.

For fellow professors just starting out their teaching careers, Wroud wants them to know that teaching gets easier the more you do it. Even as a professor, it is okay to feel anxious when giving lectures to an audience, "but it gets better with time," she says. She also wants to remind them that science is a dynamic field and new research is published every day, so it is normal not to know everything about what you are teaching and it is okay to do more research on your teaching topics. "Don't be afraid to say, 'I don't know,'" Wroud states.

"Getting to meet other people in the field through college events is key for a successful career."

Student SPOTLIGHT

Rilquer Mascarenhas

Rilquer Mascarenhas is a student in the Biology PHD Program jointly offered by the Graduate Center of the City University of New York and City College. Originally from Brazil, Rilquer holds a bachelor's degree in biology and a master's degree in biodiversity and evolution from the Federal University of Bahia. As an undergraduate student, he explored a wide range of ecosystems, from intertidal zones to mountainous forests, and participated in research projects that took him across northeastern Brazil studying insects and vertebrates. These experiences helped shape his academic path and inspired his current focus on the biology and conservation of Neotropical birds, an understudied group in his undergraduate school.

While completing his undergraduate studies in Brazil, Rilquer explored ecology and animal behavior, before focusing on biology and population genomics. During his final year of undergraduate studies, he worked with a professor that researched genetic data to investigate the history of native bird populations in the Atlantic Forest. This work required sequencing the DNA of birds to examine how their population changed over evolutionary time in correlation to regional temperatures and precipitation rates. This research field is phylogeography, and it fascinated Rilquer into learning more. While at a scientific conference in Brazil, Rilquer met CCNY Professor Ana Carnaval, leading to the opportunity to pursue a PhD under her mentorship. Rilquer plays a dual role as both a researcher and educator, combining his passion for evolutionary biology with a commitment to student mentorship. Working in the Carnaval Lab, he guides undergraduate students in developing molecular lab skills and exploring the fundamentals of evolution. He also teaches the undergraduate course BIO228 Ecology and Evolution, where he introduces students to the mechanisms that drive and maintain biodiversity. For Rilquer, the most rewarding aspect of his work is the chance to learn from students' unique perspectives and goals while helping them connect scientific concepts, like biodiversity, to the real world and their own lives. For his PhD research, Rilquer focuses on understanding how bird species in South America respond to environmental changes by analyzing their genetic data. His work investigates why some species are more sensitive to habitat fragmentation than others, looking at traits such as diet, behavior, and physiology to determine what drives these differences. What Rilquer enjoys most about his research is the opportunity to explore how various aspects of animal history connect to broader ecological patterns.

When reflecting on his successes, Rilquer attributes it to the strong sense of community and support he has found within CCNY. As an international student, being part of a diverse and inclusive academic environment has been essential to his growth as a scientist. "That is very important when you are bringing your own background and expecting to grow as a scientist and professional," he says. He highlights the collaborative spirit of his work group in the Marshak Science Building, where lab members and faculty regularly come together to exchange ideas, offer feedback, and support each other's academic and professional development. Rilquer has found his peers and mentors to be invaluable resources. He also emphasizes the importance of maintaining balance, noting that taking a light approach to life has helped him achieve goals throughout his PhD journey. "Academic research is a demanding job," Rilquer says, "and learning what you want, what you need and how to be respectful of your own boundaries is very important." For those considering a PhD, Rilquer advises on the importance of maintaining a healthy work-life balance and encourages students to view their journey as more than just a path to a final goal, but as an opportunity to grow—as scientists, educators, and members of a collaborative academic community. "Regardless of what the results of your research end up being, this is a time to grow as a scientist, as a teacher and as a person that is a part of a community of people sharing similar interests," he states. For Rilquer, adapting to evolving research questions and engaging in meaningful conversations with colleagues have been just as valuable as any specific outcome in shaping his experience and success.

Student SPOTLIGHT

Nicole Baque

Nicole Baque, a senior student at City College with a major in biology and a minor in psychology, has been passionate about science since her childhood. In elementary school, science was her favorite subject. She enjoyed participating in class and school activities that involved hands-on learning, such as making projects for science fairs, organizing project presentations, and partaking in field trips to aquariums and the Bronx Zoo. These experiences at the zoo and aquarium is where Nicole fell in love with animals and animal science, and they have helped shape her career aspiration to become a veterinarian.

Nicole has served as a College Assistant with the Biology Department for the past two years, working in an office where she plays a key role in connecting with the Biology Department community at City College. What she enjoys most about this position is the opportunity to interact with faculty members and meet them on a more personal level, which has allowed her to build valuable relationships within the department. As she provides customer service to faculty, students, and even parents, Nicole appreciates these moments of engagement to hone her interpersonal skills and develop a greater sense of self-confidence. Nicole is also President of the Biology Club, and she has embraced this role by strengthening her leadership skills in providing guidance and mentorship to peers.

These positions provide new opportunities for Nicole to challenge herself and learn new things to assist both her academic life and professional life as she shapes her career. Gaining confidence in engaging with people has been an important step in this development, and this comes in part from receiving support from her college supervisor, Christine Klusko.

When reflecting on the successes in her life, Nicole credits her strong support system of her family, friends, and especially her brother, who she admires for his dedication in pursuing a career in medicine and their shared passion for science and learning. Additionally, Nicole's volunteer experiences at animal shelters, pre-veterinary clinics, and even a bird rehabilitation center have been pivotal in her personal and professional growth. These hands-on work experiences have reinforced her love for veterinary medicine, where learning by doing provides Nicole with an enhanced way of learning. As she explores more opportunities to work with animals, Nicole is still debating whether she wants to work with wildlife or small pet animals in her future career. But what she does know for certain is that every opportunity that has come her way so far has helped her to develop connections with veterinarians, animals and their owners, and fellow volunteers.

As advice for students just starting school, Nicole wants them to remember that "Everything you do can find its way to your future and help you grow as a person." When she first started school herself, Nicole had her sights set on working at a veterinary clinic, but she was unsure of how the activities and experiences in her life at the time would help her reach this goal. But she realized that every experience she has had, whether as a College Assistant in an office, volunteering on hands at animal shelters, or speaking with faculty and students as President of the Biology Club, has contributed to her growth. Working with people as a College Assistant has sharpened her interpersonal skills, which Nicole found essential in the veterinary field, which is not just about caring for animals, but also connecting with their owners. She also explores this skill in her personal hobbies, such as being active and going to the gym, playing volleyball, and spending time with friends. Even seemingly unrelated experiences can later play a crucial role in shaping your career, and for Nicole, she hopes that she can continue to work with her current amazing opportunities and develop more skills for the future.

Student SPOTLIGHT

Laura Campoverde

Laura Campoverde is a dedicated pre-med sophomore part of the Macaulay Honors College at the City College of New York. As a biology major with aspirations to become a physician, Laura values education and became inspired to enter the medical field by participating in engaging course work with hands-on laboratory experience that connected to real-world challenges. Her commitment to biology has expanded into a professional role as an ophthalmic technician, where she works outside of school to assist with diagnostic tests and provide patient care. These practical experiences have not only deepened her understanding of biology but also reinforced her desire to pursue a career in healthcare. In addition to her academic and professional commitments, Laura balances her studies with extracurricular activities, including volleyball and spending time with friends. Her time at City College has provided her with a supportive community that has fostered her personal and professional growth.

When asked about why she chose City College, Laura highlighted the institution's strong reputation in the sciences and the diverse, vibrant, and supportive community that comes with it. At CCNY, Laura has had the opportunity to meet faculty, staff, and fellow students from a wide range of backgrounds and life experiences who "are equally driven to succeed." This ambitious environment has fostered professors and staff members that care for students' progress, are always willing to offer mentorship, and share information about opportunities that are available at City College. Learning about these opportunities that involve research and lab work make it an exciting experience for Laura and has deepened her passion for biology, as well as encouraging her to step outside of her comfort zone and explore new things.

Laura's leadership as the President of the TriBeta Biological Honor Society has been a cornerstone of her college experience. She originally joined the Honor Society as a freshman, where she felt inspired and welcomed by the participating kind and informative upperclassmen. Now as President, she works to strengthen the connection between students and faculty while promoting a deeper appreciation for biology through mentorship and networking. Laura has worked with fellow TriBeta members to organize numerous events that facilitate student-professor interactions and provide valuable insights into the world of research. These initiatives have helped many students, including Laura, build strong academic and professional networks that are essential for success in the sciences. When reflecting on her academic and leadership success, Laura credits the supportive TriBeta community and the opportunities for direct engagement with faculty as crucial elements of her growth. In addition to her time with the TriBeta Biological Honor Society, Laura credits her success in part to her personal drive to seek out internships and research opportunities that align with her interests and provide valuable hands-on experience. Professionally, her work as an ophthalmic technician has provided her with valuable hands-on experience in patient care and has allowed her to collaborate with doctors in the field, which has only strengthen her goal of becoming a physician.

For students interested in taking on leadership roles similar to hers, Laura advises to embrace the responsibility of being a connector to create opportunities for students to engage with faculty, and open doors for them to explore their academic and professional interests. She emphasizes the importance of organization, clear communication, and a proactive approach to planning events that can enrich the student experience. Laura also encourages future leaders to be open to feedback and new ideas. "Some of the best initiatives come from collaborative brainstorming," she explains. While at City College, Laura has learned the importance in finding your people to create a supportive and empowering community with a ripple effect of positivity. She has also learned to not be afraid of reaching out to others and encourages others to do the same. "You never know what doors you might open for yourself," she says. "Possibly discovering a new professional opportunity, gaining valuable advice, or simply finding someone who inspires you." Looking ahead, Laura is eager to continue giving back to the community that has supported her.

BIOLOGY Recognizes

Ileana Ruidiaz

"Even if life doesn't look bright, you've gotta always have that frame of mind that it's going to get better, because it does."

Ileana Ruidiaz, a member of the City College of New York, has built a life grounded in resilience, family, and a passion for growth. Born in Colombia and raised in New York, Ileana comes from a hardworking immigrant background, with her father working as a public-school supervisor and her mother as a cook for American Airlines. Growing up bilingual in Spanish and English, she navigated the United States education system from elementary school through college. She has spent nearly 15 years working in facilities maintenance and 2 years working as a janitor, including positions at Cornell University and Columbia University. Outside of work, Ileana love spending time with her seven-year-old son by going on weekend explorations across New York City visiting arcades, and watching Broadway shows and new movies at the cinema. Together, they have fun with Ileana as the tour guide and her son as the tourist. She also loves spending time with her friends and having dinner to explore new foods, cuddling her small yorkie dog at home, and traveling. Some of her travel destinations include Puerto Rico and Ecuador, but she dreams of visiting the Middle East. Inspired by her son and the evolving world of technology, Ileana is now interested in pursuing an education and career in cybersecurity to explore the recent advancements in the field. By going back to school, she hopes to make her son proud and show him that learning is a lifelong process and can open new doors at any stage of life.

Ileana became part of the City College community through a combination of opportunity and encouragement from friends who had previously graduated from the College. While searching for a new job, Ileana took her friends' advice to apply and was quickly offered a position. Drawn to the dynamic environment of a college campus, she finds working at City College both rewarding and full of potential. For her, being part of an academic institution means connections to opportunities of growth, exploration, and the chance to pursue new paths. "It's not only one field," Ileana says about working in her position. With the exposure of knowledge and opportunity on the CCNY campus, "You could become a painter, an engineer, whatever you set your mind to." With a strong belief in staying positive and focusing on your goals, Ileana sees City College as a place where anyone can evolve, and she's proud to be part of a community that offers so many possibilities. While working at City College, Ileana enjoys connecting with the diverse, friendly community of people from all over the world. She tries to engage with everyone, even with a simple greeting or offering a smile, in hopes of passing the positiveness along to others and she appreciates it when students, faculty and staff share their positivity with her in return. "You'd be surprised how far that can make somebody feel," she says, reflecting on how small gestures can have a big impact. Ileana also appreciates the open, welcoming atmosphere of the campus and the freedom her role gives her to move through different spaces.

BIOLOGY Recognizes

When reflecting on her successes, Ileana credits a combination of positivity, humility, and faith. She believes that maintaining a positive attitude, even during difficult times, is key to moving forward and finding new opportunities. “Even if life doesn’t look bright, you’ve gotta always have that frame of mind that it’s going to get better, because it does,” she says. Alongside her optimism, Ileana remains humble and always open to learning. Her faith also plays an important role in guiding her through life’s challenges, helping her stay grateful for each step of the journey. As advice for others, Ileana emphasizes the importance of embracing every opportunity to learn and grow. She encourages newcomers to take the initiative and learn as many skills as possible, from waxing and buffing floors to preparing classrooms for the next session, because each task is a steppingstone to greater knowledge and advancement. Ileana continues to enjoy being a part of City College and is appreciative of the opportunity to take part in it, and she looks forward to expanding her horizons here.

BIOLOGY Recognizes

The City College of New York

CCNY BIOLOGY DEPARTMENT

The Biology Department gives out several awards and scholarships to undergraduate and graduate students every year thanks to the generosity of donors. The following recipients earned awards for the 2024-2025 Academic Year:

Fiana Gasapo
The Professor William Stratford Prize

To a Biology or Biotechnology student demonstrating the greatest proficiency in both coursework in zoology and zoological research.

Will Butler
The Olivia McKenna Award

To a graduating Biology or Biotechnology senior demonstrating the greatest research proficiency in neuroscience research and academic achievements at CCNY, demonstrating one of the best overall records by a student majoring in biology.

Marina Milea & Nevalli Pinheiro
The Edmund Baermann Scholarship in Natural Sciences

To a Biology or Biotechnology sophomore or junior student completing the Biology core with the best performance in their courses.

Ealonah Volvovitz
Excellence in Biology Research Award in memory of Peter Sajovic

To Biology or Biotechnology students with excellent research results or a rigorous application of experimental, computational, or theoretical techniques.

Nicole Baque & Laura Campoverde
Outstanding Service Award

To a Biology or Biotechnology seniors demonstrating outstanding extracurricular service to the Biology Department, CCNY community, or the City of New York.

Sayyid Yobhel Vasquez Rodriguez
Excellence in Published Research Award (supported by the Dr. Myer and Gloria Fishman Scholarship in Biology)

To Biology or Biotechnology students with authorship on a peerreviewed paper that demonstrates research initiative and independent thinking. The student may be a first or middle author on a published article affiliated with a Biology Department lab.

Ramela Xhaho
The Sharon D. Cosloy Undergraduate Research Scholarship in Biology

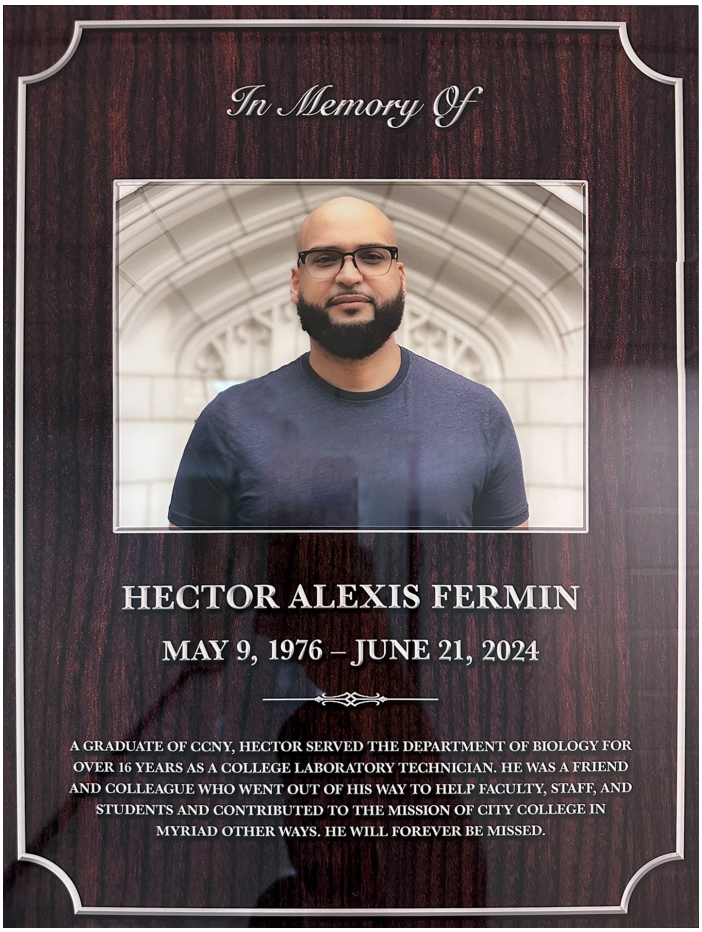
Established by the Cosloy-Blank family in the memory of Professor Sharon D. Cosloy, former Chair of our department, respected researcher, dedicated mentor, and beloved teacher. The scholarship goes to a Biology or Biotechnology or a student working in a Biology Faculty member's lab major with a strong academic background, that plans to continue laboratory research.

Ramela Xhaho
Outstanding Biology Presentation Award (supported by The Biology Scholarship for Needy Students)

To a Biology or Biotechnology student with the most outstanding biology research presentation.

In Honor of Our Beloved Colleague

HECTOR FERMIN



Hector Alexis Fermin was one of the people that if you were lucky enough to meet in your life, you'll always hold a special place in your heart for. He cared deeply about everyone and poured himself into his work, his passions and living life. He passed away suddenly on June 21, 2024, at the age of 48.

Over the past year we have continued to find ways to honor him, including having a Celebration of Life event and dedicating a space on the 5th floor to him.

Here are photos from the Celebration of Life we held for Hector on October 21, 2024.

Dean Perkins shared, "he was a friend and part of the glue that binded us all together. We dedicate the newly renovated biology labs, which he was an integral part of creating, on the 5th floor of Marshak in his honor."

Where Are They Now FEATURE

Kazi Hossain

Kazi Hossain, an alumnus of the City College of New York graduating class of 2018, currently works as a postdoctoral fellow in the lab of Katherine Roche, a leader in the field of studying synapse formation at the National Institute of Neurological Disorders and Stroke (NIH/NINDS). He began his fellowship at the beginning of this year after completing his PhD at the Duke University School of Medicine's Soderling Lab, which studies how brain circuit functions are influenced by molecular networks of proteins effected by genetic mutations. Kazi was born and raised in Queens, but his family immigrated to the United States from Bangladesh in 1995. Alongside his work at the NIH, Kazi enjoys spending time with his family, including his parents, wife, daughter, and younger sister.

Kazi took on the opportunity to attend City College after being awarded a full scholarship from the Ellen Knowles Harcourt Foundation, which supported all his college expenses. An additional benefit to attending

"Test scores are nothing more than a number, and what will really set you apart from the crowd is one's curiosity and genuine enthusiasm for science."

CCNY was that it was in the city's boroughs and close to his family home in Queens, allowing him to support and remain connected with his parents during school. Having this accessible support both in and out of school allowed Kazi to focus on his studies and personal growth. When reflecting on his time at City College, his favorite treasure were the research opportunities available to students. While in school, he spent 3 years working in the lab of Dr. Mark Emerson, studying the development of horizontal cells in chicken embryos. This wonderful opportunity then opened the doors for Kazi to participate in multiple summer programs during his tenure at CCNY. He received an NSF-REU at the University of Nevada Las Vegas working with Dr. Nora Caberoy and a SURP at New York University studying with Dr. Claude Desplan who is one of the world's best developmental biologists. Participating in lab work while attending classes was tough at times, but Kazi dedicates his success to his sense of grit, perseverance, and strong will of never giving up when things got tough. To current CCNY students, Kazi advises staying focused on achieving your goals and dreams, and to not letting anyone get in the way of your pursuit of them. It can be hard to deal with the pressure of getting good grades, but he wants every science student to remember that "test scores are nothing more than a number, and what will really set you apart from the crowd is one's curiosity and genuine enthusiasm for science." He also encourages students to express their interest through asking questions and to never stop seeking the answers you look for in your own interests and research. A part of Kazi's doctoral research was studying a gene called Cnksr2 and

its role in epilepsy-aphasia, particularly the cell type specificity, segregation of the disorder, and which brain region drives aphasia. Now during his postdoctoral research, he focuses on neuroligins and how mode patient variants can be created in mice to learn about the cellular and molecular mechanisms of certain neurological disorders. Kazi's own curiosity is still clearly driving what he pursues.

Inspiring SCIENTIST

Ramela Xhaho

Ramela Xhaho, a senior Biology major on the premed track at the City College of New York, is making waves in both the classroom and the lab. Born in Albania and raised in Brooklyn, Ramela's journey to CCNY is one of perseverance, hard work, and a passion for science.

Ramela arrived in the U.S. at a young age, navigating early challenges with language barriers. She excells academically and has become the first in her family to pursue a career as a physician. Ramela is currently applying for medical school and plans to become a physician and researcher and wants her education and extracurricular activities to support this interest. This is why when it came time for selecting a college, she was drawn to City College for its focus on the sciences. "I knew I wanted to major in Biology, and CCNY's emphasis on scientific research made it an ideal place to pursue my goals," she explains. Early in her studies, Ramela sought out hands-on research experience and joined the Emerson Lab at CCNY, a research laboratory that is centered on understanding the molecular and cellular mechanisms that underlie the development of the vertebrate retina. Ramela works at the Emerson Lab as an undergraduate researcher and has been

"It's important to remind yourself that you are capable of success no matter the circumstance."

working on her own project for over a year and is writing her own paper based on her research. "The lab has taught me how to think like a scientist," she says. (Can you please expand on this; what does think like a scientist mean to you?) Ramela has been with the Emerson Lab since her sophomore year at City College, and she's learned skills; such as, scientific investigation, the application of principles, and is able to understand research in other fields. In addition to her research, Ramela is a dedicated tutor for the BIO 10100 course and serves as a recitation leader for the General Chemistry I and II courses. "Teaching others and helping them grasp difficult concepts is something I really enjoy," she says. "It's incredibly rewarding to see students gain confidence in their abilities." It is evident that by helping others learn and build their confidence, Ramela has grown in her own abilities.

Ramela's commitment to research and academics earned her the Sharon D. Cosloy Undergraduate Research Scholarship, an honor given in memory of Dr. Sharon Cosloy, former Chair of the Biology Department at City College and beloved faculty member. This scholarship supports Ramela's interest in scientific research by providing the opportunity to engage with other scientists across various fields and talk about their work. Ramela attributes this and her other successes to the sacrifices her parents made when they emigrated from Albania, as well as the support she's received from City College. We all have challenges that we face, some may be similar to Ramela's. She wants to encourage others by sharing "not to let setbacks stop you from achieving your goals." Between challenges in or out of the classroom, "it's important to remind yourself that you are capable of success no matter the circumstance.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