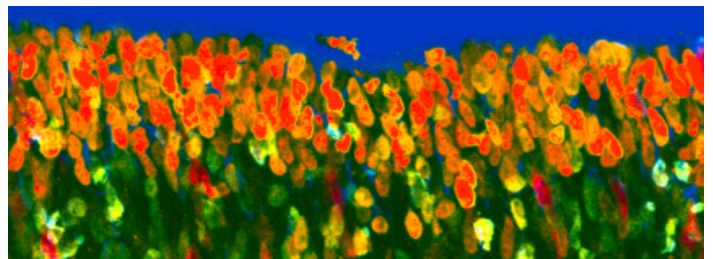


BIOLOGY

DEPARTMENT NEWSLETTER

2021-2022 | Issue #10



BIOLOGY

DEPARTMENT NEWSLETTER

In this Issue

- Advertisements 3
- Faculty Spotlight 4-5
- Publications & Presentations 6-7
- Acknowledgments 7
- Botany Feature 8-9
- Student Spotlights 10-14
- Biology Recognizes 15
- Where Are They Now 16-17
- Inspiring Scientists 18
- Biology Photo Collage 19

Senior Editor

Christine Stefano

Contributing Editors

Dr. Jonathan Levitt

Dr. David Lohman

Graphic Design Manager

Jordan Jackson

Design Concept

Rychelle McKenzie

Writers

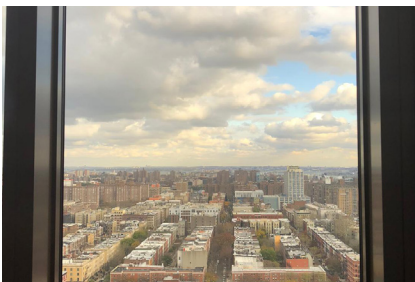
Dr. Amy Berkov

Lorraine Colbert

Farhana Nasrin

Photos

Submitted by featured
community members



Department Chair

Dr. Jonathan Levitt

B.S. Head Advisor

Dr. Yevgeniy Grigoryev

B.S. M.S. Advisor

Dr. Jay Edelman

M.S. Advisor

Dr. Amy Berkov

PhD Advisor

Dr. Shireen Saleque

Biotechnology

B.S. Advisor

Dr. Christine Li

Dr. Karen Hubbard

Biotechnology

M.S. Advisor

Dr. Christine Li

Staff

Christine Stefano

Yolanda Pitt

Calvin Forde

Maryam Tuba

Marilyn Mathews

Chief College

Laboratory Technician

Hector Fermin

Senior College

Laboratory Technicians

Andrew Blake

Suzhen Chen

Jhunior Morillo

Vitaly Zyhadlo

CCNY
BIOLOGY
DEPARTMENT



CCNY Biology



Team_Biology



CCNY Biology



CCNY Department of Biology

Ways to Get Involved with THE DEPARTMENT OF BIOLOGY



The CCNY Division of Science Student Council

The Division of Science Student Council (DoSSC) brings together leaders from biology, chemistry, earth and atmospheric science, mathematics, physics & sustainability.

We aim to enrich the City College student experience through 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!
DoSSStudentCouncil@ccny.cuny.edu

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.

Want to get involved as a club e-board leader, club member, or collaborate for an event, email us at
biologyclub@gtest.cuny.cuny.edu

WANT TO LEARN MORE ABOUT CCNY WOMEN IN SCIENCE?

OUR EVENTS AND PROGRAMS INCLUDE:

- WOMEN MAKING HISTORY PANEL
- WINS MENTORING PROGRAM
- CAREER PLANNING WORKSHOPS
- MAXIMIZING RESOURCES WORKSHOP AND MUCH MORE!

JOIN OUR MAILING LIST TO LEARN ABOUT OUR UPCOMING EVENTS:

CCNYWINS@CCNY.CUNY.EDU

WINS^{CCNY}
WOMEN IN SCIENCE

INSTAGRAM: @CCNYWINS | FACEBOOK: @CCNYWINS | TWITTER: @CCNYWINS

TriBeta

National Biological Honor Society



Beta Beta Beta (TriBeta) National Biological Honor Society gives students majoring in biology, along with other science majors, opportunities 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
biology@ccny.cuny.edu

Faculty SPOTLIGHT

Dr. David Lohman



“If I won enough money in the lottery that I never had to work again, I would probably keep doing what I’m doing now. I just wouldn’t apply for any more research grants.”

The start of this school year marks Dr. Lohman’s 12th anniversary of joining the CCNY community as a Professor and Researcher. He feels lucky to have earned the opportunity to be a part of our institution and to experience the abundance of new things that our urban environment has to offer. His favorite thing about being a part of CCNY is being able to give attention to his work. Dr. Lohman notes the freedom to work on things long term, as he is currently concluding a six year-long study. He credits his father with teaching and modeling a strong work ethic, which he credits with having carried him to his level of success today.

Dr. David Lohman understands the complexities of a full day’s work including a variety of responsibilities. He teaches courses ranging from Molecular Systematics, to Ecology and Evolution, to a study abroad course in Thailand while mentoring students on various research and professional topics. Dr. Lohman’s expertise stems from his love of nature, which he developed as he grew up on his family’s farm in central Illinois. The farm was surrounded by 50 acres of forest, all available for Lohman’s growing curiosity in the behavior and development of insects that scattered the area. After attending a nearby university, he secured a Fulbright Fellowship that granted him the opportunity to study in Australia, beginning his love for travel. His time spent conducting research across southeast Asia, particularly in Thailand, helped to spark his interest in exploring new cultures, cuisines, and people. It was in Thailand where he developed his interest in studying tropical biodiversity. The biodiversity and evolutionary processes of butterflies is the focal area of most of this research. His favorite species is *Elymnias hypermnestra*, which he likes for its complex mimicry patterns throughout its wide distribution in Asia.

Starting his first full time job at the age of 14, Dr. Lohman knows the meaning of a hard day’s work. In addition to exploring the evolution of butterflies, Dr. Lohman wants to help his students obtain the information and resources he did not have as a student. He recommends finding an area of research or work that one loves, then working towards those goals while checking the job market. Dr. Lohman frequently helps with the CCNY Biology Department’s student events and initiatives to help foster and cultivate in students the drive to practice professional skills and explore opportunities. It can be discouraging to put time into something that has limited fulfillment. On the contrary, once one finds something that one is passionate about, the time and dedication it takes to achieve the goal offers even more fulfillment. Upon reflection, Dr. Lohman shares that even with being busy working six days a week, ten hours a day, he makes time for participating in his local orchestra playing the bassoon and for doing other things that he enjoys. It helps that he enjoys many aspects of his work. Dr. Lohman shared that his work is not just work, “It’s an obsession.”



Publications & PRESENTATIONS

R. P. Anderson

Gavrutenko M, Gerstner BE, Kass JM, Goodman SM, and Anderson RP. 2021. Temporal matching of occurrence localities and forest cover data helps improve range estimates and predict climate change vulnerabilities. *Global Ecology and Conservation*, 27: e01569. [Note, this publication derived from the Biology Honors thesis of M. Gavrutenko]

Kass JM, Muscarella R, Galante PJ, Bohl CL, Pinilla-Buitrago GE, Boria RA, Soley-Guardia M, and Anderson RP. 2021. ENMeval 2.0: redesigned for customizable and reproducible modeling of species' niches and distributions. *Methods in Ecology and Evolution*, 12:1602–1608.

A. C. Carnaval

Martins LF, Choueri E, Oliveira AFS, Domingos F, Caetano G, Cavalcante V, Leite R, Fouquet A, Rodrigues MT, Carnaval AC, Colli GR, Werneck FP. 2021. Whiptail lizard lineage delimitation and population expansion as windows into the history of Amazonian open ecosystems. *Systematics and Biodiversity* 19 (8): 957-975

Martins LF, Choueri E, Oliveira AFS, Domingos F, Caetano G, Cavalcante V, Leite R, Fouquet A, Rodrigues MT, Carnaval AC, Colli GR, Werneck FP. 2021. Whiptail lizard lineage delimitation and population expansion as windows into the history of Amazonian open ecosystems. *Systematics and Biodiversity* 19 (8): 957-975

Lourenço-de-Moraes R, Campos FS, Carnaval AC, Otani M, França F, Cabral P, Benedito E. 2021. No more trouble: An economic strategy to protect taxonomic, functional and phylogenetic diversity of continental turtles. *Biological Conservation* 261, 109241

Paz A, Brown JL, Cordeiro CLO, (...), Carnaval AC. 2021. Environmental correlates of taxonomic and phylogenetic diversity in the Atlantic Forest. *Journal of Biogeography* 48 (8): 1377-1391. invited talks (all online):

Universidade Federal de Santa Maria, Brazil, Simpósio de Biodiversidade. Nov 30, 2021.

Louisiana State University, Biological Science Colloquium. April 12, 2021.

Universidad Nacional Autónoma de México, Seminarios de Fronteras en Sistemática, Biodiversidad y Evolución. April 3, 2021.

Universidade Federal do Mato Grosso do Sul, Brazil, Instituto de Biociências, Aula Magna, Cursos de Ciências Biológicas e do Programa de Pós-Graduação em Biologia Animal. March 26, 2021.

University of California, Los Angeles. EEB Seminar Series. Feb 3, 2021.

M. M. Emerson

Schick E, Gonzalez KC, Dutta P, Hossain K, Ghinia Tegla MG, Emerson MM. (2021) Early cis-regulatory events in the formation of retinal horizontal cells. *Developmental Biology* 476: 88-100.

Chen X, Emerson MM (2021) Notch signaling represses cone photoreceptor formation through the regulation of retinal progenitor cell states. *Scientific Reports* 11(1):14525.

Overcast I, Ruffley M, Rosindell J, Harmon L, Borges PAV, Emerson BC, Etienne RS, et al. 2021. "A Unified Model of Species Abundance, Genetic Diversity, and Functional Diversity Reveals the Mechanisms Structuring Ecological Communities." *Molecular Ecology Resources* 21 (8): 2782–2800.

S. Govind

Lue C, Buffington ML, Scheffer S, Lewis M, Elliott TA, Lindsey ARI, Driskell A, Jandova A, Kimura MT, Carton Y, Kula RR, Schlenke, TA, Mateos M, Govind S, Varaldi J, Guerrieri E, Giorgini M, Wang X, Hoelmer K, Daane KM, Abram PK, Pardikes NA, Brown JJ, Thierry M, Poirie M, Goldstein P, Miller SE, Tracey WD, Davis JS, Jiggins FM, Wertheim B, Lewis OT, Leips J, Phillip P A, Staniczenko PPA, Hrcek J. 2021. DROP: Molecular voucher database for identification of *Drosophila* parasitoids. *Molecular Ecology Resources* 21(7):2437-2454. doi: 10.1111/1755-0998.13435.

Ramroop J, Heavner ME, Razzak Z, Govind S. 2021. A parasitoid wasp of *Drosophila* employs preemptive and reactive strategies to deplete host blood cells. *PLoS Pathogens* 17(5):e1009615.

M. J. Hickerson

Overcast I, Ruffley M, Rosindell J, Harmon L, Borges PAV, Emerson BC, Etienne RS, et al. 2021. "A Unified Model of Species Abundance, Genetic Diversity, and Functional Diversity Reveals the Mechanisms Structuring Ecological Communities." *Molecular Ecology Resources* 21 (8): 2782–2800.

J. B. Levitt

Khalil R, Gonzalez C, Alsuwaidi S, Levitt JB. 2022. Developmental refinement of visual callosal inputs to ferret area 17. *The Journal of Comparative Neurology*. Apr;530(5):804-816. doi: 10.1002/cne.25246.

Buffenstein R, Amoroso V, Andziak B, Avdieiev S, Azpurua J, Barker AJ, Bennett NC, Briño-Enríquez MA, Bronner GN, Coen C, Delaney MA, Dengler-Criss CM, Edrey YH, Faulkes CG, Frankel D, Friedlander G, Gibney PA, Gorbunova V, Hine C, Holmes MM, Jarvis JUM, Kawamura Y, Kutsukake N, Kenyon C, Khaled WT, Kikusui T, Kissil J, Lagestee S, Larson J, Lauer A, Lavrenchenko LA, Lee A, Levitt JB, Lewin GR, Lewis Hardell KN, Lin TD, Mason MJ, McCloskey D, McMahon M, Miura K, Mogi K, Narayan V, O'Connor TP, Okanoya K, O'Riain MJ, Park TJ, Place NJ, Podshivalova K, Pamenter ME, Pyott SJ, Reznick J, Ruby JG, Salmon AB, Santos-Sacchi J, Sarko DK, Seluanov A, Shepard A, Smith M, Storey KB, Tian X, Vice EN, Viltard M, Watarai A, Wywial E, Yamakawa M, Zemlemerova ED, Zions M, Smith ESJ. 2022. The naked truth: a comprehensive clarification and classification of current 'myths' in naked mole-rat biology. *Biological reviews of the Cambridge Philosophical Society*. Feb;97(1):115-140. doi: 10.1111/brv.12791.

D. J. Lohman

Aduse-Poku K, Van Bergen E, Sáfián S, Collins SC, Etienne RS, Herrera-Alsina L, Brakefield PM, Brattström O, Lohman DJ, and Wahlberg N. 2022. Miocene climate and habitat change drove diversification in *Bicyclus*, Africa's largest radiation of satyrine butterflies. *Systematic Biology* 71:570-588. DOI: 10.1093/sysbio/syab066

Tea YK, Beaver EP, Wei JS, & Lohman DJ. 2021. Kleptopharmacophagy? Milkweed butterflies scratch and imbibe from Apocynaceae-feeding caterpillars (Lepidoptera: Nymphalidae: Danainae). *Ecology* 102: e03532. DOI:10.1002/ecy.3532. (featured on the journal issue cover)

Tsang SM, Low DHW, Wiantoro S, Smith I, Jayakumar J, Simmons NB, Vijaykrishna D, Lohman DJ, and Mendenhall IH. 2021. Detection of Tioman virus in *Pteropus vampyrus* near Flores, Indonesia. *Viruses* 13: 563. DOI: 10.3390/v13040563

Publications & PRESENTATIONS

Valencia-Montoya WA, Quental TB, Tonini JFR, Lamas G, Talavera G, Crall JD, Liénard MA, Salzman S, Whitaker MRL, Busby RC, Kawahara AY, Lohman DJ, Robbins RK, & Pierce NE. 2021. Evolutionary tradeoffs of the hyperdiverse tribe Eumaeini (Lepidoptera: Lycaenidae). *Proceedings of the Royal Society B: Biological Sciences* 288: 20202512. DOI: 10.1098/rspb.2020.2512

Wang Z, Zeng J, Meng W, Lohman DJ, & Pierce NE. 2021. Public and research interest in insects is negatively correlated with their conservation status and evolutionary distinctiveness. *Insect Conservation and Diversity* 4: 700-708. DOI: 10.1111/icad.12499 (featured on the journal issue cover)

Wilson, PR, Johnson IR & Lohman DJ. 2021. *Jamides wananga*, a new species from Papua New Guinea and Australia (Lepidoptera: Lycaenidae). *Zootaxa* 4981: 107-122.

H. V. Oviedo

Farahani F, Kronberg G, FallahRad M, Oviedo HV, Parra LC. 2021. Effects of direct current stimulation on synaptic plasticity in a single neuron. *Brain Stimulation*, j.brs.2021.03.001.

Neophytou D, Arribas D, Levy R, Park IM, Oviedo HV. 2021. Recurrent connectivity underlies lateralized temporal processing differences in Auditory Cortex. *BioRxiv*, 10.1101/2021.04.14.439872.

S. L. Perkins

Jorge F, Brealey JC, Brindley PJ, Buysse M, Cantacessi C, Duron O, Fichorova R, Fitzpatrick CR, Hahn M, Hunter C, Hervé V, Knoll LJ, Kohl KD, Lalle M, Lukeš J, Martínez JM, Perkins SL, Poulin R, Rosario K, Schneider AC, Schriml LM, Thompson LR, Walls RL, and Dheilly NM. In press. *MixS-SA: a MixS extension defining the minimum information standard for sequence data from symbiotic organisms*. *ISME Communications*.

Boysen KE, Perkins SL, Hunjan S, Oliver P, Gardner MG, Balasubramaniam S, Melville J. 2022. Diversity and phylogenetic relationships of haemosporidian and hemogregarine parasites in Australian lizards. *Molecular Phylogenetics and Evolution* 167:107358.

Ingala MR, Simmons NB, Dunbar M, Wultsch C, Krampis K, and Perkins SL. 2021. You are more than what you eat: potentially adaptive enrichment of microbiome functions across bat dietary niches. *Animal Microbiome* 3:82.

Zichello J, Gupta P, Scott M, Desai B, Cohen R, Halderman L, Perkins SL, Porzecanski A, Planet PJ, Wyner Y, Blaser M, Burk R, Diamond J, Kennett R, Borland J, and DeSalle R. 2021. A natural history museum visitor survey of perception, attitude and knowledge (PAK) of microbes and antibiotics. *PLoS ONE* e0257085.

Ingala M, Simmons NB, Wultsch C, Krampis K, Provost K, and Perkins SL. 2021. Molecular diet analysis of neotropical bats based on fecal DNA metabarcoding. *Ecology and Evolution*. 00:01-18.

M. T. Pezzano

Chakrabarti S, Hoque M, Jamil NZ, Singh VJ, Pollacksmith D, Meer N, & Pezzano MT. 2022. Bone Marrow-Derived Cells Contribute to the Maintenance of Thymic Stroma including TECs. *Journal of immunology research*, 2022, 6061746. <https://doi.org/10.1155/2022/6061746>

S. Pukatzki

Kostiuk B, Santoriello FJ, Diaz-Satizabal L, Bisaro F, Lee KJ, Dhody AN, Provenzano D, Unterweger D, Pukatzki S. 2021. Type VI secretion system mutations reduced competitive fitness of classical *Vibrio cholerae* biotype. *Nature Communications*. Nov 9;12(1):6457. doi: 10.1038/s41467-021-26847-y.

Turner JW, Duran-Gonzalez J, Laughlin DA, Unterweger D, Silva D, Ermolinsky B, Pukatzki S, Provenzano D. 2021. Draft Genome Sequences of 13 *Vibrio cholerae* Strains from the Rio Grande Delta. *Microbiology Resource Announcements*. Jun 3;10(22):e0030821. doi: 10.1128/MRA.00308-21.

Santoriello FJ, Pukatzki S. 2021. When the pandemic opts for the lockdown: Secretion system evolution in the cholera bacterium. *Microbial Cell*. Feb 18;8(3):69-72. doi: 10.15698/mic2021.03.744.

B. Q. Vuong

Attaway M, Chwat-Edelstein T, Vuong BQ. Regulatory Non-Coding RNAs Modulate Transcriptional Activation During B Cell Development. *Frontiers in Genetics*. 2021 Oct 14;12:678084.

Wishnie AJ, Chwat-Edelstein T, Attaway M, Vuong BQ. BCR Affinity Influences T-B Interactions and B Cell Development in Secondary Lymphoid Organs. *Frontiers in Immunology*. 2021 Jul 26;12:703918.

Zheng S, Matthews AJ, Rahman N, Herrick-Reynolds K, Choi JE, Sible E, Ng YK, Rhodes D, Elledge SJ, Vuong BQ. The uncharacterized SANT and BTB domain-containing protein SANBR inhibits class switch recombination. *Journal of Biological Chemistry*. 2021 Jan-Jun;296:100625.

Sible E, Zheng S, Choi JE, Vuong BQ. Analysis of Somatic Hypermutation in the JH4 intron of Germinal Center B cells from Mouse Peyer's Patches. Sible E, Zheng S, Choi JE, Vuong BQ. Analysis of Somatic Hypermutation in the JH4 intron of Germinal Center B cells from Mouse Peyer's Patches. *The Journal of Visualized Experiments*. 2021 Apr 20;(170):10.3791/61551.

Acknowledgments

Dr. S. Govind joined the editorial board of *PLoS One* as an Academic Editor in Feb 2022.

Dr. D. J. Lohman joined the editorial board of *Journal of Tropical Ecology* in Fall 2021.

Dr. S. Perkins, CCNY's Dean of Science was elected to the Board of Directors for the American Institute of Biological Sciences: <https://www.aibs.org/leadership/>.

Biology Course FEATURE

Biology 34500

Botany Class Field Trips

with **Dr. Amy Berkov**

Students must have been feeling pretty cooped up; this semester several suggested that we should take our field trips to places that they wouldn't ordinarily see on their own. I happily complied; I love showing students the amazing places that we can get to with public transportation. Our field trip sites are shown superimposed on a map from the class iNaturalist project—which includes >1400 photographic observations!

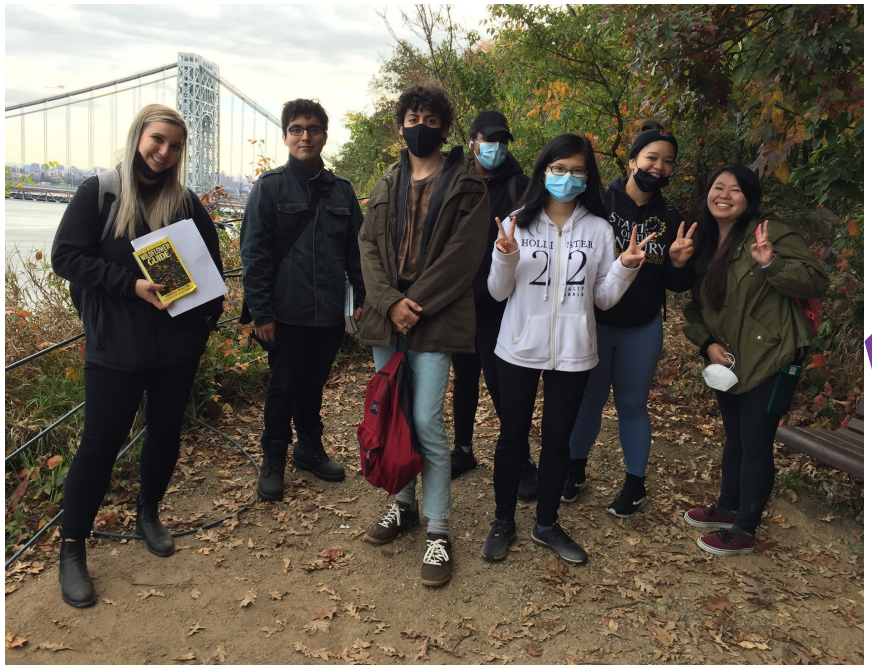
We started out visiting fall bloomers in a new native flora meadow in Central Park (to test subway competence). En route, we passed a *Magnolia*—an example of an ancient angiosperm lineage (with unfused carpels). The next trip was to Jamaica Bay Wildlife Refuge, where we found a wonderful cohort of plants that thrive on sandy soils, including sumac, (caught in the act of changing colors), bayberry, prickly pear, and *Yucca*. You might notice that the *Yucca* in St. Nicholas Park produce flowers, but not fruit—presumably because the obligate moth pollinators are missing. Students then visited Little Island, NYC's newest park, for their midterm practical—Botany Bingo. The following week we made the surprisingly long trek across the GW Bridge to the Palisades, where, among masses of climbing and scrambling vines, we found a moonseed.

This plant produces a toxic/potentially medicinal alkaloid, dauricine, and is in the same plant family as the plant that provides curare, used in arrow poison in the Neotropics!

For our next field trip we took the ferry to Governors Island. The special extra credit challenge was the almost invisible liverwort growing in the cracks of the steps at the Vietnam Veterans Memorial, near the Manhattan ferry landing. Liverworts completely lack stomata (other ancient nonvascular plant lineages, mosses and hornworts, include some genera with stomata). The small “bird nest” structures are called gemmae cups; they hold fragments of tissue that allow asexual reproduction. This is probably a good strategy, considering that sexual reproduction requires raindrops to “splash” sperm to the eggs. Once we got to Governors Island, we spent part of the afternoon sheltering from thunderstorms—before we were caught in the hail (a field trip first). Nonetheless, we found some colorful red oaks, maples, *Catalpa*, and bald cypress (a deciduous conifer). Our final field trip was to the Bronx River Pathway. Among abundant invasive species, we found towering white pines, tulip trees, and beeches, and our remarkable winter-blooming woodland shrub, witch hazel!

[Here is a listing of several field trips and photo credits. Some of these photos are used throughout this issue of the newsletter.](#)

Site	Subject	Photo credit
1 Field Sites	Map	
2 Central Park	<i>Magnolia</i>	Mahmuda Ahmed
3 Jamaica Bay	Winged sumac	Linda Dam
3 Jamaica Bay Wildlife Refuge	<i>Yucca</i> with old fruits	Mahmuda Ahmed
3 Jamaica Bay Wildlife Refuge	Bayberries	Mahmuda Ahmed
3 Jamaica Bay Wildlife Refuge	Prickly pear	Michelle Chen
4 Little Island		
5 Palisades	Moonseed vine	Jeannie Reyes
5 Palisades	Group shot	
5 Palisades	Group shot	
6 Vietnam Veterans Memorial	Liverwort	Liliana Flores
6 Governors Island	Group shot	
6 Governors Island	Red oaks	Michelle Chen
7 Bronx River Pathway	White pine	Luis Arce
7 Bronx River Pathway	Witch hazel	Eftekhar Motaleb
7 Bronx River Pathway	Witch hazel	Kevin Romeus



Student SPOTLIGHT

Gurjot Kaur



“It is imperative to think outside the box, step outside of one’s comfort zone, and challenge oneself.”

Gurjot Kaur is a senior majoring in Biology with a minor in Psychology on the premed track. Upon visiting her home country at a young age, she was astonished that healthcare is not as accessible in underserved communities. She observed that providers required a hefty payment before any treatment plan was executed, something poor, low-income families cannot afford. In the pursuit of providing the best care possible, Gurjot hopes to bridge this gap in the healthcare system by becoming a physician in the future and working with underserved communities.

Along with being a student, Gurjot works part-time as a tutor for young children. Through tutoring she has learned the importance of patience, and that we learn best when resources are tailored to individual needs, which requires her to challenge herself. She believes that it is imperative to think outside the box, step outside of one’s comfort zone regardless of what career path one is pursuing. This can help open a window of opportunities and form connections that will last a lifetime.

At CCNY, she is the President of the Biology Club for the academic year 2021-2022, and also serves on the Student Executive Committee for the Biology Department. She enjoys helping her peers pursue their goals and interests by presenting them with meaningful opportunities that aid them in reaching their full potential. She understands the importance of acknowledging opportunities that come one’s way. Therefore, she attempts to guide her peers and underclassman to the right resources to help prepare them for academic success and their future careers. One thing she enjoys the most about this is learning about other people’s stories and serving a diverse group in a fun and collaborative environment.



Student SPOTLIGHT

Adam Mouldi



“I sometimes get caught up in where I see myself in the future, but I never forget where I come from nor the people who helped me throughout my journey. I make sure to pay it forward so that others can achieve what I have.”

Adam Mouldi started his journey at City College in 2018 after coming from his home country Tunisia where he grew up. As a Biology major following a premedical track, he found himself at home at CCNY, diversity being a big factor when deciding where he would pursue his degree. Immigrating alone to the US at 19 years old, he found himself struggling to learn English, how to apply to college, and how to meet peers who’d understand his struggles, but CCNY changed that. Adam’s passion for Biology started in Dr. Firooznia’s Bio 10100 class, where he enjoyed the multifaceted aspect of studying the human body. His engagement with the material pushed him to follow a premedical track, with hopes of becoming a physician. He later continued to assist Dr. Firooznia in his lab studying the insecticidal effect of different essential oils as opposed to chemically based compounds, with hopes to develop a more sustainable solution against specific strains of bean beetles.

Adam joined the Biology Club first as a member during his freshman year, then served as the Vice President of the club in the current 2021-2022 academic year. Besides enjoying the perks of getting to expand his network of friends within the Biology Department, he took advantage of the opportunities and the events of the club as a member to build a better resume as a prospective medical school applicant. Adam built solid leadership skills as Vice President of the Biology Club during his senior year.

Adam also served as the project liaison for FUEL, an organization assisting Harlem children with developing healthier menus in schools. He is also an active Biology tutor, focusing mainly on teaching introductory courses to freshman and sophomore students, as well as a peer mentor with CCAPP, our CCNY Science Advising Office. Adam offers support to incoming students by helping them discover what they want to pursue in life.

Aside from his work on campus, Adam has also given back to his community through both his clinical and non-clinical experiences, volunteering with hospital; such as, NYP Brooklyn Methodist, and non-profits in Brooklyn and in his home country Tunisia during the summers he is there. Serving his community made him a well-rounded student and inspired Adam to follow a career that serves others. After his graduation in May 2022, Adam will be heading to Lewis Katz School of Medicine at Temple University for another four years to pursue his goals of becoming a physician.

Student SPOTLIGHT

Victoria Gomes



“Remember, no matter where you come from, if you believe in yourself and have the passion, no one can stop you from achieving your goals. You can do everything that you set your mind to.”

Victoria Gomes’ passion to provide accessible healthcare to people comes from her childhood in Bangladesh, where in rural and impoverished areas, children would grow up with a variety of health issues. As a first-generation college student with financial hardship, she was able to pursue her studies in Biology by having an affordable education at CCNY. She is currently a Pharmacy Technician, which has solidified her interest in the science of medicine. Victoria aspires to pursue her career as a Physician Assistant to reduce healthcare disparities, and to help patients live a healthier life through medicine and high-quality care. She wants to study multiple specialties simultaneously in order to help patients in different areas of medicine.

Victoria is a senior and has several leadership roles in and out of college. On campus, she co-founded TriBeta Biological Honor Society along with three other students in 2020. As Vice President of TriBeta in the current year, she encourages students to improve their understanding of Biology, and extend boundaries of human knowledge through scientific research. She has been elected as one of three members to serve in The Department of Biology Student Executive Committee where she represents students’ interests and concerns.

As part of the The City College Academy for Professional Preparation (CCAPP) Advisory Board, she plans events for students to support their learning and to provide opportunities for them to interact with expert speakers. In the past, she served as a mentor of CCNY Women in Science, and provided guidance and support to her mentees navigating a career path in science. She has also conducted research in Chemistry with Dr. Salame reviewing scientific literature on how the COVID-19 pandemic has affected students’ Chemistry learning abilities.

Off campus, her volunteer work creates a direct positive influence in her community. Victoria is affiliated with New York Cares where she assists with food packing and distribution to support vulnerable communities with food insecurities. As a volunteer of NYC Health+Hospitals, Victoria helped pregnant women, infants, and children enroll in a nutrition program, assisted them with the application process, and translated into Bengali and Hindi. Now she is volunteering to feed geriatric patients, setting up lunch trays, taking their snack orders and distributing them. She has recently accepted a job offer as a Medical Assistant; she will be providing direct patient care while shadowing healthcare professionals to learn more about the field of medicine. In her spare time, she enjoys painting, baking, and listening to music.

Student SPOTLIGHT

Shenika Christopher



After obtaining her undergraduate degree in Psychology from Fordham University, Shenika Christopher is currently pursuing a Master's degree in Biology at CCNY. While adjusting to the new environment, she appreciates the diversity and warmth from people on campus and in the Division of Science. The open-minded community along with interacting with people who are passionate about science has made her experience thus far quite enjoyable. Coming from a family of healthcare workers (mainly nurses), she became motivated to build a path to medical school, and her path includes holding various positions within the CCNY Science community.

During her CCNY academic career, Shenika has become the President of the CCNY Women in Science Organization, and is a Biology Department Leader in the CCNY Division of Science Student Council. She is also a TA for the Anatomy & Physiology, and Biology Foundations 2 courses. She has also worked at Weill Cornell New York Presbyterian assisting patients with their health care needs. In fact, her time spent at Weill Cornell influenced her decision to focus on Radiology in medical school. "I admit that the type of Doctor I want to be may have changed over time but working with patients there has me stuck on Radiology. I feel like I can be a part of women's health this way."

"Life can get complicated, but a good plan can be really helpful."

Shenika highlights the importance of having a good planner, as it guides her through her hectic schedule. She is passionate about road mapping and developing goals for herself. "I even told students this as a TA; life can get complicated, but a good plan can be really helpful." Taking in her experiences thus far, she also stresses that undergraduate students should take some time to enjoy themselves. "As a TA I've noticed so many students applying to internships and building their resumes, which is great, but they should also enjoy themselves and the time they have now." Being a go-getter herself, she acknowledges that it's important to apply yourself and not be afraid to try new things; taking a moment for oneself is just as important and allows one to develop other skills and passions while pursuing career goals.

Taking her journey thus far into consideration, Shanika voiced how she maintained her passion for medicine within a non-traditional path. "Right now, I feel a bit behind. Traditionally people complete their undergraduate and then work on joining med school, but I decided to do undergrad, masters, and then med school. I feel like I'm taking the longer route, but I've come to understand that I'm just taking a different path. That's ok because I'm doing what works for me." She reflects on how other students should work on a roadmap built for them. Your journey is how you pave the way to reach your goals.



Student SPOTLIGHT

Erica Johnson



Erica Johnson's thirst for knowledge has kept her working hard throughout her academic journey. Erica is a fourth-year PhD student at CUNY, currently working with Dr. Robert Anderson in his biogeography lab, conducting research that dives into the world of parasites and their hosts. More specifically, she is trying to understand how changes in landscape impact these complex relationships and their geographical distribution. Her work on these relationships has touched upon questions on impacts on human health, and the potential of disease crossover from animals.

Upon completion of her undergraduate degree in her home of Venezuela, Erica used the time to explore her interests, landing on her first work experience as a research assistant at the nonprofit organization EcoHealth Alliance. While conducting research here, she attended professional meetings at the American Museum of Natural History when she had time and it was here where she reconnected with her advisor, Rob Anderson. After reconnecting, Erica took the opportunity to join the CCNY community, and works to provide distribution models of parasite species to inform disease risk assessments. Specifically, she combines environmental and spatial data on parasite and host occurrences to predict their geographic distributions. But her favorite part of the job is helping others. Erica shared that "It's okay to not know, we're not expected to know everything."

"It's okay to not know, we're not expected to know everything."

Many students are nervous when they enter the lab for the first time and second guess themselves when working with others. Erica prides herself as someone there to answer any questions, and to see others grow confident in their work. During her first-time conducting research, Erica remembers feeling intimidated by higher level students and professors. She worried whether she would do something wrong. Erica tells her mentees that it is okay to be wrong and that being your own supporter is key to building confidence. According to Erica, her most successful moments are ones shared with her students.

Erica credits her string of publications to her qualities of perseverance and organization. She is always setting goals for herself. One goal she has set for after completing her Ph.D. is to enter the field of policymaking. Erica sees herself applying her scientific knowledge to solving global scale problems. As she goes on this journey, she wants to remind herself and her mentees that "Nobody knows more about your research than you."



BIOLOGY Recognizes...

Colloquium Blog

The Biology Department Colloquium has been running for many years. At CCNY, each academic science department sponsors weekly research seminars given by visiting speakers. Topics presented in the Fall 2021 semester in the Biology Colloquium included the neurobiology of speech, viruses that infect parasitoid wasps, the global diversification of ant species, and diversity and equity in STEM training. The Colloquium serves as a public learning opportunity, but for Biology master's students it is mandatory to attend for 2 semesters during their academic journey. Master's students participate by attending seminars throughout the semester, then submitting a final writing piece.

In Fall 2021 Dr. Lohman oversaw the course, and he took the opportunity to try a different engaging approach for his students. Instead of a final paper, he changed the assignment to conducting an interview. Each week, a student was assigned to a speaker and interviewed them for half an hour before the official seminar began. Students were allowed to choose their interview subject and ask any questions they wished. They then submitted a four to five paragraph piece that was posted on a newly created course blog, and other students were tasked to respond with suggested revisions, followed by comments from Dr. Lohman. The interview piece was then revised and finalized for submission.

This interview process is a big change from the previously expected final paper, and Dr. Lohman feels it is necessary to help students improve their writing skills.

The Division of Science Discord Channel

The CCNY Division of Science's (DoS) Discord channel is a safe space for students to network, meet peers, ask questions, and learn about available opportunities. From the staff to the students involved in the chat, everyone has done really well in building a sanctuary for casual communication. Since the pandemic started, we all have a deeper appreciation for virtual communications and the DoS Discord channel is the place to be!

The various channels allow for students and staff to be a part of many interesting conversations. If you want to stay up to date on opportunities and events, there are several channels to share and see information. If you're looking to take your mind off classes for a minute, the "off-topic" channel prompts great discussions.

Writing is a crucial skill in science, used when crafting grant proposals or journal articles, or writing reviews of others' work. It is a part of the backbone in building a career and making sure one's ideas are articulated. As Dr. Lohman points out, "If you can't convey it with the appropriate language or in a clear way, then nobody's going to read it." Seeing professionals speak of their research during seminars is fascinating. Having the chance to speak with them beforehand brings a better sense of understanding, not only of the content but of the investigator as well. In the classroom, science is often presented as if knowledge falls out of the sky and into the textbook, but science is a process done by real people with families, setbacks, hobbies, and unique journeys that brought them to their current post in academia. Hopefully, by hearing the backstory of each speaker in the semester's diverse line-up, students can see how their own academic path can lead to a career in science. For CCNY Biology master's students, it is "not just listening to what the speakers have to say about their research, but to hear their story" that makes this assignment valuable.

Students' blog posts for the Fall 2021 semester can be read here: <https://ccnycolloquium.wordpress.com>



SCAN ME FOR MORE
INFORMATION

During the academic year, the CCNY Women in Science organization posted a community conversation piece to allow students and staff to talk about their experiences on the topic. One fun post was everyone sharing pictures of their pets, which brought forth much positive energy. More recently, an "inspiration" channel was started to encourage members of the group who are trying to get through the semester or anything else they are coping with, and need to find some inspiration.

Thanks to the Staff, Faculty, and Division of Science Student Council Department Leaders who are present, and the engaged students involved, the Discord channel has become a great place for connecting within the CCNY science community.

Please complete this form if you wish to join in the discord
<https://tinyurl.com/5xz437b6>

Where Are They Now FEATURE

Dr. Myral Ragazzino Robbins & Dr. Gerald Robbins



Today, we see City College as a large community that stretches along Convent Avenue. Places at CCNY include the Morris R. Cohen Library, the Quad, and the field outside of Shepard Hall. But in the year of 1967 when Myral Ragazzino and Jerry Robbins graduated from CCNY with their bachelor's degrees in biology, there was quite a different scene. Myral and Jerry studied at City College before CUNY was formed and they shared some special moments from their experience that turned into the most memorable moments in their lives.

Myral and Jerry chose CCNY because of its focus on global education and affordability. Aside from lab and material fees, the registration fee was as low as \$27 per semester. Being first generation college students from working class families in the Bronx, Myral and Jerry were both excited at the opportunity of achieving a higher education degree for such a low price, something our students today may relate to. Little did they know, attending CCNY would also afford them the chance of meeting the love of their lives.

The Robbins met at their freshmen orientation. After running between tables in Shepard's Great Hall to build their course schedule on paper, time came to join a social organization, House Plan. Women and men joined separate, "houses," which served as a social club over the 4 years of college.

"Remember why you are on your path and never give up."

Jerry found Myral again and asked her out for their first date. Myral admits, "It was bad." They did not get along well. But two years later after settling into their newfound college lives, they decided to give dating another try and as the saying goes, the rest is history. While at CCNY, Myral and Jerry took advantage of other club activities, such as joining the Pre-Med Society, Caduceus, and participating in yearly House Plan carnivals hosted on campus.

Reminiscing about their college years, Myral and Jerry shared several student life memories. Jerry traveled from Gun Hill Road, and had to transfer between 3 different trains to get to campus. Myral traveled from the South Bronx, and had to take only one train. The hard part of the commute came when being faced with walking to class from the 125th Street or 145th Street Station. At the time, students would not typically walk through Saint Nicholas Park because of the stairs and limited lighting. This left the options of walking from 125th Street if their class was on South Campus, or from 145th Street if their class was on North Campus. Often they had very little time to move between classes that were in different parts of campus, so the hustle of moving to and from classes was not easy compared to today with using the City College shuttle bus.

On the way to class Myral and Jerry would encounter Raymond, a kind man who set up a portable bagel cart at the corner of Amsterdam and 135th Street to catch student traffic changing between classes on north and south campus. Students would grab a bagel for five cents when in a hurry, or a pack of six bagels for twenty-five cents. It was hole-in-the-wall businesses like this that Myral and Jerry loved about the surrounding West Harlem neighborhood. Additionally, they admired the gothic style buildings and décor of campus, such as Shepard Hall and the nearby statue of General Alexander Webb, whose sword would periodically go missing and spread mystery of who could have taken it.

Upon graduation, Myral and Jerry traveled out of state to further their education and become physicians. Myral first went to Rhode Island for a master's in zoology and then to Michigan State University for medical school, and Jerry went to Philadelphia for medical school. Being born and raised in New York made it feel like the city was the center of the world, but after attending City College, they felt prepared for what the rest of the world had to offer. The difficult and heavy course load made them successful in their medical careers, and helped to build the high-quality training they put into their practice.

Myral and Jerry admire the greater diversity that CCNY has gained over time and encourage current students to interact with one another. "It is important to build connections with people across grade levels and get involved with mentoring when possible." This can help build a support group of friends and family that will propel you on your educational and personal paths. Just as Myral and Jerry know from their time as students, not every moment will be easy. When we hit these walls, Myral and Jerry believe that students must "remember why you are on your path and never give up, because there is always a chance to continue. CCNY graduates have that ability to improve the world."



MYRAL A. RAGAZZINO



GERALD FRED ROBBINS



Inspiring SCIENTIST

Dr. Miruna Ghinia-Tegla



0000-0001-6898-1886

“At the end of the day, they were just like you and had to start somewhere.”

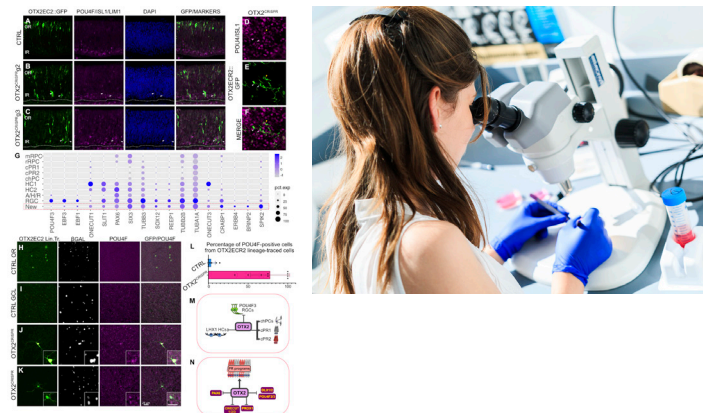
The job of a scientist is never science alone. Miruna mentors young colleagues in the lab and it is this part of her position that she loves the most. She gets to share her enthusiasm about science and help students understand new techniques that they otherwise would not pick up just from studying. Many students “spend time reading books and try to understand all the processes and everything, but once you watch in the lab, things change.” Witnessing her peers alter their learning perspectives and develop technical skills is the most exciting part of her workday.

She admits that what has helped her reach this level of success and enjoyment is a good work ethic and preserving social relationships. The work is not easy but keeping a steady sense of self-discipline has helped her exceed her work expectations and create trusting friendships with her colleagues. For students going into the fields of science and lab work, Dr. Ghinia-Tegla encourages them to talk to people and not be intimidated. It is easy to be put off by long titles and prizes that many professors have, “but at the end of the day, they were just like you and had to start somewhere.” Interacting and attending events is important to establish work connections and for Miruna, it is also important to build these connections for the sake of the future of the sciences and the mental health of those that study it.



Dr. Ghinia-Tegla works as a Postdoctoral Research Associate alongside Dr. Emerson in the CCNY Biology Department, and this past year marks her seventh anniversary. Her research focuses on the retina of the eye, mainly on the molecular signals that regulate how different types of cells in the eye are appropriately generated and connected to other cells. Looking closely at the biology of the retina, she uses a series of molecular biological, immunolabeling and microscopy techniques in her bench research. Some of her work strategies include CRISPR/Cas9 gene editing, in studying retinal samples from different species such as chicken, with visual function similar to humans.

Before coming to CCNY, Dr. Ghinia-Tegla had experience at other institutions, such as the National Eye Institute of the National Institutes of Health in Bethesda, MD and Institute of Neuroscience of the National Research Council in Italy, while studying for her doctorate, which she received from “Babes-Bolyai” University in Cluj-Napoca, Romania (her home country) in 2014. When coming to New York City, she took a chance and searched online for research opportunities matching her interests, and she found a position in Dr. Emerson’s lab. After conducting her interview in late 2014, she soon joined the lab and is now the team’s most Senior Research Associate. During her time at CCNY, Miruna has taken on other titles as well, from mentor to being a part of the CCNY Women in Science Board as Vice President and Director of Outreach and starting the CUNY Postdoc organization, connecting members of our community.



Biology PHOTO COLLAGE

