

2025 ANNUAL REPORT



Cold
Spring
Harbor
Laboratory

DNA LEARNING CENTER

The DNA Learning Center is an operating unit of Cold Spring Harbor Laboratory, extending its traditional research and postgraduate education mission to the college, pre-college, and public levels. Founded in 1988, the DNALC is the world's first science center devoted entirely to genetics education.

The mission of the DNA Learning Center is to prepare students and families to thrive in the gene age. We envision a day when all elementary students are exposed to principles of genetics and disease risk; when all high school students have the opportunity to do hands-on experiments with DNA; and when all families have access to genetic information they need to make informed health care choices.

Front cover: *Urban Barcode Project* and *Urban Barcode Research Program* students, mentors, and visitors gather at the City University of New York Theater at City Tech for DNA barcoding research project poster presentations.

Executive Director's Report

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In 2025, we were saddened by the death of James Watson, who devoted the second half of his adult life to Cold Spring Harbor Laboratory and was a mentor to many of us. Jim, as he preferred to be called and by which everyone knew him, first came to Cold Spring Harbor in the summer of 1948. There, at the age of 20, he witnessed the birth of molecular genetics. That summer, Jim interacted with founders of the “Phage Group”—Max Delbrück, Al Hershey, and his graduate mentor Salvador Luria. Understanding the interaction between phage viruses and their bacterial hosts opened a window on the molecular mechanics of heredity, lighting the way to the discovery of the structure of DNA and genetic code. All four of these men went on to win Nobel Prizes.

From that summer on, Cold Spring Harbor occupied a special place in Jim's heart. As he once told me: “Those of us who have come here have always thought it a very beautiful place. Slightly unworldly. A little village of science where people can come to think about science and nothing else.”

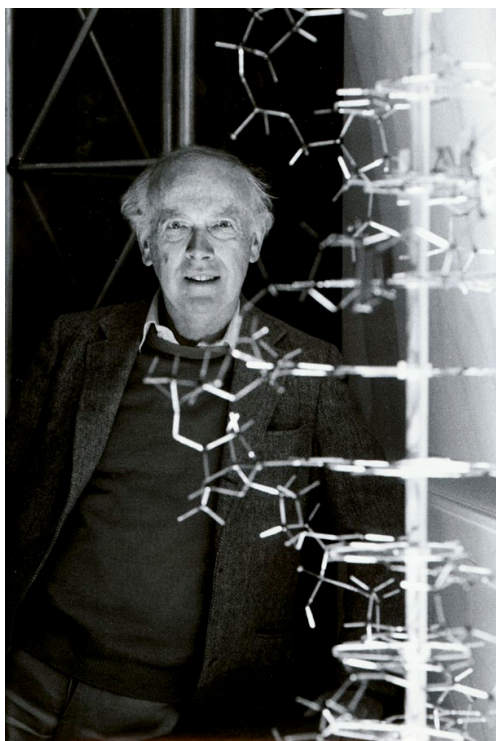
Twenty years later, in 1968, a sense of duty and perhaps destiny led Jim to set aside his professorship at Harvard and become director of the Cold Spring Harbor Laboratory of Quantitative Genetics, as it was briefly called. At that time, the Lab was reeling from the withdrawal of the Carnegie Institution of Washington, which had been the major source of funding since 1904. So, Jim inherited a nearly bankrupt organization with a staff of 50 and annual income of \$600,000. A National Science Foundation (NSF) study put the cost at \$750,000 to repair its collection of old buildings that the previous director John Cairns described as “decrepit beyond belief.”

Jim willed the Laboratory back to life with unflagging devotion and a bet that mammalian tumor viruses would provide a key to understanding the molecular genetics of higher cells—in the same way that phages had helped unlock the secrets of bacterial cells. Within a year of Jim's arrival, a \$1.5 million grant was secured from the National Institutes of Health's (NIH) Tumor Virus Program. Then, in 1971, a \$5 million Cancer Center grant was won, anchoring the Lab's cancer research and operating without hiatus to this day. Five years after Jim's arrival, the Lab staff had doubled, and its annual income had increased 400%, to \$3 million. By the time I came to the Lab, in 1982, CSHL's finances and place in modern cancer research had been secured. James Lab at CSHL was arguably the single best place in the world to study tumor viruses.

Jim Watson hired me because he knew it was time “to explain ourselves better to the outside world.” I was an unlikely hire for a new position as public relations manager. Fresh out of graduate school and at an entry-level job at a Manhattan PR firm, a management recruiter appended me as an afterthought to the of list of job prospects he presented to Jim. To my surprise, I got an interview and afterwards I walked with Jim along the harbor. My ability to identify waterfowl initiated a bond between two bird watchers and clinched the job for me.

My first task was to establish the Corporate Sponsor Program to provide annual support for the meetings and courses program. This required me to follow up with Jim's numerous friends and acquaintances in the burgeoning new world of biotechnology—netting 15 sponsors and \$225,000 in its inaugural year. I followed Jim up and down Bunting Road as he lobbed ideas or orders over his shoulder. There and on trips into Manhattan, I learned that Jim was an extraordinarily fast walker—at times I would need to skip to keep up with him. Jim was fond of saying that one should never be the brightest person in the room, and I was acutely aware that this applied to me. I was sometimes dazed by the rapid-fire scattershot of his mind and the whirlwind of bright ideas from all corners of the campus. It was at turns puzzling, thrilling, and galvanizing. I think my first year in CSH was very much like Jim's first summer there.

When Jim was away on sabbatical in 1984, I spent spare moments in Rich Roberts' lab, where I worked with postdoctoral fellow Greg Freyer to develop a simple set of experiments that would allow novices to make and analyze a recombinant DNA molecule. By the time of Jim's return from England, I had managed to raise \$60,000 to equip six local school districts for DNA experimentation. Greg and I conducted our first teacher training workshop in summer 1985. By summer 1986, we had a spiffy “Vector Van,” loaded to the ceiling with pipets, centrifuges, and water baths, which we took on a nationwide training tour that ended at the University of California at Davis. The next year, we acquired a second Vector Van, and in summer 1987 held workshops at 14 locations around the country.



James Watson at the DNALC, 1989.

Jim supported my moonlighting, because he knew it was time for the Laboratory to take the lead in fostering “DNA literacy” among the general public, in the same way that it led the way with the Lab's meetings and courses, and his own book *The Molecular Biology of the Gene*, had done for young scientists. This was a bold move at a time when high-level scientists were expected to concentrate solely on their research. I operated the fusion of public affairs, development, and education out of what is now the meetings office on the main floor of Grace Auditorium. It became clear to Jim that the education program should conform to his dictum of organizational evolution: “You get bigger, or you get smaller.” So, he determined that we should take over an abandoned elementary school on Main Street in Cold Spring Harbor Village and convert it into a DNA museum—despite that no one really knew what this might entail. Even so, by the following spring we had renovated a lab and began to conduct “field trips” in which students cut and separated viral DNA or inserted an antibiotic resistance gene into bacteria. Thus, we became the first place in the world to conduct these experiments with large numbers of students while proving their relative safety.

Jim could be tough. He famously patrolled the campus at all hours, looking for lights or other signs that people were busy in the labs. He made threats to fire people. I got my fair share, but, like other managers, considered them “badges” for having a

backbone. The first had to do with proximity, when Jim waved at the side of the room where I sat with a manager who had invoked his ire. At one supposed business lunch he pointedly focused on a life lesson from his upcoming memoir, “If you don’t respect your boss, you should quit!” At another lunch, he offered me a choice to downgrade my responsibilities: I could keep my original position at the Lab, I could choose the fledging DNALC, or I could hand in my resignation. I had the presence of mind to say I would think about it, but I had already made up my mind.

Although Jim had urged me forward, he was sometimes unhappy that I made a choice for independence from him and our successful fundraising together. I was in a precarious position in 1988, as we prepared to dedicate the renovated DNALC and an intricate exhibit loaned from the Smithsonian Institution. There was only money enough for a half year of the lease on the DNALC building, and Jim reminded me, “We can forget about you pretty quickly over there on Main Street.” In fact, Jim never forgot about me. He helped me again and again, and prodded me to dare to do the improbable. He did for me no more and no less than he did for a hundred others: he opened doors and let me walk through them, and he never took an ounce of credit for focusing me on my own vision of science education.



Dr. Watson presented “DNA for Short” to DNALC summer campers in 2013, moderated by Dave. The DNA sequence illustrated on the computer lab walls is Dr. Watson’s!

Summer of Nanopore Sequencing 2025

Nanopore sequencing is the newest element of our infrastructure to support DNA barcoding—involving students in the act of DNA sequencing rather than sending their DNA off to a sequencing company. The miniature Oxford Nanopore sequencing hardware is smaller than a cell phone and costs only about \$750. The reagent costs are about the same as commercial sequencing, so this is a cost-effective way to let students better understand what is going on “under the hood” of DNA sequencing. Nanopore sequencing also fits well with other large-scale programs to support student research to screen bacteria for new antibiotics (Tiny Earth) and to analyze the genomes of bacterial viruses (SEA-PHAGES).

The *Summer of Nanopore Sequencing* workshops continued our effort to make this revolutionary technology accessible to educators and students at a national scale. By offering workshops at locations across the U.S., we seeded sustainable regional networks that can continue to grow in the years to come. Five, three-day workshops were held at the Arcibo C3 STEM Center in Puerto Rico; Kennedy-King College in Chicago; Pima Community College and the Arizona-Sonora Desert Museum in Tucson; Forsyth Tech Community College in Winston-Salem; and San Jacinto College in Pasadena, Texas. We received nearly twice as many applicants as



Educators at Arecibo C3 STEM Center during a nanopore workshop in May.

workshop spaces, suggesting sustained interest from faculty. A total of 124 participants from 86 institutions attended, representing K–12 schools, community colleges, four-year institutions, and other educational settings. Over 75% of participants were undergraduate college faculty, and more than 40% reported working at minority serving institutions (MSI).

Over 80% reported little or no prior experience with nanopore sequencing prior to attending the workshop. Post-workshop surveys found that virtually all participants had increased their confidence to use a nanopore sequencer, to use computer tools to analyze nanopore data, and to order nanopore kits/materials. Virtually all understood how nanopore can be incorporated in student research projects, had learned skills to enable them to implement nanopore technology in their classroom, and felt motivated to work through implementation challenges. During the school year, workshop participants remained engaged online through the QUBES Hub and a Slack channel, where they continued to exchange ideas, develop new molecular biology and sequencing workflows, and create assessment materials to support classroom implementation. We envision a future in which hands-on DNA sequencing in the classroom becomes as standard a molecular biology experience such as electrophoresis or polymerase chain reaction (PCR).

Under our MOU with Oxford Nanopore Technologies (ONT), the DNALC was given discounted pricing on custom starter kits. Previous workshop participants could purchase sequencing kits—bundled with Mk1D sequencer, flongle adapter, and flongles—at a savings of over \$2,000. Twelve community college faculty received free starter kits under scholarships from InnovATEBIO. In spring 2025, ONT brought prices at their “Education Beta” store in line with the custom DNALC starter kits, making low-price kits available to all teaching faculty.

DNA Subway 2.0

In 2025, *DNA Subway 2.0* advanced from initial concept to a functional, mobile-responsive platform. We made major advances in the technical infrastructure underlying the platform. Working closely with the Texas Advanced Computing Center (TACC), we established the Tapis application programming interface (API) to securely manage user authentication, job submission, and large-scale computing tasks. The team also began transitioning existing *DNA Subway* tools to the newer Tapis V3 infrastructure to support future hosting through both Jetstream2 and Cold Spring Harbor Laboratory’s high-performance computing.

A redesigned interface now includes account creation, project, dashboard, and Blue Line analysis pages. To improve performance and consistency across devices, the development team implemented a more customizable user interface and streamlined data handling features. In the fall, we released the alpha version of the Blue Line workflow and fully transitioned users to the new platform, officially retiring the dnasubway.cyverse.org site that served educators and students since 2010.

We adapted the Blue Line to support nanopore data by improving the integration of Fastp, Porechop, and Medaka for quality control, adapter trimming, and consensus sequence generation. We also added GPU-enabled base-calling for faculty users who often do not have access to GPUs in the classroom. Because basecalling is the most computationally intensive step for many users, leveraging GPUs rather than CPUs can provide a 10- to 100-fold speedup. By the end of the year, we also completed porting the Purple Line workflow for metabarcoding analysis. In the final year of the project, we will improve the Purple Line interface and add support for nanopore data analysis through QIIME. Future development will include a workflow for small genome assembly and annotation.

Major emphasis was given to testing and accessibility. Advisory board members reviewed the site and identified opportunities to simplify the interface, add interactive help, and strengthen tutorials and training materials. We also launched a formal user-testing process through PlaybookUX, using four different testing protocols to examine both Sanger and nanopore workflows on smartphones and desktop devices. Each testing session generated detailed feedback that informed improvements to the site. As part of our effort on universal design—to make *DNA Subway 2.0* as accessible as possible—our consultant Microassist conducted a review to identify and mitigate barriers to users with limited sight. This review will support our Voluntary Product Accessibility Template (VPAT), certifying that *DNA Subway 2.0* meets accessibility and compliance standards. Finally, faculty advisors continued working with Monica Trujillo, our collaborator at Queensborough Community College, to develop new learning materials and prepare to present *DNA Subway 2.0* to their peers.

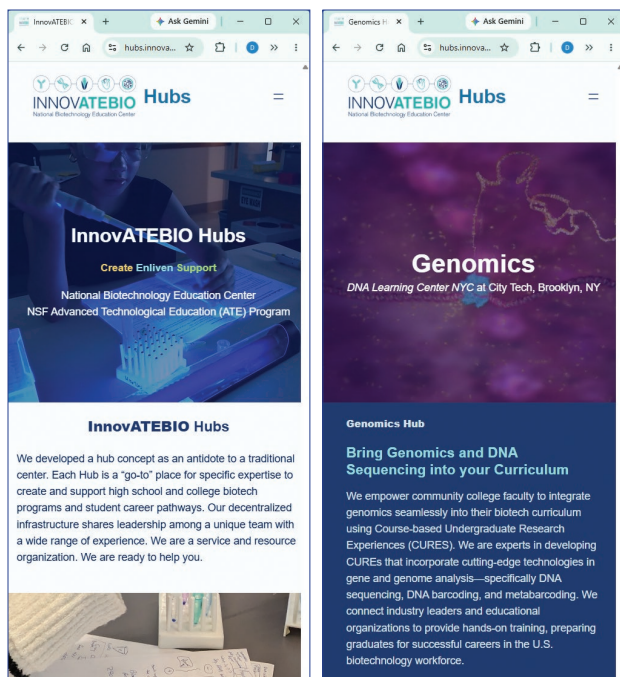
Nanopore MiniCUREs and Microcredentials

In September, the DNALC received a \$190,046 grant from NSF's Advanced Technological Education (ATE) program for a new collaborative project, "Nanopore Sequencing Mini-CUREs and Micro-credentials for the Next Generation of Biotechnicians." The primary goal of this initiative is to standardize technician training in Oxford Nanopore sequencing and bioinformatics through modular "mini-CUREs" (Course-based Undergraduate Research Experiences). The first of these modules, developed by Joseph Oleniczak (Austin Community College), Kasia Dinkeloo (University of Texas at Austin), and Anna Feitzinger (DNALC), tasks students with investigating the gut microbiome of superworms (*Zophobas morio*). In this experiment, superworms are fed common plastics, such as polystyrene and polyethylene, to observe their ability to ingest and partially degrade these materials. Using Oxford Nanopore MinION technology, students then characterize the specialized microbial communities within the larvae's digestive systems that play a critical role in breaking down plastic polymers. By mapping these pathways, students explore biological solutions for global plastic pollution while gaining hands-on experience in metagenomics and microbial ecology.

To ensure these skills translate directly into careers, the project is launching a formal microcredentialing framework led by Angela Consani, who heads the Bioscience Core Skills Institute (BCSI). These credentials certify student competency in industry tasks, such as DNA library preparation and the interpretation of genomic data. This work builds on the DNALC's mission to provide biotechnology training to community colleges and MSIs, creating an industry-certified pathway for the next generation of the biotechnology workforce.

InnovATEBIO National Center for Biotechnology Education

The DNALC Genomics Hub of InnovATEBIO continued its work to popularize nanopore sequencing in biology education. As an emerging technology, nanopore sequencing promises to revolutionize many aspects of biotechnology and biomanufacturing. Nanopore sequencing provides insertion site analysis (ISA) of CRISPR-Cas9 targeting of genes in microbial production pathways, human disease pathways, and antigen/antibody interactions. Applications in quality control include validating expression vectors used in pharmaceutical production, viral vectors used in gene therapy, and CAR-T cells used in cell therapy—as well as direct sequencing of therapeutic RNA molecules. Nanopore sequencing also provides rapid, real-time detection of viral contaminants. As demand for this technology grows, so does the need for skilled biotechnicians who can apply it in real-world settings.



InnovATEBIO Hubs site home and DNALC's Genomics Hub page.

We completed development of the InnovATEBIO Hubs website, which is conceived as the entry point through which faculty can access the Center's expertise to help them create, enliven, and support biotech programs at community colleges and high schools. Our goal was to create a flexible platform that enables hub managers to manage and update their own page content. The Hubs website adheres to best practices of web accessibility, making it responsive and easy to navigate on both computers and mobile devices. The site also incorporates strategies for search engine optimization (SEO), which will make InnovATEBIO expertise readily findable by search engines such as Google, and increasingly popular AI search tools such as ChatGPT, DeepSeek, and Gemini. At time of launch, the website scored an overall 98% SEO health score on SEMrush, an industry standard SEO evaluation tool. Only 10% of sites evaluated score above 92%.

Allied with our effort in workforce development, DNALC NYC was awarded a \$25,000 microgrant from LifeSci NYC (<https://lifesci.nyc>) to expand our college intern training and provide career readiness workshops. Five interns were selected to participate in

advanced genomics training and career development, with salary support from the microgrant. Interns reviewed individual development plans and participated in periodic meetings with DNALC NYC staff to review plans and their progress on biotechnology workforce skills. Interns were also trained to use the Agilent 2100 Bioanalyzer, conduct DNA barcoding experiments, and use nanopore sequencers. Salary support encouraged the expansion of lab and career development workshops, and DNALC NYC staff implemented activities to help interns build career readiness and lab competencies. Interns were also assessed through the BCSI, earning credentials in small volume metrology, aseptic technique, and numeracy.

Citizen DNA Barcode Network

The *Citizen DNA Barcode Network (CDBN)* entered its sixth year of funding through the NIH Science Education Partnership Award (SEPA). The program engaged citizen scientists across the United States in collecting and documenting insects through DNA barcoding. Participants carried out field collection and molecular work under the guidance of trained staff, generating barcodes that helped refine species ranges, identify new species, and

expand public sequence databases. While the Missouri Botanical Garden (MBG) fulfilled its service as the Year 5 DNA Barcoding Hub, the DNALC enlisted the Arizona-Sonora Desert Museum (ASDM) as a Year 6 DNA Barcoding Hub. Like MBG, ASDM utilized instructional and technical support from local institutions including Pima County Community College and the University of Arizona to coordinate DNA barcoding activities with citizen scientists and naturalists, including the Arizona Native Plant Society. In addition, the team at ASDM integrated citizen science DNA barcoding activities with their naturalist docent team, “The Bee Team,” who identify and document bees of the Sonoran Desert.

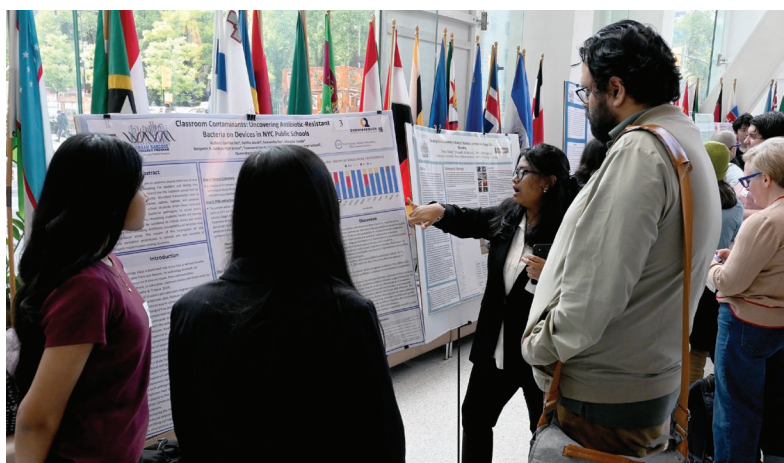
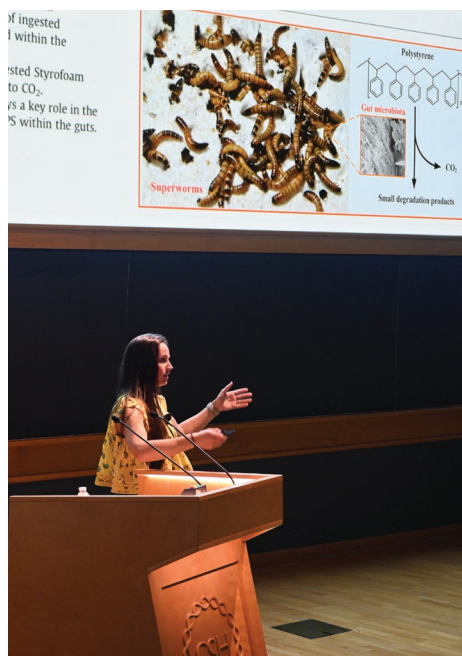
CDBN continued to support both new and longstanding collaborators across the United States beyond the larger DNA Barcoding Hubs. Among the new collaborators, an entomology graduate student at the University of Kentucky carried out DNA barcoding during the Bio-Bonanza event using ant specimens collected during fieldwork across Kentucky. Another new collaborator introduced DNA barcoding to high school campers during a STEM summer program at Camp Tamas in Massachusetts. Returning collaborators—including the Natural History Museum of Utah, Cold Spring Harbor Fish Hatchery, Northern Arizona University, the Science and Math Institute and Point Defiance Zoo & Aquarium, and the Missoula Butterfly House and Insectarium (MBHI)—continued to lead citizen science DNA barcoding activities in communities across the country. To further expand capacity, DNALC educators conducted multiple DNA barcoding training workshops throughout 2025 for teachers and science center staff interested in bringing these activities to their own institutions. Workshops were held in Arizona at ASDM, Montana at MBHI, North Carolina at NC State, and New York at the Dolan DNALC. Across all collaborators, *CDBN* engaged 991 participants during 2025.

Student DNA Barcoding Programs

The DNALC continued to enable local high school students to conduct authentic biodiversity research using DNA barcoding. *Barcode Long Island (BLI)* involves students in “campaigns” to compare biodiversity across Long Island. The *Urban Barcode Project (UBP)*, funded by the Thompson Family Foundation, and *Urban Barcode Research Program (UBRP)*, funded by the Pinkerton Foundation, involve students in independent research of biodiversity in New York City. Science teachers are mentors for *BLI* and *UBP* students, while scientists from NYC institutions mentor *UBRP* students. After the completion of funding from the National Institutes of Health (NIH) National Institute of General Medical Sciences (NIGMS) Science Education Partnership Award (SEPA) in 2023, *BLI* transitioned to a sustainable model where schools cover costs, participate through DNALC memberships, or receive need-based scholarships.

Across 99 *Barcode Long Island* teams, 213 students completed 65 projects—with 43 teams using open labs at the Dolan DNALC and Brookhaven National Laboratory and 41 teams borrowing equipment footlockers. Additionally, eight teachers attended a training workshop, with over 40% submitting student project proposals for Cohort 11. The annual *Barcode Long Island* Student Symposium was held on June 2nd on the CSHL main campus. Keynote speaker Dr. Kasia Dinkeloo, Assistant Professor of Practice at the University of Texas, presented her work on bioprospecting insect gut microbiomes for plastic-degrading bacteria.

In New York City, 157 *UBP* students on 52 teams and 35 *UBRP* students on 13 teams completed projects. Students made extensive use of DNALC facilities and equipment, and 102 *UBP* students and mentors along with all *UBRP* participants presented posters at the annual research symposium on May 20th at the New York City College of Technology, with four *UBRP* teams also presenting at the Science Research Mentoring Consortium Colloquium on June 6th. The symposium featured keynote speaker Dr. Elizabeth Suter, Associate Professor of Environmental Science at Molloy University, who presented “From Microbes to Megafauna: The Role of Metabarcoding in Shaping Oceanography.” Two teams were recognized with



Left, top: Dr. Dinkeloo presents in Grace Auditorium. Bottom: BLI students presented posters in Nichols-Biondi Hall as well as in Bush Auditorium. Right, top: UBRP poster winners present their project during the poster session. Bottom: Dr. Suter speaks to students and mentors.

outstanding poster awards: in the UBP, a team from Ethical Culture Fieldston School for “Mimicry Complexes and Host Plant Species of Seed Bugs on Randall’s Island,” and in the UBRP, a team mentored at Queensborough Community College for “Classroom Contaminants: Uncovering Antibiotic-Resistant Bacteria on Devices in NYC Public Schools.” UBRP participants reported substantial gains in scientific interest and confidence: 72% became more interested in studying science, and at least 83% felt the approach to problem-solving they learned in UBRP would help them succeed in future science courses and their future career. All UBRP students reported feeling ready for more demanding research after completing the program.

Synthetic Biology and DNA Editing

The DNALC continued its collaboration with the Vincent Noireaux and Steve Bowden labs at the University of Minnesota to establish cell-free systems for T7 bacteriophage genetic engineering. From June 16–19, we held a workshop at Pierce College in Los Angeles, “Using Cell-free Systems to Synthesize and Express Bacteriophage Genomes: Practical Biomanufacturing for Bioscience Educators” with 15 faculty representing 12 institutions.

Participants used TXTL to express fluorescent proteins from plasmids and synthesize viable T7 bacteriophage from genomic DNA.

We continued to adapt Noireaux's methods to illustrate principles of the emerging discipline of synthetic biology. First, PCR fragments from the phage genome, each approximately 10,000 nucleotides, are amplified in only 1.5 hours using a high-efficiency polymerase (KOD One). Then, exonuclease digestion creates complementary single-stranded ends that are joined to create a functional phage genome. This is a simplification of the "Gibson" method—used to assemble the first synthetic bacterial genome—because it requires no additional ligase or polymerase. Another experiment introduces mutations in the tail fiber region, altering receptor binding specificity and allowing T7 to infect a strain of *E. coli* that is normally resistant. This is a direct model for antigen-antibody and receptor-ligand interactions in biopharmaceutical engineering.

DNALC educator Jenny Hackett developed additional experiments to illustrate gene editing using *in vitro* mutagenesis of color genes on plasmids. Mutations are programmed into long PCR primers, then the entire amplified plasmid is assembled using the simplified Gibson method. A modification of our colony method, developed in the 1980s with Doug Hanahan, produces highly competent bacteria that can be transformed with the assembled plasmids. Nanopore sequencing then validates constructs and identifies specific mutations conferring new colors. This is analogous to confirming the sequence of expression vectors, viral vectors, and gene-edited constructs in pharmaceutical development and gene therapy.



Rainbow colored bacterial colonies are produced by editing color producing genes.

NIH Pathogen Data Network

During 2025, the DNALC component of the Pathogen Data Network (PDN) moved from planning to implementation. CSHL led outreach activities across the consortium, including regular coordination calls and collaboration with outreach teams from the other NIH NIAID-funded Bioinformatics Resource Centers (BRCs). The project underwent a substantial reorganization in response to changes in NIH policy. The lead institution, the Swiss Institute of Bioinformatics, was required to remove nine non-U.S. subawards, leaving CSHL and Georgetown University as the remaining partners. As a result, CSHL assumed an expanded role in the consortium, including greater responsibility for outreach, workforce preparation, and development of the Open Community Forum.

We helped develop the "Tools for Tomorrow" across-BRC webinar series to introduce researchers, educators, and other stakeholders to emerging resources for infectious disease data. We continued work to better understand barriers faced by researchers, educators, and other stakeholders when working with infectious disease data. During this period, we supported the preparation of a manuscript based on our previous global stakeholder survey, focusing on challenges related to training, access to computational resources, and the use of infectious disease data in research and education.

In addition, the DNALC participated in the NIAID-BRC AI Code-athon for Infectious Disease Research held in Lemont, Illinois, in November. During the event, we contributed to Story-Seq, a tool designed to automate sequence identification and contextualization through BLAST searches, database queries, and large language model-based narrative synthesis. This approach can accelerate the interpretation of infectious disease sequences and antimicrobial resistance genes while making these analyses more accessible to broader audiences.

Science, Technology, and Research Scholars (STARS)

This year, STARS welcomed its first cohort at *DNALC NYC* at City Tech in addition to the Cold Spring Harbor location, together serving 41 students from 30 institutions. The summer program was complemented by year-round virtual and in-person mentoring and alumni meet-ups. Peer mentors Brianna Francis ('20), Evan and Lucas Spagnoletti ('21), Nigel Williams ('19), and Z'Dhanne Williams ('19) joined monthly alumni meetings to discuss their academic



The first STARS workshop at *DNALC NYC* included a tour of several departments of City Tech, including the vision center (pictured).

and research experiences. Brianna Francis graduated from Johns Hopkins with an MS in Molecular and Cellular Biology and is now a research fellow at the National Institute of Allergy and Infectious Diseases. Lucas and Evan are data analyst interns at NIH and Glencore, respectively. Nigel graduated from Cornell University with a BS in Environmental Science and is now pursuing an MS in Wildlife and Wildlands Science and Management, while serving as a graduate research assistant at the University of Florida's North Florida Research and Education Center. Z'Dhanne Williams is a research fellow at the National Institute of Dental and Craniofacial Research and was an author on a maize development paper as a result of work that began through her participation in the CSHL *Partners for the Future* program as a high school student.

With assistance from 2025 National Academy of Inventors Fellow Carol Carter, several students were placed in career-enrichment opportunities. Internships included: Tsz Lun Quin ('25) Bargonetti Lab at Hunter College; Rachel Agbenyega ('24) MIT; Genesis Acevedo ('23) *DNALC NYC* at City Tech; Saydee Westman ('23) and Kayla Cruz ('24) Dolan *DNALC*. Leticia Kim ('24), Ben Maciel-Seidman ('24), Ikshan Rao ('24), and Logan Acuria-Lauer ('23) participated in medical or research shadowing. Susan Leach ('24) was selected for the Medical Scholars Pipeline Program at Hofstra University's Zucker school of medicine, and Aidan Vera ('22) participated in a summer program at Mount Sinai. Peter Ruiz II ('22) volunteered with *CDBN*. Alumni continued to build impressive academic and professional records. Samantha Gonzales ('20) became a clinical research assistant at Zucker Hillside Hospital. Sara Tovar ('23), also a *Partners for the Future* scholar, presented research from the Dos Santos Lab at the 2025 Symposium and is now a Morehead-Cain Scholar at the University of North Carolina at Chapel Hill. Benjamin and Sofia Ricci ('24) were accepted into the *Partners for the Future* program for 2025–2026. Clara Senada ('25) matched with Yale University as a QuestBridge Scholar.

STEP-UP

The NIH NIDDK Short-Term Research Experiences to Unlock Potential (STEP-UP) program provided students paid, eight-week summer internships in laboratories near their homes, expanding access to research opportunities regardless of economic background or geography. Each student worked with a scientist mentor and presented their project at an end-of-summer symposium. Throughout the school year, the *DNALC* continued to provide regular virtual check-ins to support seniors with college preparation and help them build additional research skills. Outreach activities included presentations at workshops, conferences, school fairs, and high schools.

In 2025, NIH abruptly cancelled the STEP-UP program for the next grant cycle, as part of broader U.S. policy changes. CSHL's appeal was unsuccessful, although STEP-UP had already instituted major changes in the application process to ensure compliance with updated federal guidance. This included race/ethnicity blind, merit-based review that focused on academics, personal statements, letters of recommendation, prior exposure to research, and enthusiasm for scientific careers. The program received more than 600 applications from all 50 states, the District of Columbia, and U.S. territories—almost double the number of the previous year. Nineteen students, including STARS alumna Leticia Kim, had been nominated for selection before the program closed. In July, we hosted a virtual meeting for nominated students to provide guidance on next steps and alternative opportunities. Several students remained in contact with the DNALC, receiving continued mentoring that helped them secure internships and college acceptances, including admission for one student to Yale University.

Research Ready

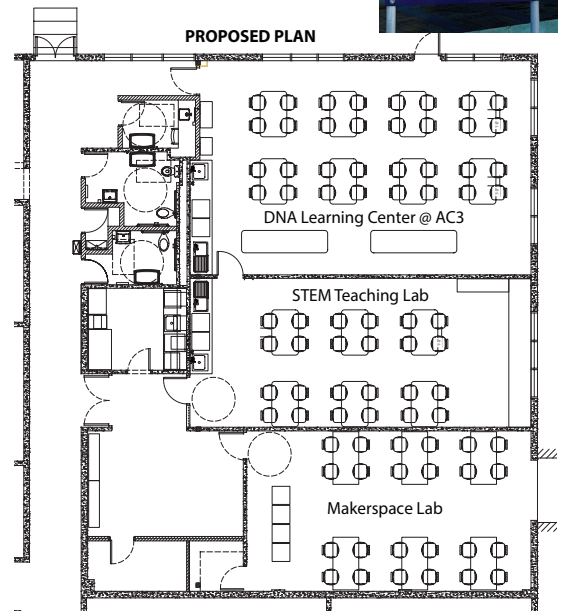
2025 was the third full calendar year for the *Research Ready* program in New York City. As part of our commitment to level the science playing field for disadvantaged students, Community High School by Beginning with Children continued to receive customized instruction and opportunities equivalent to our Partner Member program. Community High School is a charter school located a short walk from the DNALC NYC. Ninth graders visited the DNALC NYC to participate in a series of labs that are being integrated into their life sciences class. Tenth through 12th graders had the opportunity to participate in a customized forensic science camp during their winter and summer explorations—two-week periods when students at Community High School are exposed to a variety of career pathways and opportunities.

DNALC Around the World

Arecibo, Puerto Rico

During 2025, we advanced plans for the Ángel Ramos Foundation Science and Visitor Center at the Arecibo C3 STEM Center. A “Signals” exhibit will connect the former radio telescope with biological signals—including the genetics and ecology of the Puerto Rican coquí frog. The exhibit will combine low- and high-tech experiences and connect visitors with future opportunities through AC3 programs. We worked with the CSHL Facilities Department to develop construction plans for separate DNALC and *STEM Teaching Lab* spaces in the visitor center.

Year 2 participants in field trips, open houses, and Summer Science Explorations tripled to 342. A 2025 STEM Day event brought together 100 students, teachers, and families to preview future programming through activities in astronomy, computing, ecology, robotics, chemistry, and life sciences. Evaluation data from summer sessions showed increased student interest in science, greater confidence with hands-on STEM activities, and more than 80% of participants reporting increased interest in STEM careers. The Arecibo C3 STEM Center hosted a *Summer of Nanopore Sequencing* workshop, continuing its role as a regional hub for biotechnology and bioinformatics training in Puerto Rico. Plans were made for “DNA Barcode Puerto Rico,” a distributed high school research project modeled on successful DNALC programs in New York and elsewhere.



Wayfinding and building signage were installed on the AC3 campus and teaching lab plans were finalized.

Meharry Medical College

Over the year, we worked with the leadership of Meharry Medical College to develop a licensed DNALC in a 2,000-square-foot space formerly occupied by a research lab. The new center includes a 32-seat lab, prep lab, office, and multi-purpose lunchroom. The Meharry DNALC is part of *Together for CHANGE*, a program funded by Regeneron Genetics Center, AstraZeneca, Novo Nordisk, and Roche to increase research and education opportunities for African Americans. The new DNALC was formally dedicated on October 6th, along with the launch of an initiative to collect 500,000 DNA samples from African Americans and distinct African groups. These samples will be sequenced to increase representation of African ancestry in genome databases. Following intensive training in Nashville, New York, and at a *Summer of Nanopore Sequencing* workshop, Meharry staff are implementing a popular experiment on inserting a green fluorescent protein (“glowing”) gene into bacteria with 1,885 seventh-grade students from Metro Nashville Public Schools.



Signature DNALC laboratory benches were installed in the lab classroom.

Notre Dame, Indiana

Notre Dame DNA Learning Center (ND DNALC) continues to provide field trip and summer camp experiences that draw students from across the country. New programs included a “Sprint” camp collapsed from the traditional five to three days, two-day overnight workshops, a summer camp partnership with Louisville Catholic high schools, and “Football Forensics” on game days providing hands-on science engagement opportunities for visitors at home games. With an expanded geographical footprint through remote mentoring, the high school research program continued to thrive with the largest cohort yet of seven participants.

Suzhou, China

2025 marked a solid start for the renewed 10-year collaboration agreement with CSH Asia DNALC, with steady progress in curriculum development, scientific research, and international exchange. Focused on becoming China’s premier youth biological education center with international influence, the Center served 11,858 students from more than ten provinces. Supported by the SIP Education Bureau, the Innovative Biology Experimental Program (IBEP) reached 3,008 students with five to six sessions of molecular genetics labs in their schools. Twenty-two winter and summer camps were conducted, reaching 377 students. Among these, 66 students attended three camps taught by DNALC educators from New York, accounting for nearly 25% of the summer enrollment.

Dr. Kelsie Anson and Dr. Cristina Fernandez Marco visited the center to support the DNALC’s hands-on curriculum. Dr. Anson first led a workshop in DNA fingerprinting for local high school science teachers and delivered a student-focused presentation titled “Inside the Living World: Three Research Journeys Through Modern Biology.” She also conducted a three-day *DNA Barcoding* workshop for 28 middle school educators and taught a *Green Genes* camp. Dr. Fernandez Marco led two intensive programs: a *DNA Barcoding* camp for 24 students and a *Genome Science* camp for 28 students. The latter continued a collaboration with Beijing 166 High School, which sent 23 participants. The DNA barcoding initiative published 152 published sequences, including 21 first-time global publications and 37 new variants. Training for 64 students and 28 teachers in 2025 culminated in seven research posters.

Enugu, Nigeria

DNALC Nigeria recorded remarkable growth and strengthened its position as a leading hub for experiential science education in Nigeria. Student and professional participation in courses, workshops, and tours increased 44% to 628. The DNALC expanded its collaboration with the new College of Medicine and Nursing at Godfrey Okoye University's Ugwuomo Campus, providing practical training in genomics and human genetics training for 290 students. The DNALC also supported research projects for MSc and Ph.D. students at partner institutions, including University of Port Harcourt, Federal University of Technology Owerri, and Ebonyi State University. Seventy-five faculty participated in the 3rd International Course-based Undergraduate Research Experiences (CURE) Conference.

The year also marked a major infrastructure milestone with the initiation of construction of a new *DNALC Nigeria* facility as part of "Science City" on the Ugwuomo Campus. The larger upgraded facility will increase student enrollment, advanced laboratories, conferences, outreach programs, and institutional partnerships. Funded in part by the Enugu State Government, Science City will position *DNALC Nigeria* for long-term sustainability and national impact. Godfrey Okoye University was the first higher learning institution sponsored by the Catholic Church in Africa, and was honored by Archbishop Francis Michael Crotty, ambassador of the Vatican.

Lab Instruction and Outreach

The DNALC concluded 2025 with record income of \$6.724 million and a net cash surplus of \$177,652. In the face of decreased federal funding, we expanded our help to under-resourced schools and students by nearly 50% over 2024. We provided scholarships to 9,887 students valued at \$382,706. These were subsidized by endowment as well as funds from the National Grid Foundation, NY-RaMP at Hunter College, and the City Tech STEP program.

Visitation across our centers increased 22%. Combined, 30,302 students attended lab field trips, and 7,753 received in-school instruction. An additional 958 students used DNALC footlockers, including 214 conducting independent research through *UBP*, *UBRP*, or *BLI*. Attendance reached 1,780 at 90 week-long summer camps—including 773 in Cold Spring Harbor, 353 in Sleepy Hollow, 46 in Passaic, and 413 in Brooklyn. Among the students in Brooklyn were five Chinese students who attended a sponsored camp, and nine post-baccalaureates who attended three weeks of NSF-sponsored Summer Bootcamp courses through NY-RaMP. Partnership with CSHL Women in Science and Engineering (WiSE) continued as DNALC educators and WiSE volunteers presented the ninth annual *WiSE Fun with DNA* camp for 21 campers. One hundred fifty-six students attended offsite camps at Partner schools, Meharry DNALC, and The Hotchkiss School in Lakeville, Connecticut, while 57 used *On-Demand* camp kits. Annual training with first-year graduate students from the CSHL School of Biological Sciences continued with a series of 12 half-day sessions led by DNALC educators to develop science communication skills with a variety of audiences.

School membership strengthened with 23 Sustaining Members and the addition of Long Island Lutheran Middle and High School, Rye Country Day School, and School of the Holy Child. Long Island Partner schools enriched their curricula through *Barcode Long Island* and customized programs spanning elementary through high school. We welcomed new Associate Partner St. Anthony's High School, supporting microbiology, AP[®] Biology, environmental science, forensics, and medical science courses. Friends Academy and the Long Beach, Massapequa, and Glen Cove districts engaged students in activities ranging from third-grade heredity lessons to environmental data collection during the "Day in the Life" event. St. Dominic High School and Cold Spring Harbor High School offered co-taught Molecular Genomics courses, while member schools continued to support research opportunities.



In addition to our regular slate of programs, this year we offered unique experiences including *The Iceman Adventure* “escape room” that called on DNALC educators to get creative (*top row*) and welcomed new audiences, like the Girl Scouts (*bottom row*).

Partner schools in NYC used memberships to develop custom instructional sequences and advanced electives. Lycée Français de New York introduced inquiry-based enzyme modules and continued forensics and human DNA studies. Trevor Day School engaged Upper and Lower School students, including a cumulative bacterial transformation project for 8th graders. Advanced student research included DNA barcoding surveys of NYC ants by St. David’s and Marymount students, while Chapin’s Advanced Molecular Genetics elective piloted a new lab expressing two fluorescent proteins from a single bacterial gene.

The *Our Human Inheritance* and *What DNA Says about our Past and Future* exhibitions drew 4,472 visitors; most were students on field trips. Twenty-six *Saturday DNA!* sessions across all locations drew 326 registrants. Participants experienced how gram staining is used to identify bacteria, learned how DNA helps marine scientists identify cryptic corals, used LEGOs to simulate DNA sequencing, and explored how yeast can be used as model organism for genetic research. An additional 152 participants attended *The Iceman Adventure* at Dolan—an “escape room” event where participants moved through a series of Ötzi the Iceman inspired lab activities, and 106 Cadettes, Juniors, and Brownies enjoyed a day of hands-on science at the annual Girl Scouts of Nassau County STEM Conference. Thirty-five students attended *School Break Bio!* sessions over winter and spring break, and 19 more got a jump-start on summer at *April Fun with DNA* and *DNA Science* camps.

Brooklyn educators continued to engage with local communities at the SUBMERGE Marine Science Festival, Science Saturday at Rockefeller University, the Atlantic Antic Festival, and

the Brooklyn Cyclones STEM Education Day, and the NYS Marine Educators Association conference at SUNY Maritime. On Long Island, community events included Cold Spring Harbor Fish Hatchery Spring and Fall Festivals, Old Westbury Gardens Bug Safari, Farmingdale State College Smart Scholars Career Day, and the Science and Engineering Festival of Long Island at Hofstra University. Math for America teachers participated in a three-session mini courses called *All a Matter of Taste: An Exploration of the PTC Bitterness Tasting Gene* where they used PCR to explore human DNA variations.



Kelsie Anson works the booth at the Atlantic Antic Festival.

School year visitation at *Regeneron DNALC* included 2,010 students on field trips. An additional 228 middle schoolers attended the annual *Regeneron Day for Doing Good* volunteer event, where *Regeneron* volunteers were trained to present hands-on STEM activities. DNALC educators were once again invited to attend the International Science and Engineering Fair (ISEF) Education Outreach Day in Columbus, Ohio, where over 300 students enjoyed DNA extraction and DNA barcoding, and a *Regeneron DNALC* intern presented his research!

In its first full year, the Passaic County DNALC served 4,025 students through field trips and school programs. In partnership with Passaic County Technical Institute (PCTI), 48 high school seniors conducted year-long research projects using nanopore sequencing to investigate microbial diversity in local soil samples. To expand awareness and adoption, educators presented DNA barcoding programs at state and regional science education conferences. The Passaic DNALC also joined the Greater Newark STEM Ecosystem, strengthening collaboration and outreach among STEM-focused organizations across the region.

BioMedia Visitation and Projects

In 2025, 3.28 million visitors accessed our suite of multimedia resources, about 90% of the previous year. Our YouTube channel had 1,099,019 views with 32,247 hours of watch time and added 2,929 subscribers. Google Analytics counted 2.06 million user sessions on DNALC websites, about 2% more than the prior year. *3D Brain* and *Gene Screen* smartphone/tablet apps saw 116,130 downloads, including 2,889 *3D Brain HQ* in app purchases that earned \$1,992. We benefitted from an ongoing Google Ads grant that pays for ads for our websites in the Google search engine. Ads generated 61,654 impressions and 6,219 clicks equaling an impressive 10% click through rate; the equivalent of \$9,200 in advertisement spending.

At the *DNALC NYC*, we worked on fine-tuning support materials and developing new content for the exhibit spaces:

- *DNALC NYC* educator Jason Getzler worked with the *BioMedia* team to add an interactive element to the museum exhibition touchscreen and to update the museum exhibition guide for student visitors.
- In 2024, we worked with Dave and Jan Witkowski, editors of the *DNALC's Image Archive on the American Eugenics Movement* website, to develop a draft exhibit—"Immigration Act of 1924, Restricting Access to the American Dream"—featuring images from the website. This year, we finalized design and adaptation of the exhibit to fit standing panels for display opposite the "All the World in NYC" photo exhibit that celebrates people from across the world who call NYC home.

- We are collaborating with CSHL Communications staff on development of displays about the history and research on genetics and molecular genetics at the Lab.

We continue to support grant-funded programs, notably:

- We worked with InnovateBIO project staff to “spin off” a section of the InnovateBIO website that features project “hubs.”
- We assisted with signage for the Arecibo C3 site, including entrance branding, directional signs, and building identifiers.

DNALC licensing initiatives often require drafting plans for laboratory spaces in potential collaborator institutions; so, plans were created for laboratories at Arecibo C3, in Mexico City, and in Albany County, NY. In addition, we worked with CSHL Facilities and Community High School, Brooklyn—recipient of a donated Breakthrough Junior Challenge laboratory—to develop plans for renovation of a classroom.

In addition to design responsibilities, Chun-hua Yang continued to be integral to collaborations with CSH Asia DNALC in Suzhou, as well as with other institutions in China.

Staff and Interns

This year, we welcome two new staff members to the DNALC family: David Lamb and Brittany West.

To enable expansion of the DNALC educational network in President Stillman's Five-Year Vision for CSHL, in July we brought on board David Lamb as Marketing Manager. David was born in Essex County, England, and crossed the pond to New York in 2020. David studied molecular biology at Royal Holloway, University of London. There, he earned the Gary



Warren Prize for his outstanding dissertation on the genetics of wheat domestication. David brings over a decade's experience in marketing and communications across the arts and sciences, including at Springer Nature, NYU, and Columbia University. In this new role, David will expand the DNA Learning Center's global footprint by facilitating the launch of new licensed centers across domestic and international territories. He will also cultivate strategic partnerships with educational institutions and drive year-round engagement for the core centers' summer camps and field trip programs to ensure sustained growth and impact.

In July, Brittany West became an educator at the *Regeneron DNALC*. Brittany grew up in the Bay Area of California and discovered her interest in science during her first science fair in seventh grade. While studying at the University of Washington, she developed a passion for biopsychology. She earned an M.S. at Seton Hall University where she explored novel siRNA therapies for cancer. As a result of this research, she authored two scientific papers and co-invented a provisional patent. Her enthusiasm led her to focus on teaching rather than innovation, so she became a certified high school science teacher. In her new position, Brittany continues to connect with students and fulfill her intellectual need for lab research. She now molds the minds of the next generation of scientists, prepares and tests lab materials, manages interns, books on-site and off-site field trips in the Westchester area, and promotes memberships for local schools.

During the year, Elizabeth Asaro was promoted to Administrative Manager. Liz now oversees our administrative group that handles field trip reservations and summer camp registration for all the NY-metro DNALC locations, supports administration of faculty training workshop across the country, greets the visitors to our busy Brooklyn and Long Island centers, and much more!



The entire DNALC staff from all locations gathered at *DNALC NYC* for a retreat to workshop ideas for new initiatives.

In April, we bid farewell to Ashley Paynter, Ph.D., who left to join the Regeneron Genetics Center as a Research Program Manager. Ashley joined the *DNALC NYC* team in June 2024, bringing a passion for making STEM education more accessible to people of all backgrounds. At *DNALC NYC*, she helped implement the *UBRP*, created curricula for the *Research Ready* schools in Brooklyn, and assisted in planning for the *DNALC NYC STARS* workshop.

In July, Diana Metz Estrella, Ph.D. left the DNALC to return to Students 2 Science, a STEM-based center in New Jersey that empowers students in 3rd through 5th grades. Diana joined the Passaic County instructional team In September 2024.

Katrina Giambertone left in August, to accept a part-time lab position at Cold Spring Harbor High School and to complete her master's thesis in marine science from California State University at Monterey Bay—as well as complete a master's in secondary education. A Cold Spring Harbor native, Katina joined the Dolan team in July 2024 as an educator.

Skyla Robinson left in September for a new position with Disney+. Skyla joined the DNALC staff as a college design intern in May 2024. After receiving her bachelor's degree in informatics and interactive user experience, she became a Junior Designer-Developer. Her ability to bridge the gap between programming and design was instrumental to developing the user interface for the new *DNA Subway 2.0*.

This year we hosted an exceptional cohort of interns, and we said farewell as others left for college:

High School Interns

Dolan DNA Learning Center

Zainab Baber, Commack High School
 Kayla Cruz, Deer Park High School
 Gemma Fox, Berkshire School
 Aleksandra Gloukhovski, International Student
 Nicholas Galvin Gusmano, Portledge High School
 Kate Lin, Syosset High School

Ella Mayers, Farmingdale High School
 Emily Osterman, W.T. Clarke High School
 Isabella Palacios, Huntington High School
 Robert Rappa, The Stonybrook School
 Emma Rothelder, John Glenn High School
 Sadie Westman, Homeschool

Regeneron DNA Learning Center

Kyle Battacharia, Ossining High School	Norah Rosenberg, Walter Panas High School
Eliana Chorost, Rye Country Day School	Maya Shetty, Scarsdale High School
Ronak Das, Walter Panas High School	Brady Wang, Horace Greeley High School
Rayeerth Dasgupta, Scarsdale High School	Cynthia Zhang, Suffern High School
Andrea Mezgravis-Miani, Horace Greeley High School	Jerry Zhang, Jericho High School
Juliette Moore, Rye Country Day School	

DNA Learning Center at Passaic County Biotechnology Innovation Center

Mia DeGrandpre, PCTI STEM Academy	Katelyn Sperry, PCTI STEM Academy
Nadine Mari, PCTI STEM Academy	Kayla Valer, PCTI STEM Academy

College Interns

Dolan DNA Learning Center

Chloe Arma, Stony Brook University	Nick Liotta, Nassau Community College
Liam Asaro, University of Vermont	Kathryn Maloney, Boston University
Kevin Darcy, SUNY Environmental Science & Forestry	Francesca Mango, Clemson University
Sophia Dean, Brown University	Clodagh McNamara, Eckerd College
Genevieve Decker, Auburn University	Lola Milanese, University of Michigan
Lila Freire, Roger Williams University	Nicholas Peranzo, Farmingdale State University
Alexander Gottlieb, Stonybrook University	Jakob Rechtweg, Texas A&M
Isabella Grippo, Fordham University	Jacob Ribowsky, NYIT
Daniel Gusmano, NYIT	Jason Saulle, Stony Brook University
Ryan Koenigsberger, Boston College	Croi Spillane, Quinnipiac University
Sandhya LoGalbo, Hofstra University	Nicholas Stabile, University of Notre Dame
Marc Lanzone, SUNY Oneonta	Michael Stabile, Cornell University

DNA Learning Center NYC

Genesis Acevedo, New York University	Vanshika Kohli, Baruch College
Nicole Almonte Smith, Hunter College	Natalie Leow, Hunter College
James Babo, Hunter College	Jayden Leung, Hunter College
Selinnur Bicer, John Jay College of Criminal Justice	Mariana Lucero, NY City College of Technology
Rahima Chowdhury, City College of New York	Sofia Mateus, John Jay College of Criminal Justice
Elizabeth Diaz, Pace University	Kailynn Noble, John Jay College of Criminal Justice
Guadalupe Gonzalez, NY City College of Technology	Patrick Norales Ramirez, City College of New York
Paulina Hiyaev, John Jay College of Criminal Justice	Naomi Rawlins, Case Western Reserve University
Tanzeem Hossain, Queens College	Sherley Tejada, John Jay College of Criminal Justice
Melony-Rose James, John Jay College	Faith Tsentner, Hunter College
Tasnia Jennifer, Queens College	

Regeneron DNA Learning Center

Caoilainn Bischoff, University of Virginia	Steven Perrone, Syracuse University
Alyssa Costello, University of New Haven	

David Micklos
DNA Learning Center Executive Director

Workshops, Meetings, Collaborations, and Site Visits

January 11	<i>Saturday DNA!</i> "The Mystery of Anastasia," DNALC NYC
January 12	"Nanopore Network, Broadening Participation in the Benefits of Genomics," 32 nd International Plant and Animal Genome Meeting, San Diego, CA
January 21	Nextflow Training Day, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
January 25	New Jersey Summer Camp Fair, West Orange, New Jersey
	<i>Saturday DNA!</i> "Gram-azing Bacteria," DNALC
January 27	New York National Summer Program Fair, New York, New York
February 1	New Jersey Summer Camp Fair, Paramus, New Jersey
	<i>Saturday DNA!</i> "Plasmid Manipulation," <i>Regeneron DNALC</i>
February 2	Bioinformatics, Sweetbriar Nature Center, Virtual
February 7	NIH NIDDK HS STEP-UP Coordinating Center Workshop/Meeting, Virtual
February 8	<i>Saturday DNA!</i> "Mystery of the Iceman," DNALC
Feb 10–12	Site Visit by Dr. Taneisha Gillyard Cheairs, Meharry Medical College, DNALC and DNALC NYC
February 13	NIH NIDDK STEP-UP Application Review Meeting, Virtual
February 14	<i>Barcode Long Island</i> Open Lab, DNALC
Feb 18–21	<i>School Break Bio!</i> "Mighty Microbes," DNALC
February 22	New Jersey Summer Camp Fair, Morris, New Jersey
	<i>Saturday DNA!</i> "Swab to Sequence: How Genetic Testing Works," DNALC NYC
March 5-8	NIH NIDDK STEP-UP Review Meeting, Salt Lake City, Utah
March 15	<i>Saturday DNA!</i> "Engineering Yeast: Transforming Auxotrophs," DNALC NYC
	"Lactose Intolerance at the DNA Learning Center" Teacher Training Workshop, DNALC NYC
Mar 17–20	NIH Pathogen Data Network Meeting and Curriculum Planning Workshop
March 22	<i>Saturday DNA!</i> "Corals-Hiding in Plain Sight!" DNALC
March 27	Site Visit by Miriam Cortes-Caminero, Director of Marketing, Enzo, DNALC
April 5	<i>Saturday DNA!</i> "From Genes to Proteins," DNALC at Passaic County Biotechnology Innovation Center
	<i>Saturday DNA!</i> "Got Lactase?" <i>Regeneron DNALC</i>
April 9	Course-based Undergraduate Research Experiences Using <i>In Silico</i> Resources to Expand Aging Education, "Making Data Accessible to Undergraduates," National Institute of Aging, Virtual
April 11	"DNA Barcoding," New Jersey Association for Gifted Children, Somerset, New Jersey
April 14–18	<i>Fun with DNA</i> Workshop, DNALC
	<i>DNA Science</i> Workshop, DNALC
	<i>DNA Science</i> Workshop, <i>Regeneron DNALC</i>
April 15–18	<i>Fun with DNA</i> Workshop, <i>Regeneron DNALC</i>
April 25	NIH STEP-UP Coordinator Center Meeting, Virtual
April 26	<i>Saturday DNA!</i> "Cellular Architecture," DNALC
April 30	Brooklyn Cyclones STEM Education Day, Brooklyn, New York
Apr 30–May 2	SRMC Conference 2025, American Museum of Natural History, New York, New York
May 3	"Using DNA Barcoding to Explore Marine Biodiversity," New York State Marine Education Association (NYSMEA) Conference, SUNY Maritime College, Bronx, New York
	Cold Spring Harbor Fish Hatchery Spring Festival, Cold Spring Harbor, New York
May 10	Old Westbury Gardens Bug Safari, Old Westbury, New York
May 14–16	<i>Summer of Nanopore Sequencing 2025</i> Teacher Workshop, Arecibo C3 STEM Center, Arecibo, Puerto Rico
May 17	Farmingdale State College Smart Scholars Career Day, Farmingdale, New York
May 16–17	SUBMERGE Marine Science Festival, New York, New York

May 17	<i>Saturday DNA! "Enzymes in Action," DNALC</i>
May 20	<i>Urban Barcode Research Program and Urban Barcode Project Student Symposium, DNALC NYC</i>
May 21	<i>"Making Genomic Education Accessible for All," London Calling, London, UK</i>
May 28	<i>Science Summer Camp Open House, DNALC at Passaic County Biotechnology Innovation Center</i>
May 29	<i>Science Summer Camp Open House, DNALC NYC</i>
May 31	<i>Saturday DNA! "Swab to Sequence: What happens when you send off your DNA?," DNALC</i> <i>Urban Advantage Expo, American Museum of Natural History, New York, New York</i>
June 2	<i>Barcode Long Island Student Symposium, CSHL</i>
June 2,4	<i>NIH Pathogen Data Network Wastewater Workshop, IndigiData Health and Artificial Intelligence Conference, Ak-Chin Reservation, Arizona</i>
June 2-4	<i>Summer of Nanopore Sequencing 2025 Teacher Workshop, Kennedy-King College, Chicago, IL</i>
June 2-6	<i>DNA Science Workshop, NSF Arecibo C3 STEM Center, Arecibo, Puerto Rico</i>
June 3-4	<i>Teacher Workshop, Metro Nashville Public Schools, DNALC at Meharry Medical College, Nashville, Tennessee</i>
June 7	<i>Saturday DNA! "Pollen-palooza," DNALC</i>
June 9-11	<i>Summer of Nanopore Sequencing 2025 Teacher Workshop, Pima Community College and Arizona-Sonora Desert Museum, Tucson, AZ</i>
June 9-13	<i>World of Enzymes Workshop, NSF Arecibo C3 STEM Center, Arecibo, Puerto Rico</i> <i>Forensic Detectives Workshop, Lycée Français de New York, New York</i>
June 16-19	<i>NSF "Using Cell-free Systems to Synthesize and Express Bacteriophage Genomes: Practical Biomanufacturing for Bioscience Educators," Teacher Workshop, Pierce College, Los Angeles, California</i>
June 16-20	<i>Fun with DNA Workshop, NSF Arecibo C3 STEM Center, Arecibo, Puerto Rico</i> <i>DNA Barcoding Workshop, DNALC at Meharry Medical College, Nashville, Tennessee</i>
June 21	<i>"Inclusive Genomics Education," ASM Microbe, Los Angeles, CA</i>
June 23-25	<i>Summer of Nanopore Sequencing 2025 Teacher Workshop, Forsyth Tech Community College, Winston-Salem, NC</i>
June 26	<i>"Conquest of Abundance, Genomics in a Time of Plenty," Galaxy-Bioconductor Conference, CSHL</i>
June 23-27	<i>DNA Barcoding Workshop, NSF Arecibo C3 STEM Center, Arecibo, Puerto Rico</i> <i>Fun with DNA Workshop, DNALC at Passaic County Biotechnology Innovation Center</i>
June 30-July 2	<i>Summer of Nanopore Sequencing 2025 Teacher Workshop, DNALC</i>
June 30-July 3	<i>Fun with DNA Workshop, DNALC</i> <i>World of Enzymes Workshop, DNALC</i> <i>Green Genes Workshop, DNALC</i> <i>Forensic Detectives Workshop, DNALC</i> <i>Fun with DNA Workshop, DNALC NYC</i> <i>World of Enzymes Workshop, DNALC NYC</i> <i>Forensic Detectives Workshop, DNALC NYC</i> <i>Fun with DNA Workshop, Regeneron DNALC</i> <i>Forensic Detectives Workshop, Regeneron DNALC</i> <i>World of Enzymes Workshop, DNALC at Passaic County Biotechnology Innovation Center</i> <i>Fun with DNA Workshop, The Hotchkiss School, Lakeville, Connecticut</i> <i>DNA Barcoding Workshop, Donostia, Spain</i> <i>DNA Barcoding Teacher Training Workshop for Suzhou City Teachers, CSH Asia DNALC, Suzhou, China</i>
July 7-11	<i>Fun with DNA Workshop, DNALC</i> <i>World of Enzymes Workshop, DNALC</i> <i>DNA Science Workshop, DNALC</i>

	<i>Forensic Crime Lab Workshop, DNALC</i>
	<i>Green Genes Workshop, DNALC NYC</i>
	<i>DNA Science Workshop, DNALC NYC</i>
	<i>World of Enzymes Workshop, Regeneron DNALC</i>
	<i>DNA Science Workshop, Regeneron DNALC</i>
	<i>Fun with DNA Workshop, The Hotchkiss School, Lakeville, Connecticut</i>
	<i>DNA Barcoding Workshop, Donostia, Spain</i>
	<i>Green Genes Workshop, CSH Asia DNALC, Suzhou, China</i>
July 8	Site Visit by Jerry Cozine and Kelly Lewis, Laurel Hill School, DNALC
July 12	STARS STEM Workshop Student Orientation "Family Day," DNALC NYC
July 14–18	<i>Forensic Detectives Workshop, DNALC</i>
	<i>Green Genes Workshop, DNALC</i>
	<i>DNA Science Workshop, DNALC</i>
	<i>DNA Barcoding Workshop, DNALC</i>
	<i>Forensic Detectives Workshop, DNALC NYC</i>
	<i>DNA Science Workshop, DNALC NYC</i>
	<i>DNA Barcoding Workshop, DNALC NYC</i>
	<i>STARS STEM Workshop, DNALC NYC</i>
	<i>Green Genes Workshop, Regeneron DNALC</i>
	<i>DNA Barcoding Workshop, Regeneron DNALC</i>
	<i>DNA Science Workshop, DNALC at Passaic County Biotechnology Innovation Center</i>
	<i>Fun with DNA Workshop, The Hotchkiss School, Lakeville, Connecticut</i>
July 21–25	<i>Fun with DNA Workshop, DNALC</i>
	<i>World of Enzymes Workshop, DNALC</i>
	<i>Green Genes Workshop, DNALC</i>
	<i>Genome Science Workshop, DNALC</i>
	<i>Fun with DNA Workshop, DNALC NYC</i>
	<i>Green Genes Workshop, DNALC NYC</i>
	<i>Genome Science Workshop, DNALC NYC</i>
	<i>STARS STEM Workshop, DNALC NYC</i>
	<i>Forensic Detectives Workshop, Regeneron DNALC</i>
	<i>DNA Science Workshop, Regeneron DNALC</i>
July 23–26	NIH "What's My Molt?! Identifying Species Through Molt Skins Using DNA Barcoding," 2025 Invertebrates in Education and Conservation Conference, Tucson, Arizona
July 28–Aug 1	<i>World of Enzymes Workshop, DNALC</i>
	<i>Forensics Detectives Workshop, DNALC</i>
	<i>DNA Science Workshop, DNALC</i>
	<i>BioCoding Workshop, DNALC</i>
	NIH <i>Citizen DNA Barcode Network Teacher Training Workshop, "DNA Barcoding," DNALC</i>
	<i>World of Enzymes Workshop, DNALC NYC</i>
	<i>Forensic Crime Lab Workshop, DNALC NYC</i>
	<i>DNA Science Workshop, DNALC NYC</i>
	<i>Fun with DNA Workshop, Regeneron DNALC</i>
	<i>Genome Science Workshop, Regeneron DNALC</i>
	<i>Forensic Detectives Workshop, DNALC at Passaic County Biotechnology Innovation Center</i>
	<i>DNA Barcoding Workshop, CSH Asia DNALC, Suzhou, China</i>
August 4–8	<i>Fun with DNA Workshop, DNALC</i>

- Green Genes Workshop, DNALC*
- DNA Barcoding Workshop, DNALC*
- Forensic Crime Lab Workshop, DNALC*
- Fun with DNA Workshop, DNALC NYC*
- Green Genes Workshop, DNALC NYC*
- New York Research and Mentoring for Postbaccalaureates at Hunter College: Green Genes Workshop, DNALC NYC*
- DNA Science Workshop, WELAND visiting students from China, DNALC NYC*
- World of Enzymes Workshop, Regeneron DNALC*
- DNA Science Workshop, Regeneron DNALC*
- Genome Science Workshop, CSH Asia DNALC, Suzhou, China*
- August 6–8 *Summer of Nanopore Sequencing 2025 Teacher Workshop, San Jacinto College, Generation Park, Houston, TX*
- August 9 *STARS STEM Workshop Student Orientation “Family Day,” DNALC*
- August 11–15 *World of Enzymes Workshop, DNALC*
- DNA Science Workshop, DNALC*
- Genome Science Workshop, DNALC*
- STARS STEM Workshop, DNALC*
- Forensic Detectives Workshop, DNALC NYC*
- DNA Science Workshop, DNALC NYC*
- DNA Barcoding Workshop, DNALC NYC*
- BioCoding Workshop, DNALC NYC*
- New York Research and Mentoring for Postbaccalaureates at Hunter College: DNA Barcoding Workshop, DNALC NYC*
- Green Genes Workshop, Regeneron DNALC*
- Forensic Crime Lab Workshop, Regeneron DNALC*
- DNA Science Workshop, DNALC at Passaic County Biotechnology Innovation Center*
- August 14 *Site Visit by Jason Flom and Khaliah Ali Flom with Charlie Prizzi and Jan Witkowski, DNALC*
- August 18–22 *WISE Fun with DNA Workshop, DNALC*
- Forensic Detectives Workshop, DNALC*
- Green Genes Workshop, DNALC*
- DNA Science Workshop, DNALC*
- STARS STEM Workshop, DNALC*
- Fun with DNA Workshop, DNALC NYC*
- World of Enzymes Workshop, DNALC NYC*
- DNA Science Workshop, DNALC NYC*
- New York Research and Mentoring for Postbaccalaureates at Hunter College: DNA Barcoding Workshop, DNALC NYC*
- Fun with DNA Workshop, Regeneron DNALC*
- DNA Barcoding Workshop, Regeneron DNALC*
- Fun with DNA Workshop, DNALC at Passaic County Biotechnology Innovation Center*
- August 20 *Site Visit by Jessica Raba, Laura Callahan and Billy Edzards, faculty from Long Island Lutheran Middle & High School, DNALC*
- August 25–29 *Fun with DNA Workshop, DNALC*
- Forensic Detectives Workshop, DNALC*
- DNA Science Workshop, DNALC*
- Fun with DNA Workshop, DNALC NYC*
- Green Genes Workshop, DNALC NYC*

	<i>Genome Science Workshop, DNALC NYC</i>
	<i>Urban Barcode Research Program Training, DNALC NYC</i>
	<i>World of Enzymes Workshop, Regeneron DNALC</i>
	<i>Green Genes Workshop, Regeneron DNALC</i>
	<i>Green Genes Workshop, DNALC at Passaic County Biotechnology Innovation Center</i>
	<i>Site Visit by Cameron Washington, Meharry DNALC Educator, DNALC</i>
September 11	<i>Staff Retreat, DNALC NYC</i>
Sept 15–16	<i>Nanopore Professional Development Workshop, NSF Arcibo C3 STEM Center, Arcibo, Puerto Rico</i>
Sept 15–18	<i>Staff Training, DNALC at Meharry Medical College, Nashville, Tennessee</i>
September 22	<i>Urban Barcode Project Educator Training, “DNA Barcoding,” DNALC NYC</i>
September 26	<i>Northeast Regional Association for Science Teacher Education Annual Conference, Kean University, Union, New Jersey</i>
September 27	<i>Cold Spring Harbor Fish Hatchery Fall Festival, Cold Spring Harbor, New York</i> <i>Science Saturday at RockEDU, New York, New York</i>
October 3	<i>“A Day in the Life” River Program, Massapequa Preserve, Massapequa, New York</i>
October 4	<i>Saturday DNA! “Bilayer in a Bubble,” DNALC at Passaic County Biotechnology Innovation Center</i> <i>Urban Barcode Project Educator Training, “DNA Barcoding,” DNALC NYC</i>
October 5	<i>Atlantic Antic Festival, Brooklyn, New York</i>
October 7	<i>Urban Barcode Project Educator Training, “DNA Barcoding,” DNALC NYC</i>
October 9	<i>Urban Barcode Project Educator Training, “DNA Barcoding,” DNALC NYC</i>
October 10	<i>DNA Subway 2.0 Teacher Training Workshop, Virtual</i>
October 11	<i>DNA Subway 2.0 Teacher Training Workshop, Virtual</i> <i>“Lactose Intolerance Series Session 1: Genes, Mutations, and Inheritance,” Teacher Training Workshop, DNALC NYC and Regeneron DNALC</i>
October 15	<i>Urban Barcode Project Educator Training, “DNA Barcoding,” DNALC NYC</i>
October 16	<i>Math for America Teacher Training Workshop, “All a Matter of Taste: An Exploration of the PTC Bitterness Tasting Gene,” DNALC NYC</i>
Oct 17–18	<i>Site Visit by Armando Barriguete and Marco Barrera, Mexico City Museum of Health DNALC Project, DNALC and DNALC NYC</i>
October 18	<i>Saturday DNA! “The World Around Us,” DNALC</i> <i>Saturday DNA! “Lab-o-ween!” DNALC NYC</i>
October 18	<i>STARS STEM College Preparation Workshop, Virtual</i>
Oct 21–22	<i>“DNA Barcoding,” NJ Science Convention, Princeton, New Jersey</i> <i>Regeneron Day for Doing Good, Regeneron Pharmaceuticals, Sleepy Hollow, New York</i> <i>NIH SciEd Conference: DNA Subway 2.0, Virtual</i>
October 23	<i>Math for America Teacher Training Workshop, “All a Matter of Taste: An Exploration of the PTC Bitterness Tasting Gene,” DNALC NYC</i>
October 25	<i>DNA Subway 2.0 Teacher Training Workshop, Virtual</i> <i>“Lactose Intolerance Series Session 1: Genes, Mutations, and Inheritance,” Teacher Training Workshop, DNALC</i>
October 28	<i>ExpandedED Schools Virtual STEM Resource Fair, District 14, Brooklyn, New York</i>
October 30	<i>Math for America Teacher Training Workshop, “All a Matter of Taste: An Exploration of the PTC Bitterness Tasting Gene,” DNALC NYC</i>
October 31	<i>Western Suffolk BOCES/NIH Citizen DNA Barcode Network Collaborator Nature Center Staff Workshop, Caleb Smith State Park, Smithtown, New York</i>
November 4	<i>DNA Subway 2.0 Teacher Training Workshop, DNALC and Virtual</i> <i>“Lactose Intolerance Series Session 2: Lactase Enzymes in Action,” Teacher Training Workshop, Regeneron DNALC</i>

- November 6 “DIY your PCR: Purifying *Taq* Polymerase to Detect a Jumping Gene,” Teacher Training Workshop, DNALC
 Excellence in Research Panel, Hofstra University, Hempstead, New York
 Undergraduate Life Sciences Skills Development Consortium Meeting, New York, New York
- November 7–9 “Exploring Biodiversity Through DNA Barcoding,” Science Teachers Association of New York State Conference, Syracuse, New York
- November 8 “Lactose Intolerance Series Session 2: Lactase Enzymes in Action,” Teacher Training Workshop, DNALC NYC
Saturday DNA! “Bio Building,” DNALC
Saturday DNA! “Mystery of the Iceman,” DNALC
Saturday DNA! “Sour to Sweet: The Miraculin Effect!” DNALC NYC
- November 11 “A Day in the Lab – Iceman Adventure” DNALC
- November 12 Summer Opportunities Fair, Wheatley High School, East Williston
- Nov 12-14 NIH Pathogen Data Network AI Hackathon, Argonne National Laboratory, Lemont, Illinois
- November 13 “Crack the Case with Gel Electrophoresis, *Taq* Purification Made Simple for the Classroom Scientist,” National Science Teaching Association 2025 National Conference, Minneapolis, Minnesota
- November 15 “Got Lactase? Exploring Enzymes and Evolution,” National Science Teaching Association 2025 National Conference, Minneapolis, Minnesota
Saturday DNA! “Fall into the Micro World!” *Regeneron DNALC*
 Girl Scouts of Nassau County “STEM Conference,” DNALC
- December 5 *Barcode Long Island Open Lab*, DNALC
 Site Visit by Dr. Michael Brophy and Dr. Donna Barron, Hudson Valley Community College, DNALC and *Regeneron DNALC*
- December 6 *Saturday DNA!* “Let It Glow!” DNALC at Passaic County Biotechnology Innovation Center
Saturday DNA! “Sweet Genes,” DNALC NYC
- December 13 “Lactose Intolerance Series Session 3: Our Genes and Lactose Intolerance,” Teacher Training Workshop, DNALC NYC
Saturday DNA! “Darwin’s Adventure,” DNALC
Saturday DNA! “Plasmid Manipulation,” *Regeneron DNALC*
- December 14 Science and Engineering Festival of Long Island, Hempstead, New York
- December 23 Site Visit by Lorenzo Johnson with Charlie Prizzi, DNALC NYC

Sites of Major Faculty Workshops

Program Key: *Middle School* High School **College** Informal Education

State	Institution	Year(s)
VIRTUAL	Host: Atlanta University Center Consortium, Atlanta, Georgia	2021
	Host: Bowie State University, Bowie, Maryland	2020
	Host: DNA Learning Center, New York	2020
	Host: Harlem DNA Lab and <i>Regeneron DNALC</i> , Sleepy Hollow, New York	2020
	Co-host: James Madison University, Harrisonburg, Virginia	2020, 2021 (3)
	Host: North Carolina State University, Raleigh, North Carolina	2021
	Co-hosts: University of Arizona, Tucson, Arizona & DNA Learning Center, NY	2020
	Host: Quantitative Undergraduate Biology Education and Synthesis (QUBES) Project	2020
ALABAMA	University of Alabama, Tuscaloosa	1987–90
	Hudson Alpha Institute, Huntsville	2014
ALASKA	University of Alaska, Anchorage	2012
	University of Alaska, Fairbanks	1996
ARIZONA	Arizona State University, Tempe	2009
	Maricopa Community College, Phoenix	2023
	Pima Community College and Arizona-Sonora Desert Museum, Tucson	2025
	Tuba City High School	1988
	University of Arizona, Tucson	2011, 2019–20
	United States Department of Agriculture, Maricopa	2012
ARKANSAS	Henderson State University, Arkadelphia	1992
	University of Arkansas, Fayetteville	2017, 2019
	University of Arkansas, Little Rock	2012
	University of Arkansas for Medical Sciences, Little Rock	2019
CALIFORNIA	<u>California Academy of Sciences, San Francisco</u>	<u>2022</u>
	California State University, Dominguez Hills	2009
	California State University, Fullerton	2000
	California State University, Long Beach	2015
	California Institute of Technology, Pasadena	2007
	Chan-Zuckerberg BioHub, San Francisco	2018
	Canada College, Redwood City	1997
	City College of San Francisco	2006
	City College of San Francisco	2011, 2013
	Contra Costa County Office of Education, Pleasant Hill	2002, 2009
	Foothill College, Los Altos Hills	1997
	Harbor-UCLA Research & Education Institute, Torrance	2003
	Los Angeles Biomedical Research Institute (LA Biomed), Torrance	2006
	Laney College, Oakland	1999
	Lutheran University, Thousand Oaks	1999
	Oxnard Community College, Oxnard	2009
	Pasadena City College	2010
	Pierce College, Los Angeles	1998, 2022, 2025
	Salk Institute for Biological Studies, La Jolla	2001, 2008
	San Francisco State University	1991
	San Diego State University	2012
San Jose State University	2005	
Santa Clara University	2010	
Santiago Canyon College, Orange	2023	
Scripps Institute, San Diego	2019	

	Skyline College, San Bruno	2024
	Southwestern College, Chula Vista	2014–15
	Stanford University, Palo Alto	2012
	University of California, Berkeley	2010, 2012
	University of California, Davis	1986
	University of California, Davis	2012, 2014–15
	University of California, Long Beach	2015
	University of California, Northridge	1993
	University of California, Riverside	2011
	University of California, Riverside	2012
	University of California, San Francisco	2015
COLORADO	Aspen Science Center	2006
	Colorado College, Colorado Springs	1994, 2007
	Colorado State University, Fort Collins	2013, 2018
	Community College of Denver	2014
	United States Air Force Academy, Colorado Springs	1995
	University of Colorado, Denver	1998, 2009–10
CONNECTICUT	Choate Rosemary Hall, Wallingford	1987
	Jackson Laboratory, Farmington	2016
DELAWARE	University of Delaware, Newark	2016
DISTRICT OF COLUMBIA	Howard University, Washington	1992, 1996, 2009–10
FLORIDA	Armwood Senior High School, Tampa	1991
	Florida Agricultural & Mechanical University, Tallahassee	2007–08
	Florida Agricultural & Mechanical University, Tallahassee	2011
	Florida SouthWestern State University, Fort Myers	2015
	North Miami Beach Senior High School	1991
	Seminole State College, Sanford	2013–14
	University of Florida, Gainesville	1989
	University of Miami School of Medicine	2000
	University of Western Florida, Pensacola	1991
GEORGIA	Fernbank Science Center, Atlanta	1989, 2007
	Gwinnett Technical College, Lawrenceville	2011–12
	Morehouse College	1991, 1996
	Morehouse College	1997
	Spelman College, Atlanta	2010, 2024
	University of Georgia, Athens	2015
HAWAII	Kamehameha Secondary School, Honolulu	1990
	University of Hawaii at Manoa	2012, 2024
IDAHO	University of Idaho, Moscow	1994
ILLINOIS	Argonne National Laboratory	1986–87
	iBIO Institute/Harold Washington College, Chicago	2010
	Illinois Institute of Technology, Chicago	2009
	Kennedy-King College, Chicago	2025
	Kings College, Chicago	2014
	University of Chicago	1992, 1997, 2010
	University of Southern Illinois, Carbondale	2016
INDIANA	Butler University, Indianapolis	1987
	Purdue University, West Lafayette	2012
IOWA	Drake University, Des Moines	1987
KANSAS	University of Kansas, Lawrence	1995
KENTUCKY	Bluegrass Community & Technical College, Lexington	2012–14
	Murray State University	1988

	University of Kentucky, Lexington	1992
	Western Kentucky University, Bowling Green	1992
LOUISIANA	Bossier Parish Community College	2009
	Jefferson Parish Public Schools, Harvey	1990
	John McDonogh High School, New Orleans	1993
	Southern University at New Orleans	2012
	University of New Orleans	2018
MAINE	Bates College, Lewiston	1995
	Southern Maine Community College	2012–13
	Foundation for Blood Research, Scarborough	2002
MARYLAND	Annapolis Senior High School	1989
	Bowie State University	2011, 2015
	Frederick Cancer Research Center	1995
	McDonogh School, Baltimore	1988
	Montgomery County Public Schools	1990–92
	National Center for Biotechnology Information, Bethesda	2002
	<i>St. John's College, Annapolis</i>	1991
	University of Maryland, School of Medicine, Baltimore	1999
MASSACHUSETTS	Arnold Arboretum of Harvard University, Roslindale	2011
	Beverly High School	1986
	Biogen Idec, Cambridge	2002, 2010
	Boston University	1994, 1996
	CityLab, Boston University School of Medicine	1997
	Dover-Sherborn High School, Dover	1989
	Randolph High School	1988
	The Winsor School, Boston	1987
	Whitehead Institute for Biomedical Research, Cambridge	2002
MICHIGAN	Athens High School, Troy	1989
	Schoolcraft College, Livonia	2012
MINNESOTA	American Society of Plant Biologists, Minneapolis	2015
	Minneapolis Community and Technical College, Madison	2009
	Minneapolis Community and Technical College, Madison	2013
	University of Minnesota, St. Paul	2005
	University of Minnesota, St. Paul	2010, 2024
MISSISSIPPI	Mississippi School for Math & Science, Columbus	1990–91
	Rust College, Holly Springs	2006–08, 2010
MISSOURI	St. Louis Science Center	2008–10
	Stowers Institute for Medical Research, Kansas City	2002, 2008
	University of Missouri, Columbia	2012
	Washington University, St. Louis	1989
	Washington University, St. Louis	1997, 2011, 2019
MONTANA	Montana State University, Bozeman	2012
NEBRASKA	University of Nebraska-Lincoln, Lincoln	2014
NEVADA	University of Nevada, Reno	1992, 2014
NEW HAMPSHIRE	Great Bay Community College, Portsmouth	2009
	New Hampshire Community Technical College, Portsmouth	1999
	St. Paul's School, Concord	1986–87
NEW JERSEY	Coriell Institute for Medical Research, Camden	2003
	DNA Learning Center at Passaic County Biotechnology Innovation Center	2024
	Raritan Valley Community College, Somerville	2009
NEW MEXICO	Biolink Southwest Regional Meeting, Albuquerque	2008
	Los Alamos National Lab	2017

	New Mexico State University, Las Cruces	2017
	Santa Fe Community College, Santa Fe	2015
NEW YORK	Albany High School	1987
	American Museum of Natural History, New York	2007, 2015
	Bronx High School of Science	1987
	Brookhaven National Laboratory, Upton	2015–18
	Canisius College, Buffalo	2007
	Canisius College, Buffalo	2011
	City College of New York	2012
	Cold Spring Harbor High School	1985, 1987
	Cold Spring Harbor Laboratory	2014–15, 2018–19, 2022
	Columbia University, New York	1993
	Cornell University, Ithaca	2005
	<i>DeWitt Middle School, Ithaca</i>	<i>1991, 1993</i>
	Dolan DNA Learning Center	1988–95, 2001–04, 2006–09, 2015–19, 2024, 2025
	Dolan DNA Learning Center	1990, 1992, 1995, 2000–11, 2025
	<u>Dolan DNA Learning Center</u>	<u>2021, 2022, 2023, 2024</u>
	<i>Dolan DNA Learning Center</i>	<i>1990–92</i>
	DNA Learning Center West	2005
	<i>DNA Learning Center NYC</i>	2019, 2021, 2025
	DNA Learning Center NYC	2022, 2023, 2024, 2025
	Environmental Science Center, Bergen Beach, Brooklyn	2015–16
	<i>Fostertown School, Newburgh</i>	<i>1991</i>
	<i>Harlem DNA Lab, East Harlem</i>	2008–09, 2011–13, 2016–19
	Harlem DNA Lab, East Harlem	2015–16
	Huntington High School	1986
	Irvington High School	1986
	K-12 Summer Institute, Kerrville	2019
	John Jay College of Criminal Justice	2009
	<i>Junior High School 263, Brooklyn</i>	<i>1991</i>
	<i>Lindenhurst Junior High School</i>	<i>1991</i>
	Math for America	2017–19, 2022
	Michel J. Petrides School, Staten Island	2018
	Mount Sinai School of Medicine, New York	1997
	Nassau Community College, Garden City	2013
	New York Botanical Garden, Bronx	2013
	New York City Department of Education	2007, 2012
	New York City Technical College (City Tech)	2018
	New York Institute of Technology, New York	2006
	New York Institute of Technology, New York	2006
	<i>Orchard Park Junior High School</i>	<i>1991</i>
	<i>Plainview-Old Bethpage Middle School</i>	<i>1991</i>
	Regeneron DNA Learning Center	2024, 2025
	Regeneron Pharmaceuticals, Inc	2019
	School of Visual Arts, New York	2017
	State University of New York, Purchase	1989
	State University of New York, Stony Brook	1987–90, 2015–18
	State University of New York, Stony Brook	2014, 2016
	Stuyvesant High School, New York	1998–99
	The Rockefeller University, New York	2003, 2015–16
	The Rockefeller University, New York	2010
	<i>Titusville Middle School, Poughkeepsie</i>	<i>1991, 1993</i>
	Trudeau Institute, Saranac Lake	2001
	Union College, Schenectady	2004

	United States Military Academy, West Point	1996
	Wheatley School, Old Westbury	1985
NORTH CAROLINA	CIIT Center for Health Research, Triangle Park	2003
	Forsyth Technical Community College, Winston-Salem	2022, 2025
	North Carolina Agricultural & Technical State University, Greensboro	2006–07, 2009–11
	North Carolina School of Science, Durham	1987
	North Carolina State University, Raleigh	2012, 2018
NORTH DAKOTA	North Dakota State University, Fargo	2012
OHIO	Case Western Reserve University, Cleveland	1990
	Cleveland Clinic	1987
	Langston University, Langston	2008
	North Westerville High School	1990
	The Ohio State University, Wooster	2016
OKLAHOMA	Oklahoma City Community College	2000
	Oklahoma City Community College	2006–07, 2010
	Oklahoma Medical Research Foundation, Oklahoma City	2001
	Oklahoma School of Science and Math, Oklahoma City	1994
	Tulsa Community College, Tulsa	2009
	Tulsa Community College, Tulsa	2012–14
OREGON	Kaiser Permanente-Center for Health Research, Portland	2003
	Linfield College, McMinnville	2014
PENNSYLVANIA	Duquesne University, Pittsburgh	1988
	Germantown Academy	1988
	Kimmel Cancer Center, Philadelphia	2008
RHODE ISLAND	Botanical Society of America, Providence	2010
SOUTH CAROLINA	Clemson University	2004, 2015
	Medical University of South Carolina, Charleston	1988
	University of South Carolina, Columbia	1988
SOUTH DAKOTA	South Dakota State University, Brookings	2015
TENNESSEE	<u>Discover Life in America, Gatlinburg</u>	<u>2023</u>
	<u>Meharry Medical College, Nashville</u>	<u>2025</u>
	NABT Professional Development Conference, Memphis	2008
TEXAS	Austin Community College – Rio Grande Campus	2000
	Austin Community College – Eastview Campus – Roundrock Campus	2007–09, 2013
	Austin Community College – Roundrock Campus	2012
	Austin Community College - Austin	2018
	Houston Community College Northwest	2009–10
	J.J. Pearce High School, Richardson	1990
	Langham Creek High School, Houston	1991
	University of Lone Star College, Kingwood	2011
	Midland College	2008
	Southwest Foundation for Biomedical Research, San Antonio	2002
	Taft High School, San Antonio	1991
	Texas A&M University, College Station, TX	2013
	Texas A&M University, Prairie View, TX	2013
	Texas A & M, AG Research and Extension Center, Weslaco	2007
	Trinity University, San Antonio	1994
	University of Texas, Austin	1999, 2004, 2010, 2012
	University of Texas, Brownsville	2010
UTAH	Brigham Young University, Provo	2012
	<u>Natural History Museum of Utah, Salt Lake City</u>	<u>2023</u>
	Natural History Museum of Utah, Salt Lake City	2024
	University of Utah, Salt Lake City	1993
	University of Utah, Salt Lake City	1998, 2000

	Utah Valley State College, Orem	2007
VERMONT	University of Vermont, Burlington	1989
	Champlain Valley Union High School	1989
VIRGINIA	Eastern Mennonite University, Harrisonburg	1996
	James Madison University, Harrisonburg	2017, 2024
	Jefferson School of Science, Alexandria	1987
	Mathematics and Science Center, Richmond	1990
	Mills Godwin Specialty Center, Richmond	1998
	Virginia Polytechnic Institute and State University, Blacksburg	2005, 2008–09
WASHINGTON	Fred Hutchinson Cancer Research Center, Seattle	1999, 2001, 2008
	Shoreline Community College	2011, 2012
	University of Washington, Seattle	1993, 1998, 2010
WEST VIRGINIA	Bethany College	1989
WISCONSIN	Blood Center of Southeastern Wisconsin, Milwaukee	2003
	Madison Area Technical College/Madison Area College	1999, 2009, 2011–14
	Marquette University, Milwaukee	1986–87
	University of Wisconsin, Madison	1988–89
	University of Wisconsin, Madison	2004, 2012
WYOMING	University of Wyoming, Laramie	1991
GUAM	John F. Kennedy High School, Tamuning	2024
PUERTO RICO	Arecibo C3 STEM Center, Arecibo	2024, 2025
	Arecibo C3 STEM Center, Arecibo	2025
	Universidad del Turabo, Gurabo, Puerto Rico	2011, 2012, 2014
	University of Puerto Rico, Mayaguez	1992
	University of Puerto Rico, Mayaguez	1992
	University of Puerto Rico, Rio Piedras	1993
	University of Puerto Rico, Rio Piedras	1994
	University of Puerto Rico, San Juan	2019
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AUSTRALIA	Walter and Eliza Hall Institute and University of Melbourne	1996
	EMBL/Australian Bioinformatics Resource, University of Melbourne	2016
	University of Western Australia, Perth	2018
AUSTRIA	Vienna Open Lab, Vienna	2007, 2012
	Technical University of Graz	2019
CANADA	Red River Community College, Winnipeg, Manitoba	1989
	University of Quebec, Montreal	2018
CHINA	Beijing No. 166 High School, Beijing	2013–19
	<i>CSH Asia DNA Learning Center, Suzhou</i>	2024
	CSH Asia DNA Learning Center, Suzhou	2025
	Ho Yu College, Hong Kong	2009
DENMARK	Faroe Genome Project, Torshavn, Faroe Islands	2013
GERMANY	Urania Science Center, Berlin	2008
IRELAND	European Conference on Computational Biology/Intelligent System for Molecular Biology Conference, Dublin	2015
	University College Dublin	2018
ITALY	International Institute of Genetics and Biophysics, Naples	1996
	Porto Conte Research and Training Laboratories, Alghero	1993
MEXICO	ADN Mexico, Morelia	2016
	ASPB Plant Biology, Mérida	2008
	Langebio/Cinvestav, Irapuato	2016
NIGERIA	Godfrye Okoye University, Enugu, Nigeria	2013, 2018, 2025
	Godfrey Okoye University, Enugu, Nigeria	2025
PANAMA	University of Panama, Panama City	1994

PHILIPPINES	Eastern Visayas Campus, Philippine Science High School, Palo, Leyte	2017
RUSSIA	Shemyakin Institute of Bioorganic Chemistry, Moscow	1991
SINGAPORE	National Institute of Education	2001–05
	Singapore Science Center	2013
SOUTH AFRICA	North-West University, Potchefstroom	2016
	South African Bioinformatics Society, Durban	2016
SWEDEN	Kristineberg Marine Research Station, Fiskebackgkil	1995
	Uppsala University	2004
THE NETHERLANDS	International Chromosome Conference, Amsterdam	2007
	Wageningen University and Research Center, Wageningen	2014
UNITED KINGDOM	Earlham Institute, Norwich	2018
	The Genome Analysis Center, Norwich	2015
	University of York, York	2017
	Wellcome Trust Conference Center, Hinxton	2012–13
	University of Warwick, Coventry	2013

2025 Grants

Grantor	Program	Grant Duration	Funding*
<i>FEDERAL GRANTS</i>			
National Institutes of Health	<i>Citizen DNA Barcode Network</i>	6/20–3/26	\$256,367
National Institutes of Health	<i>Genomics Step-Up High School</i>	5/22–3/27	\$60,023
National Institutes of Health	<i>Pathogen Data Network</i>	9/24–6/28	\$219,538
National Science Foundation	<i>Enhancing DNA Subway 2.0 as a Shared Resource for Bioscience Workforce Development</i>	7/23–6/26	\$246,238
National Science Foundation	<i>Collaborative Research: Arecibo C3- Center for Culturally Relevant and Inclusive Science Education, Computational Skills, and Community Engagement</i>	10/23–9/28	\$766,450
National Science Foundation (Austin Community College)	InnovATEBIO National Biotechnology Education Center	10/19–9/26	\$179,500
National Science Foundation (Pierce College)	<i>Advanced Student-Focused Projects: Internship, Research and Education (ASPIRE)</i>	9/21–8/25	\$5,867
National Science Foundation (University of Minnesota)	<i>FMRG: BIO: Enabling Cell-Free Engineering and Biomanufacturing of Bacteriophages as a Universal Platform for Tailorable Bioactive Materials</i>	10/22–9/26	\$103,615
National Science Foundation	<i>Nanopore Sequencing Mini-Cure and Micro-Credentials for the Next Generation of Biotechnicians</i>	8/25–7/26	\$21,330
<i>NON-FEDERAL GRANTS</i>			
Beijing No. 166 High School	Chinese Collaboration Agreement	7/19–6/26	\$13,543
Breakthrough Prize Foundation	Laboratory Design and Teacher Training for Breakthrough Junior Challenge Prize Winners	12/15–12/26	\$69,534
Health Park	Health Park Agreement	12/15–12/27	\$25,054
Pinkerton Foundation	<i>Urban Barcode Research Program</i>	1/21–5/26	\$136,330
Paul Taubman	Paul Taubman support for DNALC NYC Exhibit Development	6/21–6/26	\$121,256
DNALC Unrestricted Institutional Grant	DNALC Asia Royalties	9/15–12/25	\$45,827
LifeScience NYC	LifeScience NYC Internship Program	6/25–1/26	\$30,248

*Includes direct and indirect costs.

School Membership Programs

The following schools and school districts participated in these membership programs of the **Dolan DNALC**:

<i>Sustaining Memberships</i>			
Bellmore-Merrick Central High School District	\$3,200	Oceanside Union Free School District	\$3,200
Elwood UFSD	\$3,200	Oyster Bay-East Norwich Central School District	\$3,200
Great Neck	\$3,200	Plainview-Old Bethpage Central School District	\$3,200
Herricks Union Free School District	\$3,200	Portledge School	\$3,200
Huntington	\$3,200	Port Washington Union Free School District	\$3,200
Island Trees	\$3,200	Roslyn Union Free School District	\$3,200
Jericho High School	\$3,200	Syosset Central School District	\$3,200
Levittown Union Free School District	\$3,200	Yeshiva University High School for Girls	\$3,200
Long Island Lutheran Middle and High School	\$3,200		

<i>Associate Memberships</i>			
Glen Cove Central School District	\$18,000	St. Anthony's High School	\$17,000
Friends Academy	\$18,000	St. Dominic High School	\$18,000

<i>Partner Memberships</i>			
Cold Spring Harbor Central School District	\$35,000	Massapequa Union Free School District	\$35,000
Long Beach Central School District	\$35,000		

The following schools participated in these membership programs of the **DNALC NYC at City Tech**:

<i>Sustaining Membership</i>			
Marymount School of NY	\$3,200	Stuyvesant High School	\$3,200

<i>Partner Memberships</i>			
The Chapin School	\$35,000	St. David's School	\$35,000
Lycée Français de NY	\$35,000	Trevor Day School	\$35,000

The following school participated in this membership program of the **Regeneron DNALC**:

<i>Sustaining Membership</i>			
Archbishop Stepinac High School	\$3,200	Rye Country Day School	\$3,200
Paterson Public Schools	\$3,200	School of the Holy Child	\$3,200



Cold Spring Harbor Laboratory
DNA LEARNING CENTER

One Bungtown Road
Cold Spring Harbor, NY 11724

Located at 334 Main Street (Route 25A) in Cold
Spring Harbor Village

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DNA Learning Center NYC at City Tech

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Brooklyn, New York 11201

DNA Learning Center
at Passaic County Biotechnology Innovation Center

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Regeneron DNA Learning Center

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Sleepy Hollow Campus
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Harlem DNA Lab

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