

Resource	Website
American Museum of Natural History	<a href="https://www.amnh.org/">https://www.amnh.org/</a>
Rockefeller University	<a href="https://www.rockefeller.edu/">https://www.rockefeller.edu/</a>
Weill Cornell Medical College	<a href="http://weill.cornell.edu/">http://weill.cornell.edu/</a>
Columbia's Lamont Doherty Earth Observatory	<a href="http://www.ldeo.columbia.edu/">http://www.ldeo.columbia.edu/</a>
Lehman College	<a href="http://www.lehman.cuny.edu/">http://www.lehman.cuny.edu/</a>
City College	<a href="https://www.ccny.cuny.edu/">https://www.ccny.cuny.edu/</a>
Harlem DNA Lab / Urban Bar Code Project	<a href="https://www.dnalc.org/harlemdnalab/">https://www.dnalc.org/harlemdnalab/</a> and <a href="https://www.dnabarcoding101.org/programs/ubp/">https://www.dnabarcoding101.org/programs/ubp/</a>
NPower	<a href="http://www.npower.org/">http://www.npower.org/</a>
Mount Sinai	<a href="http://www.mountsinai.org/">http://www.mountsinai.org/</a>
Einstein Medical College	<a href="http://www.einstein.yu.edu/">http://www.einstein.yu.edu/</a>

## Science Programs For You!

### Local NYC Research and Medical Programs

#### 1. Woodland Ecology Research Mentorship

Wave Hill's Woodland Ecology Research Mentorship is a 14-month program offering motivated New York City high school students a unique opportunity to gain in-depth knowledge of NYC ecological restoration efforts and conduct important field research with working scientists—*all while getting paid!*

**For more information:**

<https://www.wavehill.org/education/woodland-ecology-research-mentorship/>

#### 2. STEM Research Academy (CUNY)

Building on the goals and mission of College Now, the STEM Research Academy was developed as a two-semester program, consisting of a spring pre-college science course and the opportunity to conduct hands-on research with CUNY faculty members in a summer research experience. The Academy is designed to provide students with an opportunity to build essential literacy and numeracy skills by engaging in 'authentic inquiry' activities. High schools that lack a strong science research program and serve a population generally underrepresented in the STEM fields are targeted for student recruitment. This program serves primarily juniors who qualify for participation based on several criteria including Regents exam

scores, GPA, submission of a general interest essay, and review of their high school transcript. The STEM Academy's spring pre-college course is a thematic course designed to strengthen basic skills such as formulating researchable questions, designing testable experiments, performing literature searches in library databases, and reading scientific literature including peer-reviewed journal articles. Upon successful completion of the spring course, a select group of students have the opportunity to apply to participate in a 6-week summer research experience under the guidance of CUNY research faculty with support of CUNY College Now.

For more information:

<http://nycsef.cuny.edu/summer-program/>

### **3. Environmentor (Rockaway Waterfront Alliance)**

The *Environmentor* Program, is a science research mentoring program that provides 12 high school sophomores and juniors paid internships to participate in an intensive, year-long environmental science after school and summer program, to conduct authentic research under the mentorship of field scientists from CUNY and the Jamaica Bay Science & Resilience Institute. As part of this initiative, Rockaway Waterfront Alliance is part of the Science Research Mentoring Consortium (SRMC) led by the American Museum of Natural History. SRMC leverages its connections to increase student recruitment, share experiences and expertise, and identify specific opportunities, challenges, and strategies for effectively supporting students in developing science research skills and competencies and is intended to propel students on the pathway to higher education and careers in science.

Students receive a stipend for their participation and research studies in the program and must commit to a full year of participation in the program.

For more info:

[http://www.rwalliance.org/rwa/programs/environmentor\\_program%20/](http://www.rwalliance.org/rwa/programs/environmentor_program%20/)

### **4. ARISE (NYU)**

After a successful launch in summer 2013, the NYU School of Engineering continues to conduct the Applied Research Innovations in Science and Engineering (ARISE) program. This selective program is for academically strong, current 10th and 11th grade New York City students with a demonstrated interest in science, technology, engineering and math (STEM). This seven week program includes: college level workshops and seminars, a high level research experience in one of several NYU-Poly faculty labs, and mentoring in that placement by a graduate or postdoctoral student. In the seminars and workshops, students will be introduced to engineering concepts and principles, the scientific method and ethics, research practices and lab safety.

For more info:

<http://engineering.nyu.edu/k12stem/arise/>

### **5. Urban Barcode Research Project (Cold Spring Harbor)**

We are pleased to offer the *Urban Barcode Research Program (UBRP)*, science education initiative to engage high school students to study biodiversity in NYC using DNA technology. Students complete introductory workshops and then conduct independent, student-driven research projects using DNA barcoding under expert mentorship. The *UBRP* enables students to gain knowledge, confidence, and interest in science while studying the interaction between biodiversity and human activity.

For more info:

<http://www.urbanbarcodeproject.org/ubresearch.html>

## **6. The Secondary School Field Research Program (Columbia University)**

The Secondary School Field Research Program, run by the Earth Institute of Columbia University and the Lamont-Doherty Earth Observatory (LDEO), is a field- and laboratory-science internship program that engages high school students in real research projects. The primary research site is the Piermont Marsh, which is part of the Hudson River National Estuarine Research Reserve, where students conduct a wide range of environmental and ecological studies, including sediment accumulation, groundwater chemistry, nutrient cycling, bacterial levels, fish species, fish feeding patterns, invasive and native plant distributions, and more, while working in teams under the mentorship of Columbia researchers and technicians. There are also additional lab placement opportunities during the summer in LDEO and Earth Institute laboratories. Students take an after school preparatory course in the spring focused on field ecology, then spend 6 weeks carrying out their research. This is followed by a fall after school class in data handling. The program is open to students in grades 10 through 12. An interview is part of the application process to establish students' level of enthusiasm for working outdoors, on the water or in a Marsh, and for their interest in science.

For more info, email: [Bob Newton](mailto:Bob.Newton@ldeo.columbia.edu), [bnewton@ldeo.columbia.edu](mailto:bnewton@ldeo.columbia.edu) or [Susan Vincent](mailto:Susan.Vincent@gmail.com), [vincent.Susan@gmail.com](mailto:vincent.Susan@gmail.com)

## **7. Science Research Mentoring Program (American Museum of Natural History)**

The Science Research Mentoring Program (SRMP) offers high school students the opportunity to join ongoing research projects lead by AMNH scientists. Students interested in getting accepted for this science research experience must first take three After School Program Science Research courses offered at the museum. These courses prepare students to gain the knowledge and skills necessary for doing science research.

For more info:

<http://www.amnh.org/learn-teach/grades-9-12/science-research-mentoring-program>

## **8. Lloyd Sherman Scholars (Mt Sinai School of Medicine)**

The Lloyd Sherman Scholars program is a gender-based biomedical science enrichment program that will focus on developing science-based skills, application of skills, and fostering the development of a scientist identity with a cohort of Black and Latino male High School students. This program will be administered by the Center for Excellence in Youth Education (CEYE), which is housed at the Center for Multicultural and Community Affairs (CMCA) and will take place at the Icahn School of Medicine at Mount Sinai (ISMMS), working with The Eagle Academy Foundation as a school partner. The Program involves three components, beginning the summer before junior year of high school, concluding at the end of the summer prior to senior year. Specifically, the Program starts with 1) Rising Junior - a six-week skill- building preparatory course in biotechnology, followed by 2) Junior Year - an academic year-round application and enrichment phase, and ends with 3) Rising Senior - a six- week summer lab placement. The Program curriculum is gender-based, wherein all of the topics and examples used to develop and apply research, laboratory skills and knowledge will utilize a learning style that caters to the education of young males.

For more info contact: [Erin Page](mailto:erin.page@mssm.edu), [erin.page@mssm.edu](mailto:erin.page@mssm.edu), [www.facebook.com/ceye.cmca](http://www.facebook.com/ceye.cmca)

## **9. LAB initiative (Rockefeller University)**

The Learning At the Bench (LAB) Initiative is a new is a new component of the Science

Outreach Program that will utilize the Science Outreach and Education Laboratory for student and teacher training. The LAB Initiative will be a hub for active learning and deductive reasoning for high school students, and an expansion of hands-on learning skill sets for teachers.

The LAB Initiative will support 12 NYC high school students in an afterschool program to study the microbiome of built and natural environments. Students participating in this after school program will work within an authentic research environment and interact directly with scientists. During this time, students will participate in a series of interactive lectures and hands-on demonstrations that will discuss the underpinnings of microbiology, genetics, and bioinformatics, and provide a broad understanding of the scientific method and experimental design.

For more info:

[http://www.rockefeller.edu/outreach/LAB\\_After-School\\_Program](http://www.rockefeller.edu/outreach/LAB_After-School_Program)

## **10. HIRES (CUNY)**

HIRES is a program within the CREST CUNY Institute which offers high school students an opportunity to work closely with scientists in the field and in labs, collect and analyze data, present at conferences, and more! It's aim is to provide NYC high school student research experience especially in STEM

We leverage our connections and resources to increase student recruitment, share experiences and expertise, and identify specific opportunities, challenges, and strategies for effectively supporting students in developing science research skills and competencies. We also jointly develop and implement a set of experiences to support students in developing a shared community and college and career readiness.

For more info:

<http://crest.cuny.edu/hires/>

## **11. Weill Cornell Youth Scholars (at WCMC)**

Weill Cornell Youth Scholars Program is a three-week summer enrichment program targeting high school juniors and seniors who have an interest in science and medicine and use the vast educational resources available at WCMC and NYPH. The WCYSP embodies the idea that early intervention is critical to shaping a student's future, and therefore seeks to endow students with the skills and experience necessary to fulfill their vast potential. It is important to expose students early to the rigors of a medical training since it can help develop the necessary attitudes to an education, interpersonal skills, and self-confidence that a student would need to be successful academically. It is also important to inspire students to set academic and professional goals and encourage them to work cooperatively and think critically. The curriculum consists of basic science lectures (primarily given by medical students, residents, and physicians), faculty spotlight sessions, Problem Based Learning sessions, mentor/mentee sessions, and visit to the anatomy lab. The topics discussed during the lectures included medical ethics, organ systems biology, nutrition, infectious disease, embryology, disease pathogenesis, immunology, and chronic conditions. The WCYSP starts on the first Monday of July and runs four days a week, from 9:00 am to 2:00 pm.

For more information:

[http://weill.cornell.edu/education/student/so\\_comm\\_serv.html](http://weill.cornell.edu/education/student/so_comm_serv.html)

<https://www.facebook.com/wcysp/>

email: [wcmc.scholars@gmail.com](mailto:wcmc.scholars@gmail.com)

## **12. Health Professions Recruitment and Exposure Program (at WCMC)**

The Health Professions Recruitment and Exposure Program (HPREP) was developed in 1989 by the Weill Cornell chapter of the SNMA. It is now a national program addressing the issues of declining enrollment rates of underrepresented minorities, specifically in medicine and generally in the health professions. The program exposes high school sophomores and juniors to science-related activities. HPREP also teaches students about specific career fields and the steps needed to become a physician or other health care provider. During the ten-week program, 10th and 11th grade high school students are exposed to physicians and health care professional from minority groups. These professionals give lectures on a broad range of topics and, in addition, the students participate in small group workshops led by medical students. The participants are also required to submit a short research paper on a pre-approved subject at the conclusion of the program.

For more information:  
please contact our chapter's coordinators at [wcmc.hprep@gmail.com](mailto:wcmc.hprep@gmail.com):

## **13. Rockefeller Summer Science Research Program (SSRP)**

The Rockefeller University Summer Science Research Program (SSRP) provides high school students with a unique and personalized opportunity to conduct hands-on research under the mentorship of leading scientists at one of the world's premier biomedical research facilities. During this rigorous 7-week program, SSRP students become immersed in scientific culture while gaining an appreciation for the process of biomedical discovery.

For more information: [http://www.rockefeller.edu/outreach/summer\\_science](http://www.rockefeller.edu/outreach/summer_science)

## **14. Rockefeller Summer Neuroscience Program**

The **Summer Neuroscience Program (SNP)** at The Rockefeller University is a two-week course aimed at introducing talented and enthusiastic high school students to the brain. Led by graduate students, the program takes a look at the most current research in neuroscience in an effort to understand how our brain works and how it relates to our daily life. In addition to the series of highly interactive lectures, students present fun and fascinating journal articles to their classmates. Students also visit research laboratories, dissect brains, and design and conduct neuroscience experiments.

For more information: <http://rockefeller.edu/outreach/snp/>

## **15. MSKCC The Human Oncology and Pathogenesis Program**

The Human Oncology and Pathogenesis Program (HOPP) Summer Student Program is designed for high school students who are interested in pursuing careers in the biomedical sciences.

The program is focused on two distinct areas:

*Independent research and a stimulating learning environment*

Students will have a chance to take part in independent research projects under the direct mentorship and guidance of a HOPP principal investigator (PI). The PI matches each student with a mentor — typically a senior member from the lab, such as a postdoctoral fellow, graduate student, or research technician. At the end of the summer, the students will be expected to present their research project at a poster session.

*Extracurricular events, tours, training, and luncheons*

The students will also have the opportunity to explore outside of the laboratory by participating in a variety of events. These extracurricular activities contribute an additional facet

to the internship and allow them to become fully immersed in the world of translational medicine and research. The events are hosted by programs throughout Memorial Sloan Kettering, including the Office of Diversity, various Memorial Hospital clinical departments, and Human Resources.

For more information:

<http://www.mskcc.org/research/human-oncology-pathogenesis/hopp-summer-student>

#### **16. Columbia University Science Honors Programs:**

The Columbia University Science Honors Program (SHP) is a highly selective program for high school students who have a strong interest in the sciences and mathematics. The SHP holds classes at Columbia from 10:00 A.M. to 12:30 P.M. on Saturdays throughout the academic year. Courses are primarily in the physical, chemical, biological, behavioral, and computing sciences; and instructors are scientists and mathematicians who are actively engaged in research at the University.

For more information:

<http://www.columbia.edu/cu/shp/>

## Hospital Volunteer Services (must be 16 years or older)

**1. New York Presbyterian - Cornell Hospital:**

<http://nyp.org/volunteer/weillcornell.html>

**2. NYP - Morgan Stanley Campus:**

<http://nyp.org/volunteer/morganstanley.html>

**3. NYP - Lower Manhattan:**

<http://nyp.org/volunteer/lowermanhattancampus.html>

**4. NYP - Columbia Campus:**

<http://nyp.org/volunteer/columbia.html>

**5. NYP - Allen Hospital Campus:**

<http://nyp.org/volunteer/allen.html>

**6. Memorial Sloan-Kettering Hospital:**

<https://www.mskcc.org/about/get-involved/volunteering>

**7. Mt Sinai Patient Services:**

<http://www.mountsinai.org/careers/volunteer-services/patient-related-placements>

**8. Mt Sinai Student Research Volunteer: (minimum age 15!)**

<http://www.mountsinai.org/careers/volunteer-services/student-research>

**9. NYU Langone Hospital:**

<http://nyulangone.org/volunteer>

**10. NYC Health and Hospital Corporations:** (try contacting administrators by email)

<http://www.nyc.gov/html/hhc/html/contact/Volunteering.shtml>

## Other STEM (Science, Technology, Engineering, Math) Programs, outside of NYC

1. Partners in Science - Liberty Science Center,

<http://lsc.org/for-educators/programs-at-the-center/partners-in-science/>

2. SEAP, [http://seap.asee.org/program\\_details](http://seap.asee.org/program_details)

3. Blue Stamp, <http://bluestampengineering.com/services-view/become-a-student/>

4. Institute on Neuroscience, <http://www.cbn-atl.org/education/ion.shtml>

5. Generation Google,

<https://www.google.com/edu/scholarships/the-generation-google-scholarship/>

6. Jackson Lab, <http://education.jax.org/summerstudent/index.html>

7. MITES, <http://oeop.mit.edu/programs/mites/program-details>

8. NIH SIP, <https://www.training.nih.gov/programs/sip>

9. NSF Wyoming,

<http://www.uwyo.edu/epscor/fellowships-and-student-programs/srap/index.html>

10. UCSF Arthritis Foundation Fellowship, <http://www.kintera.org/htmlcontent.asp?cid=619275>

11. NYCSEF, <http://nycsef.cuny.edu>

12. Simons SIP SUNY, <http://www.stonybrook.edu/simons/>