**Hunter’s Commitment to Faculty & Student Research in the Sciences**

The science programs at [Hunter College](http://www.hunter.cuny.edu/main/) have long been the pride of the college and increasing administrative and financial resources have been committed to recruit, train, mentor, and graduate the next generation of scientists and future leaders. Hunter is the first and only school in the world to have produced two female Nobel Laureates in Physiology and Medicine – Rosalyn Yalow and Gertrude Elion – and is a national leader in producing female undergraduates who were later elected to the National Academy of Sciences.[[1]](#footnote-1) Hunter’s external funding via grants and contracts has risen from $37.1 million in 2008 to $50.2 million in 2013, most of which supports scientific projects and the student training positions. According to the National Science Foundation’s Higher Education Research and Development Survey Report for the Fiscal Year 2011, Hunter College ranks in the top 25% out of 912 institutions for research and development expenditures.[[2]](#footnote-2) Within the [City University of New York (CUNY)](http://www.cuny.edu/index.html), Hunter College is second only to City College and outranks The Graduate Center of CUNY for research and development expenditures. Hunter also ranked in the top 25% out of 823 institutions ranked by research and development in the life sciences, top 20% out of 703 institutions in the physical sciences (including chemistry), and in the top 10% out of 502 institutions within psychology.[[3]](#footnote-3)

Hunter’s commitment to and excellence in the sciences has contributed to its status as one of the top-performing underrepresented student-serving institutions in the nation in attracting federal institutional grants to support its science enterprise. Hunter has had 34 years of ongoing funding, totaling more than $53 million, from the National Science Foundation, National Institutes of Health and Howard Hughes Medical Institute Programs, among others, to support its science students.[[4]](#footnote-4) Hunter is currently the home of 15 federally funded and privately funded institutional programs to train its STEM students, including the Blueprint Program for Enhancing Neuroscience Diversity through Undergraduate Education (NIH), the Minority Biomedical Research Support-Research Initiative for Scientific Enhancement (NIH), the Ronald E. McNair Post-Baccalaureate Achievement Program (U.S. Dept. of Education) and the John P. McNulty Scholars Program for Excellence in Science and Math (John P. McNulty Scholarship Fund). In addition to these projects, Hunter promotes undergraduate research through major college initiatives, including: the [Undergraduate](http://www.hunter.cuny.edu/scimon) [Research](http://www.hunter.cuny.edu/ugresearch) Opportunities and Creative Collaborations Center (UROCC Center), which provides institutional support to students and mentors engaging in research, scholarship, and creative collaborations at the college; the institutionally-coordinated [Undergraduate Research Initiative](http://www.hunter.cuny.edu/ugresearch/initiative), which supports student-faculty research in and beyond the sciences; an annual [Undergraduate Research Conference](http://www.hunter.cuny.edu/ugresearchconference) that recognizes and celebrates student-faculty research; and Presidential funding initiatives for summer and semester-long research experiences within and outside Hunter.[[5]](#footnote-5) Hunter’s faculty strive to expose and socialize students to the broader research community by taking them to scientific meetings and co-authoring publications in peer-reviewed journals, activities that foster the development of future scientific leaders. The college is committed to promoting undergraduate research activity, which aligns with the two major planks of Hunter’s recently restructured strategic plan – to excel as a research-oriented institution and to increase efforts to support student success.

Hunter’s commitment to scientific research productivity and excellence is further evidenced by its innovative partnerships to expand its infrastructure. Hunter is a primary partner both financially and physically with space in Weill Cornell Medical Center’s Clinical and Translational Science Center, funded via two consecutive NIH grants totaling nearly $100 million. This center provides a multi-institutional collection of resources, including training and seed funding, critical to building an effective research infrastructure. Additionally, Hunter recently purchased its own 21,000 square-foot research floor within Cornell’s new Belfer Science Building. Hunter has committed to build a 300,000 square feet new state-of-the-art facility in collaboration with Memorial Sloan Kettering Cancer Center, which will include dedicated space for Hunter’s science programs in biology, chemistry, physics and neuropsychology. These partnerships have fostered numerous cross-institutional collaborations between faculty at Hunter and these two world-class institutions that have resulted in new degree and certificate programs (e.g., in cytotechnology), training grants (e.g., an NSF IGERT in radiochemistry) and scientific advances (e.g., in laser-based non-invasive imaging of the human eye).[[6]](#footnote-6)

Hunter’s committed faculty and quality facilities support an ever-increasing number of science students. In recent years, science programs have shown especially robust enrollment trends in Anthropology, Biological Sciences, Chemistry, Environmental Studies (including Earth Science), Medical Laboratory Sciences, Psychology (including Behavioral Neuroscience), and Physics (including Biomedical Imaging). There has been a 62% increase in the number of students majoring in these six disciplines (from 2206 in 2009 to 3586 in 2013), with particularly large increases in the number of Biology (286 to 458), Chemistry (244 to 449) and Psychology (1360 to 2287) majors.[[7]](#footnote-7) Many of Hunter’s students pursuing these science majors are interested in health professions, which are in increasing demand on a national level.[[8]](#footnote-8)

Through its [Undergraduate](http://www.hunter.cuny.edu/scimon) [Research](http://www.hunter.cuny.edu/ugresearch) Opportunities and Creative Collaborations Center (UROCC Center) and [Undergraduate Research Initiatives](http://www.hunter.cuny.edu/ugresearch/urhub), Hunter introduces its students to the plethora of STEM research opportunities available to them from the moment they enroll at the college. Targeting incoming freshman and sophomores can inculcate enthusiasm early on in students’ academic careers, which has been shown to strengthen positive outcomes, including confidence and awareness of interests in STEM careers and continued education.[[9]](#footnote-9) Early involvement in research also allows students to participate in research endeavors for longer amounts of time, which can lead to greater perceived benefits, including the ability to carry out research, analyze data, think critically, speak effectively, and possess clear career goals.[[10]](#footnote-10)

Hunter’s undergraduate research programs and mentorship activities are designed to prepare students for advanced degree programs. Hunter graduates who have participated in undergraduate research are accepted to top-ranking graduate programs, including: Brown University, Carnegie Mellon University, Columbia University, Cornell University, Harvard University, Johns Hopkins University, Massachusetts Institute of Technology, Princeton University, University of Michigan, Stanford University, and Yale University within the United States, and Oxford and Cambridge Universities in the United Kingdom.[[11]](#footnote-11) Doctoral education in the sciences is also emblematic of Hunter. The College formally became a doctorate-granting institution in 2008, but Hunter faculty have been training doctoral students in the sciences since The Graduate Center of CUNY was established in 1961. Hunter now co-awards the doctorates in Biology, Biochemistry, Chemistry and Physics together with The Graduate Center.

Altogether, Hunter’s institutional commitment to undergraduate research supports exceptional students to develop the skills necessary to become accomplished researchers and prominent leaders in science. Engaging in research alongside Hunter faculty enables students to build their credentials, via publications and presentations, and positions them to enter the next phase of their academic careers and excel in their scientific and professional pursuits.

1. For updated information contact the Acting Associate Provost For Research (Mark Hauber, mark.hauber@hunter.cuny.edu) [↑](#footnote-ref-1)
2. National Science Foundation (2011). Higher Education Research and Development: Fiscal Year 2011. Retrieved at <http://www.nsf.gov/statistics/nsf13325/pdf/nsf13325.pdf>. [↑](#footnote-ref-2)
3. For updated information contact Office of Research Administration (<http://research.hunter.cuny.edu>, rbuckley@hunter.cuny.edu) [↑](#footnote-ref-3)
4. For updated information contact Office of Research Administration (<http://research.hunter.cuny.edu>, rbuckley@hunter.cuny.edu) [↑](#footnote-ref-4)
5. For updated information contact the Office of the Provost – Undergraduate Research (<http://www.hunter.cuny.edu/ugresearch>, ugresearch@hunter.cuny.edu) [↑](#footnote-ref-5)
6. For updated information contact the Acting Associate Provost For Research (Mark Hauber, mark.hauber@hunter.cuny.edu) [↑](#footnote-ref-6)
7. For updated information contact the Office of Institutional Research (<http://www.hunter.cuny.edu/institutional-research>, joan.lambe@hunter.cuny.edu) [↑](#footnote-ref-7)
8. Gearon, C.J. (2011). Healthcare Jobs on the Rise. *U.S. News & World Report.* Retrieved November 12, 2014, from http://www.usnews.com/education/best-graduate-schools/articles/2011/05/19/healthcare-jobs-on-the-rise. [↑](#footnote-ref-8)
9. Russell, S., Hancock, M., & McCullough, J. (2007). The Pipeline: Benefits of undergraduate research experiences. *Science, 316*(5824): 548-549. [↑](#footnote-ref-9)
10. Bauer, K. W., & Bennett, J. S. (2003). Alumni Perceptions Used to Assess Undergraduate Research Experience. *The Journal of Higher Education, 74*(2): 210-230. [↑](#footnote-ref-10)
11. For updated information contact the Office of the Provost – Undergraduate Research (<http://www.hunter.cuny.edu/ugresearch>, ugresearch@hunter.cuny.edu) [↑](#footnote-ref-11)