

CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

of the

COMMITTEE ON HIGHER EDUCATION and CIVIL RIGHTS

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June 16, 2009
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HELD AT: Committee Room
City Hall

B E F O R E:

CHARLES BARRON
Chairperson

LARRY B. SEABROOK
Chairperson

COUNCIL MEMBERS:

Charles Barron
Larry B. Seabrook
Tony Avella
Gale A. Brewer
Darlene Mealy
Eric Ulrich
Mathieu Eugene

A P P E A R A N C E S

Gillian Small
Vice Chancellor for Research
City University of New York

Dr. Mande Holford
Assistant Professor
York College

Catherine Garcia
Graduating Senior
Hunter College

Jill Bargonetti
Professor of Biological Sciences
Hunter College

Jamie Farrington
PhD Student
Hunter College

Virginia Valian
Professor of Psychology and Linguistics
Hunter College

Neepa Maitra
Physics Faculty
Hunter College

Regina Miranda
Assistant Professor of Psychology
Hunter College

CHAIRPERSON BARRON: Good

afternoon. My name is Councilman Charles Barron. I'm Chair of the Higher Education Committee here in the City Council. I'm with Council Member Larry Seabrook, who chairs the Civil Rights Committee. We are having a joint hearing together. We will hear from Chair Seabrook in a minute. This is really to celebrate the blacks in science and the scientists and engineers in CUNY. A lot of people don't realize how many scientists we have and outstanding scientists we have in the CUNY system. Also, to talk about how we can diversify more, especially in the 21st century when looking at high technology, green economy and where this world is going. Every student in CUNY should be preparing for a new world, a world of high technology, a world of computers, the internet and all that goes on and how it impacts our lives in so many ways. We wanted to have this hearing to highlight that and also to invite you Friday the 19th for our Juneteenth program right here in City Hall. We'll be celebrating the liberation of African people from enslavement. Some of you celebrate the Fourth of July. I don't

1 know why. We were still enslaved at that time.
2 Anybody here celebrate the Fourth of July? Look
3 at them. Security, could you remove these two
4 that celebrate July Fourth? We were still
5 enslaved when they were celebrating some
6 independence. They got a lot of nerve, right?
7 Isn't that right? There you go. I just wanted to
8 see somebody with some heart. But on the real
9 side, we really have to look at this question of
10 diversity, this question of excellence in science.
11 We were able to find some people that are going to
12 come forth and talk a little bit about that and
13 then talk about our diversity. I'm going to read
14 for the record my official opening statement and
15 then I'll turn it over to Chair Seabrook and then
16 we'll have our first witnesses come forward. I
17 want to knowledge Council Member Tony Avella from
18 Queens. He is one of the strongest supporters of
19 CUNY. And in my hearings we allow hand claps, so
20 you can give him a hand clap. I always like for
21 my most able-bodied lawyers and analysts to give
22 you their names and their titles so that they can
23 be recognized as well.

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25 TONYA CYRUS: Tonya Cyrus, policy

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2 analyst to the Higher Education Committee.

3 TRACY UDELL: Tracy Udell, counsel
4 to the Higher Education Committee.

5 CHAIRPERSON BARRON: And also we
6 have Miss Monique Indigo-Washington. She's a
7 staff member from our office and she is
8 responsible for staying connected and on top of
9 the CUNY issues. Today we will examine CUNY's
10 Decade of Science, along with other initiatives,
11 embodies the university's commitment to advancing
12 science at the highest levels, training students
13 to teach science disciplines and encouraging young
14 people, particularly women, and students of color
15 to study in these areas. Blacks and Latinos are
16 underrepresented in science and math at every
17 level from elementary to graduate school. At a
18 time when science, technology, engineering and
19 math fields are increasingly important to our
20 health and ability to compete, we are not
21 producing the diverse pool of scientists and
22 engineers we need to fuel our future and our
23 economy. Blacks account for about 15% of the
24 population between the ages of 20 to 24, however,
25 only about 8% of science and engineering degrees

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2 are earned by this group. Both students of color,
3 and the U.S., as a whole, stand to lose from this
4 lack of diversity. Students in our communities
5 are deprived of career choices and access to
6 higher salaried occupations. Adequate preparation
7 in science and math enables students to develop
8 intellectually and participate fully in
9 technological society as informed citizens. A
10 diversity of perspectives enriches learning and
11 makes science more responsive to a global pool of
12 clients. Unequal participation of students of
13 color in science and math is fueled by several
14 factors including understaffed in schools,
15 prejudgment about ability, number and quality of
16 science and mathematic courses offered and access
17 to qualified teachers and resources. Essentially,
18 poor black and Latino students receive sub par
19 educations that do not adequately prepare them for
20 higher levels of education. Such education
21 disparities tend to perpetuate rather than
22 compensate for existing inequalities. Our
23 colleges and universities have an obligation to
24 teach science, technology, engineering and
25 mathematics to a racially and ethnically diverse

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2 group for the good of our entire society. We look
3 forward to hearing about CUNY's innovative Decade
4 of Science. So on this day, while we're dealing
5 with a diversity issue, we also want to use this
6 time to brag that we are very proud of some of the
7 students and scientists and engineers that are
8 coming through the CUNY system. With that, I'll
9 turn it over to Council Member Larry Seabrook, the
10 chair of the Civil Rights Committee.

11 CHAIRPERSON SEABROOK: Thank you
12 very much, Mr. Chairman. He had asked who
13 celebrated the Fourth of July. He never asked me
14 how I celebrated it. So remind him that I read
15 Fredrick Douglas' speech every year. I think that
16 all of us should have the opportunity to do that
17 in celebration of the Fourth of July. So that's
18 how I celebrate the Fourth of July. Good
19 afternoon, my name is Council Larry B. Seabrook
20 and I'm the chair of the Committee on Civil
21 Rights. I'd like to begin by thanking my esteemed
22 colleague, Council Member Charles Barron for co-
23 chairing this very important hearing with me. I'd
24 also like to thank the City University of New York
25 and all the other groups that are joining us

1
2 today. There is no debating that New York is one
3 of the most racially diverse cities in the world,
4 with each New Yorker contributing to in intricate
5 mosaic of cultures. In many ways, the diversity
6 of the CUNY student body reflects the city's
7 diversity. In fact, Baruch College was recently
8 named one of the most diverse schools in the
9 nation by Princeton Review. Despite the diversity
10 of the student population, however, the
11 instructional faculty is a bit more homogenous.
12 While black students represent over 28% of the
13 undergraduate class, black instructors account for
14 a mere 16.5% of the faculty. Similar patterns
15 hold true for Latino and Asian instructors. Not
16 only does under representation of minorities at
17 the faculty level rob students of color of a more
18 comfortable learning environment, it also takes
19 away from an enriching academic experience for the
20 entire student body, both minority and non-
21 minority students alike. As my co-chair already
22 said, communities of color are also under-
23 represented in the so-called STEM field: science,
24 technology, engineering and math. Certainly there
25 are preexisting circumstances that may exist such

1 as inadequate academic preparation, lack of role
2 models or the lack of mandatory science and math
3 classes which contribute to the under-
4 representation in these fields. It is certainly
5 worth examining the instances of
6 disenfranchisement at various steps along a
7 person's academic career. Today, however, we'll
8 be hearing about CUNY's attempt to remedy this
9 pipeline problem through its various diversity
10 efforts. I look forward to examining the current
11 state of diversity in the student body and faculty
12 of our city universities, particularly in the STEM
13 fields and to learn about the success of CUNY's
14 Decade of Science initiative. Diversity in higher
15 education is not just a moral imperative, it is
16 critical to the industry itself. Education
17 thrives on a range of thoughts. And experiences
18 in an attempt to expand its reach to under-
19 represented and underserved communities must be
20 considered. With that, I'll turn the mike over
21 after I make acknowledgements of my staff, the
22 counsel to the Civic Rights Committee, Attorney
23 Julene Beckford and the policy analyst Damien
24 Butvick. So I'll turn this over to the chairman.
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CHAIRPERSON BARRON: Thank you very much, Council Member Seabrook. Once again, make sure you pick up one of these fliers before you leave. Indigo Washington will make sure that you get one. This is or Juneteenth flier. If you come on this Friday at 6 p.m. right here in the chambers at City Hall, the room right next to you, you're going to see an excellent cultural program. There will be a whole lot of delicious free food. Look, that's the only thing you smiled about. I talked to you about scientists and engineers and nothing. I told you about cultural enlightenment and nothing. Free food and you smile. Anyway, we're going to have free food and we're going to have some great cultural entertainment, such as African drummers and dancers. We're going to have our scientists that we're going to honor. We're going to give them proclamations. It'll be a great, great day of celebrating science. It'll be filmed by CUNY TV. If the food didn't do it and you want to be on TV, there are several things that can draw you this program. With that, we're going to ask the first witness to be called and then we'll have a panel of five after that.

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2 TRACY UDELL: Gillian Small, Dr.
3 Holford, Catherine Garcia, Jill Bargonetti and
4 Jamie Farrington. Can you please raise your right
5 hands? Do you swear and/or affirm that the
6 testimony you're about to give is to the best of
7 your knowledge accurate and truthful? Thank you.
8 Please remember to state your names before
9 beginning your testimony.

10 GILLIAN SMALL: Good afternoon,
11 Chairman Barron, Chairman Seabrook and members of
12 the Council. My name is Gillian Small. I'm the
13 Vice Chancellor for Research at the City
14 University of New York. I appreciate the
15 opportunity to testify today about the work we're
16 doing under the umbrella of the Decade of Science
17 at CUNY. I'm also pleased to introduce the panel
18 with me, Dr. Jill Bargonetti, Dr. Mande Holford,
19 Mr. Jamie Farrington and Ms. Catherine Garcia.
20 First let me say that I understand that CUNY had a
21 great success yesterday with regard to the budget.
22 I hear that Chairman Barron and Chairman Seabrook
23 you played a great role in that, so for that we'd
24 like to start off by thanking you.

25 CHAIRPERSON BARRON: I'm glad you

1 mentioned that. I do also want to thank Council
2 Member Seabrook. We just went through the budget
3 process and CUNY faired fairly well with that. I
4 want to thank him and thank Tony Avella for
5 getting \$21 million put in for our community
6 colleges. We've got \$2.5 million for the Black
7 Male Initiative was restored. They had the Peter
8 Vallone Scholarship at \$6.8 million and now it's
9 at \$9 million. So we added another \$2.2 million
10 to the Peter Vallone Scholarship, then our ethnic
11 study programs like Dominican project and the
12 Puerto Rican studies project and then another
13 \$250,000 for the Vallone Scholarship at FIT. So
14 we had a very good budget thing for CUNY. Thank
15 you very much. Sorry to interrupt you. I'm glad
16 you brought it up though.

18 GILLIAN SMALL: Many of you will
19 have heard over the past several years from a
20 variety of sources that student participation and
21 proficiency in the science, technology,
22 engineering and mathematics fields is on the
23 decline in the U.S. and that our county's
24 preeminence in science education and innovation is
25 in question. Indeed, two years ago, the National

1 Academies convened a panel of experts that
2 produced an important document which reported
3 making an urgent plea to increase the country's
4 scientific competitiveness. One of the
5 recommendations in this report stated that we must
6 make the United States the most attractive setting
7 in which to study and perform research so that we
8 can develop, recruit and retain the best and
9 brightest students, scientists and engineers from
10 within the United States and throughout the world.
11 Prior to this, in a 2000 report, the National
12 Science and Technology Council noted that as
13 minority groups increased as a percentage of the
14 U.S. population increasing their participation
15 rate in science and engineering is critical if we
16 are to maintain the overall participation rate in
17 science among the U.S. population. Our Chancellor
18 at CUNY, Matthew Goldstein, taking note of these
19 national trends, designated the years 2005 to 2015
20 the Decade of Science at CUNY. This designation
21 is renewing the university's commitment to
22 creating a healthy pipeline to science, math,
23 technology and engineering fields by advancing
24 science at the highest levels, training students
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2 to teach in these areas, and encouraging young
3 people, particularly women and minorities to study
4 in these disciplines. CUNY has a history of
5 excellence in research in the sciences, as
6 evidenced by the 12 CUNY Nobel Laureates in areas
7 including economics, physics, medicine and
8 chemistry. Research remains strong at the
9 university and we have faculty who have won
10 prestigious awards, including memberships to the
11 National Academies of Sciences. This indicates
12 the high quality of faculty research at CUNY and
13 the lead role that our faculty, some of whom will
14 testify here today, play in advancing science at
15 every level within the university. But we
16 understand the pressing need to do more. In this
17 21st century we need to be more competitive in
18 recruiting the best faculty, providing them with
19 the most up to date equipment and facilities that
20 will enable both our faculty and our students to
21 perform cutting edge research, hence the Decade of
22 Science. The Decade of Science is moving forward
23 on several fronts. Over the next several years we
24 will be expending in excess of \$1 billion across
25 the university on the construction and

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2 modernization of science facilities at many of our
3 campuses. In addition, we are building a CUNY-
4 wide advanced science research center, or ASRC,
5 which will concentrate on emerging disciplines
6 such as in nanoscience, neuroscience and
7 environmental sciences. The ASRC will provide
8 high end instrumentation that will allow many
9 scientists and their students from across the CUNY
10 campuses to progress with their research endeavors
11 and it will facilitate the development of
12 integrated research collaborations. We've also
13 recently established the CUNY Energy Institute
14 located at City College that is focusing its
15 attention on developing clean fuel technologies,
16 including flow battery applications for use in
17 buildings and transport. Planning is also
18 underway to create the first public graduate
19 school of public health in New York City to be
20 located at Hunter College. We understand the need
21 for such a school since approximately half the
22 world's population is now in urban areas. These
23 urban environments are already facing major health
24 challenges, AIDS, obesity, diabetes and other
25 areas of health disparities. A center of public

1 education will address these and other issues
2 through research and education. CUNY's extensive
3 College Now program in the public schools that
4 prepares students for college enrollment continues
5 to run summer science programs. An exciting
6 development for the past two years, CUNY has
7 partnered with the New York City Department of
8 Education to run the New York City Science and
9 Engineering Fair. This is the city's largest high
10 school research competition and each year several
11 hundred high school students from throughout the
12 five boroughs of New York City present their
13 research projects to expert judges and compete for
14 a variety of prizes, including going on to the
15 Intel International Science and Engineering
16 competition. So what are the results of these
17 efforts and many other initiatives involved in the
18 Decade of Science thus far? As I said, you will
19 hear from some of our faculty and students today,
20 but let me just give you some numbers. In 2008,
21 17,139 students enrolled in STEM, that's science,
22 technology, engineering and mathematics majors at
23 CUNY, which is a 57% increase over the number for
24 the year 2000. In fact, just since 2005 when we
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2 initiated our Decade of Science, we have seen a
3 30% increase enrollment to STEM majors. Given
4 that our overall student body is extremely
5 diverse, as earlier noted, with approximately 48%
6 of our students having a native language which is
7 not English and that an African American and
8 Hispanic undergraduates each comprise more than a
9 quarter of the total, I believe that we are
10 succeeding in our mission to train the next
11 generation of scientists and engineers and to
12 ensuring that this body is as diverse as is New
13 York City itself. Thank you.

14 JILL BARGONETTI: My name is Jill
15 Bargonetti and I'm a Professor of Biological
16 Sciences at Hunter College. Public education has
17 been and continues to be an important part of my
18 life. I'm a New Yorker and I was a student of
19 Hunter Elementary School, Hunter High School until
20 eighth grade and then the Bronx High School of
21 Science. I followed that education by getting my
22 bachelor's degree from the State University of New
23 York at Purchase and my master's in PhD from NYU.
24 As a former public school student, I and many
25 others like me welcome investment into the Decade

1 of Science in the CUNY system. This is a
2 visionary plan to enrich science education and
3 research. It's a wise investment and I'm proud to
4 be a part of the process and the vision. I work
5 at Hunter studying the P-53 gene, which plays a
6 key role in 70% of cancers. In my laboratory, we
7 carry out experiments on human cancer cells and
8 worms, but eventually the therapies and molecular
9 pathways we discover may be tested on humans. The
10 P-53 gene is a tumor-suppressing gene. In 70% of
11 cancers, the gene product isn't working properly.
12 We look at ways to reactivate it, or to kill cells
13 where it isn't functioning. We also try to
14 understand why it might not kill the cancer cells
15 sometimes. The Decade of Science is important for
16 my research, but it is also important for the next
17 generation of scientists who I mentor. I pride
18 myself in being a mentor for all individuals. I
19 have attracted people of multiethnic backgrounds
20 to my laboratory. Working as part of the Research
21 Centers and Minority Institutions Program, which
22 is funded by the NIH, we take this goal quite
23 seriously for recruiting faculty and students from
24 under-represented backgrounds into STEM fields. I
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1
2 didn't come from a family of academics, but two
3 professors during my undergraduate years were
4 mentors to me. They put the application for
5 graduate school in front of me and made me fill it
6 out. Today I want to be the mentor who does that
7 for students. I thought it would be especially
8 good for students of color to see someone like me
9 in a role as a researcher, geneticist and teacher.
10 Many of the students in my classes and in my
11 laboratory are participants in the NIH funded
12 Minority Access to Research Career Program in
13 addition to the Lewis Stokes Alliance for Minority
14 Representation Program. Each student who works
15 with me, be it an undergraduate or a graduate
16 student, has his or her own part of the project.
17 I help them design their experiments. We study
18 human cancer cells derived from patients and the
19 germ cells from the worms in these microscopic
20 nematodes. Germ cells are a special type of cell
21 that divides quickly like the cancer cells. We
22 treat the human cancer cells and the worms with
23 chemotherapeutic drugs to see how the drugs affect
24 their development. The chemotherapeutic drugs
25 change the DNA of cancer cells and the germ cells

1 of the worms. Then we study what happens to the
2 ability of the cells to die as a result of the
3 chemotherapy. In order to carry out this cutting
4 edge research, we need cutting edge facilities for
5 our teams of students and professors. We need
6 groups of people from many walks of life educated
7 in the science and human aspects of gene therapy
8 and molecular therapeutics at the table making
9 decisions. These decisions have to be on a case
10 by case basis. We need teamwork on all of these
11 issues. The Decade of Science is to inspire the
12 multitude of CUNY students to consider the
13 importance of science in our day-to-day lives.
14 Part of the Decade of Science important for Hunter
15 College and for me concerns the possibility of our
16 new science building which will allow for clinical
17 and basic research to happen side by side. More
18 nursing students will be able to join our
19 programs. More clinical collaborations will
20 result. Our students may be the ones finding new
21 treatment and prevention alternatives for multiple
22 types of diseases. They could be the ones writing
23 future laws. The prospect of a new unified Hunter
24 Science and Health Center in this, one of the best
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2 biomedical research neighborhoods in the world
3 where Hunter is, would open an exciting
4 possibility for research at Hunter and for our
5 students' futures. It will benefit Hunter
6 students, New York City and the future
7 diversification of the science workforce in our
8 nation. The Decade of Science is a visionary plan
9 to enrich public education and science training in
10 New York City. Thank you.

11 DR. MANDE HOLFORD: Hello,
12 Committee Members. My name is Dr. Mande Holford.
13 I'm recent assistant professor at the City
14 University of New York at York College and at the
15 Graduate Program. I would like to discuss with
16 you today my experiences as a CUNY alum and as a
17 new faculty. I will start by giving you detail
18 about my background in science. I went to a
19 science high school, Brooklyn Technical High
20 School, similar to my colleague who went to Bronx
21 Science. I got my B.S. from a CUNY college,
22 actually York College where I'm currently a
23 professor. I did my PhD training at the
24 Rockefeller University uptown at 66th Street. So
25 for me science and the city are intricately

1 linked. Having traveled to conduct research in
2 other cities, such as Paris, Berlin, and Panama
3 City, I'm in a unique position to appreciate what
4 a career in science in New York offers compared to
5 those other places. In one word, it offers
6 diversity, especially at CUNY. CUNY offers
7 diversity in the population of students and
8 faculty, diversity in the scientific facilities
9 and diversity in the scientific expertise
10 available. These are important components for
11 developing successful scientific institutions.
12 Science is usually driven by the questions being
13 asked. If you have a diverse scientific
14 community, the questions will vary. This will, in
15 turn, innovate the techniques created which will
16 lead to an advancement of the field. As an
17 example, consider the actions of Rita Colwell, the
18 former director of the National Science
19 Foundation. Upon visiting countries ravaged by
20 cholera, which was being spread through
21 contaminated water, Rita, a bacteriologist,
22 realized the high tech expensive water filtration
23 devices being produced in the west could not work
24 in the impoverished villages she visited for the
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2 simple reason that the villagers couldn't afford
3 the devices. So she came up with a low tech
4 solution, cheesecloth. Cheesecloth, a fabric that
5 was cheap and readily available in all the
6 villages, was what Rita came up with. Through
7 experiments, Rita discovered that if you strain
8 the drinking water through cheesecloth before use,
9 the bacteria that were causing the cholera
10 infection could be eliminated. Rita, through her
11 diverse travel experience, asked different
12 questions and came up with new solutions. The
13 take home message is that diversity in people,
14 experiences, and expertise are key ingredients for
15 advancing science and technology. These things
16 are abundant at CUNY. My scientific research
17 involves investigating the evolutionary history of
18 marine snails and their toxins in order to find
19 new tools for manipulating signaling in the
20 nervous system. The long-term impacts of my
21 research would be the discovery of novel
22 therapeutics for disorders affecting the nervous
23 system such as chronic pain or epilepsy. That's
24 the payday that we're working towards. And when
25 we're successful, I'll come back and testify about

1 that. But for now, we are focused on basic
2 research to identify the structure and function of
3 peptide neurotoxins. As a new hire in CUNY's
4 Decade of Science initiative, I'm very excited
5 about the possibilities to collaborate with
6 colleagues CUNY-wide. At York, I have established
7 collaborative projects with Doctors Emmanuel Chang
8 and Shao-Ying Hua. I hope to collaborate with
9 Wayne Harding at Hunter College on the synthesis
10 of peptide analogues and possibly with Dr.
11 Gonzalez at City College in the area of small
12 business initiatives. The ASRC being constructed
13 will be an excellent opportunity to access state
14 of the art equipment and train the next generation
15 of science PhDs and undergraduates. Last week I
16 attended the National Science Foundation joint
17 annual meeting for programs such as the Lewis
18 Stokes Alliance Minority Program. There were so
19 many eager and excited graduate and undergraduate
20 students there. Their energy was contagious. It
21 inspired me to want to create the best laboratory
22 I can to train them. For me, that means a lab
23 that is at the intersections of top science and
24 top people from diverse cultures with diverse
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1
2 scientific questions to ask, exactly what can be
3 found at CUNY. Thank you for your time.

4 JAMIE FARRINGTON: Good afternoon.
5 My name is Jamie Farrington and I am a physics PhD
6 student at Hunter College. In 2001 I came to New
7 York with my wife and son from Puerto Rico.
8 Having started a major in physics at the
9 University of Puerto Rico Mayaguez, I wanted to
10 continue my studies in New York but I wasn't sure
11 in which institution to do so. The institution
12 needed to be of excellent academic standards and
13 affordable since we were living with very limited
14 financial resources at the time. As I talked to
15 more and more people, the CUNY system,
16 specifically Hunter, seemed to be a perfect fit.
17 Actually a dean of NYU recommended Hunter to me
18 instead of NYU. I met Professor Greenbaum at
19 Hunter and when he showed me all of the academia
20 and professional opportunities available, I made
21 my choice. In addition, he helped me get the
22 necessary financial aid to complete my degree. I
23 was accepted the MBRS/MARC Honors Program, which
24 was not only a great honor for me but also a
25 relief because at the time I was supplementing my

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2 finances with loans. With opportunities
3 available, I was able to present and several
4 meetings and get involved in research in places
5 such as Brookhaven National Laboratory. Besides
6 the professional opportunities, I greatly enjoy
7 the cultural diversity of the student population
8 of CUNY. I have the opportunity to forge long
9 lasting relationships with people from all around
10 the world. On the personal level, several of the
11 faculty and staff at the university became like an
12 extended family, which honestly make it easier for
13 me to adapt to a new city in a foreign country.
14 After I graduated, I was accepted to a master's
15 PhD program at Columbia University. Due to family
16 circumstances I had to leave the program once I
17 got my master's. I always kept in contact with
18 the people at CUNY and after some time after my
19 master's, Professor Greenbaum offered me the
20 chance to join the CUNY physics doctoral program.
21 Because of my past experience at CUNY I accepted
22 and as is said, the rest is history. Currently
23 I'm on track to finish my doctoral degree early
24 next year. Over the past years at CUNY as a grad
25 student, I have benefited from many programs

1 through the Decade of Science initiative. For
2 example, I had the opportunity to attend different
3 conferences over the past years. I participated
4 in various seminars, including the
5 entrepreneurship seminar held by the CUNY
6 technology transfer office, and other professional
7 development courses at the CUNY grad center. In
8 addition, I attended workshops and seminars
9 outside CUNY, such as the idea to IPO course at
10 the New York Academy of Sciences and a future
11 workshop that I will be attending in July. After
12 I finish my PhD studies, there will be a good
13 chance that I will join a renewable energy startup
14 in Puerto Rico or work for a national laboratory.
15 I feel optimistic about my professional future
16 since I see several great opportunities thanks to
17 my preparation at CUNY. Overall I had a great
18 experience at CUNY, a very nurturing experience.
19 This is the reason why I'm actively involved in
20 recruiting students from Puerto Rico for the CUNY
21 physics program. I want to help other students
22 pursue their dreams as I have at CUNY. Thank you
23 very much.

24
25 CATHERINE GARCIA: Good afternoon,

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2 Chairman Barron, Chairman Seabrook and members of
3 the New York City Council on Higher Education and
4 the Civil Rights Committee. My name is Catherine
5 Garcia. I am humbled and thankful for the
6 opportunity to stand before you today to testify
7 about my experiences as a student at the City
8 University of New York and the ways in which the
9 Decade of Science has impacted me. I am also
10 grateful for your steadfast support and leadership
11 of CUNY, which has made stories like mine
12 possible. I am a graduating senior of Hunter
13 College majoring in environmental science with
14 minor concentrations in chemistry and urban
15 planning. I was always a curious child, observant
16 of the world around me and incessantly pestered my
17 mother with questions. Always encouraging of my
18 inquisitive nature, my mother envisioned her
19 little girl growing up to achieve the dream that
20 she had always dreamed for herself but never did
21 and that is completing a college education. The
22 efforts stemming from the Decade of Science at
23 CUNY helped make this dream more attainable than I
24 could have ever imagined. Initially I attended
25 John Jay College as a forensic science major

1 before transferring to Hunter College in the fall
2 of 2006. At Hunter, I continued my academic
3 journey focusing my studies on renewable energy
4 and environmental health issues. I worked as a
5 research assistant at the CUNY Institute for Urban
6 System examining the reduction of total greenhouse
7 gas emissions through New York City's newly
8 revised building code and secured several
9 internships researching renewable energy
10 technologies. But studying that information was
11 not enough. I wanted to use my education to give
12 back to the institution that gave me such
13 opportunities. Chancellor Goldstein once said
14 that science is not made in a laboratory; it is
15 made when a young person gets that initial spark
16 of inspiration. My personal goal became to
17 inspire other young people to find their own
18 spark. In 2008, my best friend and I co-founded
19 the Hunter Solar Project, an effort to bring a
20 solar energy system to the Hunter College campus,
21 offsetting a portion of the school's non-renewable
22 energy demands while creating research and
23 teaching opportunities for faculty and students.
24 We're creating a solar tour program where high
25

1 school students get the opportunity to visit our
2 solar array for educational tours and hands-on
3 labs. The program's goal is to stimulate interest
4 and encourage them to pursue higher education in
5 vital STEM disciplines such as engineering,
6 physics and chemistry while keeping in line with
7 our university's flagship research initiative in
8 environmental science. Partnering with
9 administration, faculty and students, we raised
10 enough funds to cover half of the installation
11 costs. For these efforts, the Hunter Solar
12 Project has been recognized by the CUNY
13 Sustainability Task Force, the Center for
14 Sustainable Energy, and was awarded the 2009
15 Outstanding Student Commitment Award from the
16 Clinton Global Initiative. We expect to pilot our
17 first tour program this fall. As well, the
18 National Hispanic Environmental Council has
19 requested that I serve as a mentor in their Fourth
20 Annual New York City Minority Youth Environmental
21 Training Institute, an intensive science-based
22 seven-day program that exposes minority high
23 school youth to research and field work in natural
24 resource conservation, geology, plant science,
25

1
2 biology and other disciplines. I intend to
3 continue my involvement with this organization in
4 order to bring the same exposure to environmental
5 science fields to youth across the city and CUNY.
6 This summer, I will be the first member in my
7 family to graduate college and I'm looking forward
8 to pursuing a PhD in environmental health.
9 Today's global issues command solid scientific
10 knowledge and the ability to convey this knowledge
11 across barriers and disciplines. My story attests
12 to the dedication CUNY provides its students to
13 engage and prepare them to face these issues
14 through its Decade of Science initiatives. I
15 speak for thousands of students who share my story
16 of opportunity across the university when I say,
17 "the greatest lesson I'll take with me from CUNY
18 is that no dream is too big to dream." Thank you.

19 CHAIRPERSON BARRON: Thank you very
20 much for the testimony. I'm particularly
21 impressed with the students and the fields that
22 you chose and the fact that you're both pursuing a
23 PhD. Give them another round of applause. We
24 appreciate your very, very articulate testimony.
25 Before I get to the other questions, just could

1
2 you tell us a little bit more about why you chose
3 environmental science and your field as well and
4 how will that apply to our communities,
5 particularly as we move further into the 21st
6 century?

7 JAMIE FARRINGTON: Well, in my
8 case, I was born in Puerto Rico and I had a lot of
9 access always to very beautiful scenery, stars,
10 the ocean and everything.

11 CHAIRPERSON BARRON: Look, don't
12 try to make us jealous here now.

13 JAMIE FARRINGTON: But basically, I
14 would say that beauty was an inspiration for me to
15 pursue sciences. And I just always had an
16 intrinsic curiosity for how the natural world
17 works and how I can use it to benefit others. I
18 see that technology can really help our
19 civilization in general. For example, there are
20 so many problems right now that energy itself
21 could solve, especially in poor countries. What I
22 see is that one of the biggest limitations that
23 many developing countries have is the access to
24 energy. If you are in a poor village, a rural
25 village, you might have six hours of electricity.

1
2 How can you work with a laptop with that? How
3 will you be able to have a small clinic? So a lot
4 of my emphasis and drive will be to find ways of
5 developing energy for poor communities in an
6 affordable way so they can empower their own
7 economies. That's why I'm trying to get involved
8 in different projects to try to create a
9 sustainable model, an economic model which
10 includes the energy equation into it to help less
11 fortunate communities.

12 CHAIRPERSON BARRON: Thank you very
13 much. We have a housing program coming into east
14 New York. One of the things I requested, and
15 they're working on it, they're putting solar
16 panels on the roof and they're going to train some
17 of the east New York residents on solar panels.
18 The greening of the economy, a lot of that is
19 coming. I would really like for both of you to
20 come out to east New York and talk to some of our
21 youth to try to encourage them to look into these
22 fields.

23 CATHERINE GARCIA: Thank you. Like
24 Jaime, I wish I could say I grew up around the
25 stars and nature, but my exposure to the

1
2 environment actually came from playing with soot
3 when I was younger. I'm a Queens' native and I
4 was born and raised in Queens. I live right on
5 Main Street. I don't know if anyone's ever been
6 there but the traffic is pretty much insane, for
7 lack of a better word. I always remember being a
8 young kid playing with this soot. I would ask my
9 mother what the magic black powder was that I
10 could draw with on the walls. I just became very
11 curious and it wasn't until I got into high school
12 that I began to realize that this was something
13 that was harmful and polluting. Not only was it
14 harmful and polluting but it was
15 disproportionately located in communities of
16 color. If you look at the South Bronx, even East
17 Harlem, you've got seven times the asthma rate
18 above the rest of the country, which speaks
19 volumes as to what's happening and how these
20 particular pollutants are winding up in these
21 communities. The reason I minored in urban
22 planning and took environmental science and
23 chemistry all together was to hopefully research
24 ways in which we can plan for viable and health
25 neighborhoods using planning mechanisms. I know

1
2 there are folks like Majora Carter and Van Jones
3 who speak highly of this. Van Jones is a person
4 who very much pushes for the green economy and the
5 renewable workforce. As a Latina, I know that one
6 of the greatest barriers in these communities of
7 color is there is not an adequate translation to
8 Hispanic communities that don't know how to speak
9 English very well, may not know how to read it
10 very well to the dangers of pollution and things
11 like that. I thought that because my mother came
12 to this country and never had that opportunity, it
13 inspired me to go ahead and give back to that very
14 same community. That's why I'm here.

15 CHAIRPERSON BARRON: Wow, very,
16 very impressive. We really appreciate both of you
17 and your testimonies. Certainly this is one of
18 the more inspiring hearings that we've had and
19 we've had many over the last six or seven years.
20 But this kind of information coming from you to
21 our neighborhoods is awesome. We're very, very
22 proud of you.

23 CATHERINE GARCIA: Thank you.

24 CHAIRPERSON BARRON: I wish you the
25 best and most success in your careers. To the

1
2 professors, what are we doing to encourage more
3 students? Are students coming into the field?
4 Are you having an increase in interest? How are
5 you trying to attract students, and once you
6 attract them hold them, sustain them, and maintain
7 them? What are some of the things that you are
8 doing to see that that happens?

9 JILL BARGONETTI: I'll start. So
10 part of how we work to attract the students, I
11 mean we start at a very young age. I begin with
12 high school students. At Hunter we have the
13 Manhattan Hunter Science School. We are taking
14 those students into the lab for the summer, so I
15 have students in my lab this summer from high
16 school. They are touring during the school year
17 because they are there during the school year
18 taking classes. So in terms of our youngest, our
19 youngest outreach right now is directly to the
20 high school students. Then, when we move on to
21 the students who are in college, we begin with our
22 entering freshman, trying to get them to know all
23 the different programs that we have. We have the
24 MARC program, the MBRS program and we are actively
25 recruiting students from our Biology 100, our

1
2 introductory biology course in terms of from my
3 standpoint as a biology professor. But they are
4 being recruited from Chemistry, et cetera, into
5 this MARC and MBRS program in that first year, so
6 their initial year. This way, by the time they
7 enter their second year, they're in a laboratory.
8 They're actually doing the hands-on research. I
9 think this student here to my right is a testimony
10 to the fact that when you get the students
11 involved in something where they are actually
12 making a difference, they are helping in the
13 discoveries, they see that it's not just an
14 academic exercise. I think that's how we're doing
15 it specifically is making them recognize it's not
16 just academic. That's from the high school
17 students to the college students. That's the way
18 I try to do it at the ground level. Of course,
19 also in the classroom, I teach the undergraduates
20 and there's a large class of students who come
21 into my lectures. And there, my feeling as a
22 mentor is being there, having those students see
23 that I am not just their professor but I also run
24 a lab. They come to my laboratory for their
25 office hours. So they have to see the research

1
2 going on. Now maybe some of them aren't doing the
3 hands-on stuff, but they are seeing me giving the
4 information to them. They're asking questions in
5 class. They're coming to office hours. So if we
6 can't get them involved in the actual generating
7 the questions and seeing the answers for
8 themselves, at least being there as the role model
9 in the classroom I think does some of it as well.
10 So it's on a number of different fronts.

11 CHAIRPERSON BARRON: Thank you.

12 DR. MANDE HOLFORD: I have a
13 scientific appointment at the American Museum of
14 Natural History where I do research in the
15 genomics invertebrate zoology division.

16 CHAIRPERSON BARRON: What'd you
17 say? Do you want to say that one more time? I
18 just want to follow.

19 DR. MANDE HOLFORD: I also work at
20 the Museum of Natural History.

21 CHAIRPERSON BARRON: I got that
22 part. That was easy.

23 DR. MANDE HOLFORD: In the genomics
24 division, invertebrate zoology because I work on
25 marine snails. For me, bringing students starts

1 with pre-k through 12. Through the museum we are
2 allowed to develop a lot of outreach educational
3 programs for the lay public and students as well.
4 In my current research, I develop programs for
5 high school students and also we're working on
6 developing something for Ology which is a program
7 for pre-k through third graders. So I'd like to
8 think that we want to get them involved in science
9 as young as we can. Directly from pre-k all the
10 way through high school and then continue on
11 through undergraduates and the graduate programs.
12 Like my colleague, I will be having several high
13 school students in my lab this summer that I will
14 continue to train. And similar to my colleague,
15 mentoring was very important to me. I did not
16 know I wanted to be a scientist until I met my
17 mentor at York College actually. It was Larry
18 Johnson, a physical chemistry professor. He was
19 the one who introduced to me the idea of being a
20 scientist and having this as a career goal.
21 Through him I was able to envision that goal and
22 achieve it. So I am keenly aware of how important
23 it is to mentor students in the undergraduate
24 level and levels beyond. For the graduate
25

1
2 program, as a new faculty I'm hoping to develop a
3 science course in chemical biology where we take
4 the students different places. Science happens
5 all around and it's an exciting field. Students
6 tend to think it's very static and it happens just
7 in a laboratory and you have to be doing beakers
8 and all of these things. My work is very
9 interdisciplinary. I do a lot of field work to
10 collect the snails as well as the traditional
11 bench work. So the course I hope to develop would
12 take the students to Panama during the winter
13 session to work in collaboration with the
14 Smithsonian Tropical Research Institute, which is
15 a collaboration institution that I work with. So
16 we would go in January to do field work to collect
17 our snails, do initial screening and DNA
18 extractions and then continue with the rest of the
19 course through the spring semester where we'd talk
20 about research techniques and how we're using what
21 we've collected from the field. So to sort of
22 bring in the broad idea that science happens
23 everywhere, outside of the lab, in places that you
24 would least expect.

25 CHAIRPERSON BARRON: That's

1
2 excellent. I just want you all to join me because
3 one of the challenges we have is I think we've got
4 to end mayoral control of our schools on an
5 elementary to high school level because the
6 emphasis is not on science, it's on test taking.
7 They've turned our elementary schools and middle
8 schools and high schools into test taking mills.
9 So as long as they pass these standardized tests
10 in reading and math, both important subjects, then
11 the mayor looks good and others. That's why we
12 shouldn't have a businessman heading up the
13 schools. But we're here for CUNY and we don't
14 engage in politics outside of our narrow degree.
15 That's why I don't want to say and I should not be
16 saying and will not say that we should end mayoral
17 control of schools because this is not the place
18 to say it and I just won't engage in those kinds
19 of politics. But I am very impressed with this
20 panel. I want to turn it over to my colleague,
21 Council Member Seabrook.

22 CHAIRPERSON SEABROOK: Thank you
23 very much, Mr. Chairman. Certainly it is indeed a
24 pleasure to hear and to the see the diversity
25 within the faculty and the students that are here.

1 I'm a product of CUNY in many, many ways. To see
2 this, I'm very, very impressed at seeing the level
3 of diversity in term of having women in those
4 departments and hopefully we will move around to
5 recruiting some African American males and Latino
6 males. We've got one over there, so we need to
7 bring him on into the department once he has his
8 doctoral. I'm impressed. There is a gap on the
9 basis of American children from Europe. Then
10 there is a gap that's between African American and
11 Latino children and those who are classified as
12 white in America and New York City as it relates
13 to science and math. Those kids at an early age
14 are somewhat discouraged, not that they do not
15 have the capacity or the capability and the
16 imagination, but they just don't have the
17 academics that are there. You indicated that you
18 got into the game a little bit later than normal
19 as it relates to someone seeing something within
20 you and telling you to do that. How would you
21 suggest we deal with our school children who might
22 not be able to take that test, but have that
23 ability and that inquisitiveness to become a
24 scientist? What type of program do you think we
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1
2 should be looking at that would allow a late
3 bloomer, if there is such a thing in a late
4 bloomer in this type of situation? What do you
5 think CUNY and our school system should do?

6 CHAIRPERSON BARRON: Before you
7 answer, I just want to say Council Member Gale
8 Brewer is here from Manhattan, Council Member
9 Ulrich from Queens is here and Council Member
10 Mathieu Eugene from Brooklyn is here. I just want
11 to welcome them to the hearing.

12 JILL BARGONETTI: We all have
13 ideas.

14 CATHERINE GARCIA: I used to be one
15 of those students that could not pass the
16 standardized tests. Maybe I shouldn't be saying
17 that out loud, but for sure I was. I know what
18 it's like to be able to take those tests and get
19 this discouraging grade and not be able to do it.
20 I remember meeting somebody in high school, one of
21 my teachers in high school and then a professor at
22 John Jay, Dr. Donald Hoffman who was in chemistry
23 and he just would not let me take that at all. He
24 would always tell me that unless someone tells you
25 now and puts a big fat no in your face, don't take

1
2 that. You're going to take it again you're just
3 going to keep going. He really pushed me forward.
4 So I went ahead and went to intense tutoring and
5 did it over and over again, not the exams per se,
6 but eight years ago when I was getting a
7 horrendous grade in the Math Regents, I was
8 getting an A in Calculus II and I couldn't believe
9 it. I think that it was really in part to the
10 push and the inspiration that I got from these
11 professors. I feel like my part as an
12 undergraduate student and as a student in general
13 will be to hopefully take somebody else and take
14 another student of color who thinks that they
15 cannot do it because they got this failing grade
16 one time. Hopefully I'll push them and they'll
17 want to take it a second time, pass it and then
18 have stories and be able to testify here one day.

19 GILLIAN SMALL: If I can say one, I
20 think what you'll notice, and if you ask many
21 faculty who have really succeeded in the sciences
22 and the students too, I think they'll tell you at
23 some point in their career, there has been one
24 important person who has been a mentor to them and
25 has got them through a hurdle or a step or turned

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2 them on in a certain direction. I think you can
3 have as many tests as you like, but I think that
4 important personal contact with somebody as a
5 mentor who reaches out to you and helps you
6 through a sticky point in your career is really
7 what it takes. The other thing is just hands-on
8 experience. I mean, my experience is you see
9 young kids, you see kids in kindergarten and
10 they're full of inquisitiveness and any science
11 experiment you can give them, they're turned on by
12 it. In kindergarten you may not do too bad a job,
13 but when they enter middle school and it's all
14 about tests and it's taking them out of the lab,
15 out of the hands-on experience and putting it in
16 front of a piece of paper, I think that's when
17 some of the magic goes. I think we need to have
18 more kids in labs and with hands-on experiences.

19 DR. MANDE HOLFORD: I'd just like
20 to second that. You can't get involved in
21 something unless you're aware of it, so exposure
22 is a very important part of it. As Gillian was
23 pointing out, we all have this innate curiosity
24 when we're young and as we get older it's tested
25 out of us quite frankly. I would say to have more

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2 programs that have mentoring where students are
3 able to get into laboratory-type settings or able
4 to do some kind of scientific research initiative
5 from pre-k all the way through high school and
6 then on to undergraduate programs as well. the
7 more opportunities for them to do research,
8 whether in an actual scientific lab or whether
9 it's an after school program or a summer program,
10 I would encourage more programs like that.

11 JAMIE FARRINGTON: If I can add
12 something, I didn't do high school in the United
13 States. When I came to the United States, I did
14 tutoring when I was an undergrad and I was amazed
15 to see students that are second year and they
16 couldn't do a basic algebra equation. When I see
17 myself now, I look at the people that entered with
18 me into the physics program and I am the only
19 citizen. Everybody else is from China, India or
20 another country. It's very clear to me the
21 disparity. I think in general, just to second
22 what has been said, is that if you have teachers
23 in high school that don't have real science
24 background, it's likely that they will pass their
25 own insecurities about science. That's why most

1
2 people will say math is hard and science is tough
3 and don't do that because that's only for
4 geniuses. From the beginning it starts to create
5 a lot of mental barriers. I have seen people that
6 are very bright, but they didn't have the
7 opportunities to develop this. Once they enter in
8 college and they are taking courses, they get
9 frustrated. They think they're not smart and they
10 cannot do it. That's not the problem. They were
11 handicapped from the beginning. At that point on,
12 they just drop off. They go somewhere else and do
13 something else. I have seen that several times.

14 JILL BARGONETTI: You asked what we
15 think you can do and I think everybody has said
16 more exposure. I don't know if there's any
17 possible way that making this more exposure so all
18 the kids think it's cool. I think part of what
19 happens is we have this disparity, but part of the
20 disparity is because much of the focus is on music
21 and all kinds of things in film and being a
22 scientist is just boring and it is just considered
23 boring. So if you can somehow utilize this hands-
24 on exposure in summer opportunities, summer camps,
25 things that work where you have children who have

1
2 to go to summer school who don't even get to go
3 outside because they didn't pass some exams. So
4 then they have to repeat, so of course they're
5 going to hate it even more. Instead of just
6 sticking children back in a classroom to take a
7 test again, to change the whole paradigm of how
8 this is delivered and deliver stuff outside in the
9 field. You hear all this stuff about the field,
10 that's what makes you excited. Out there
11 collecting specimens, doing things, counting so
12 they have the numbers, making the graphs all out
13 side so they're not in a classroom. If there's
14 some way you could make summer opportunities as
15 these having to go to summer school. You have
16 kids out there playing tennis. I know it's like
17 this big thing to have summer tennis programs.
18 How about summer science programs for our children
19 so that they think science is cool? They're dying
20 to get into that free summer science camp.

21 GILLIAN SMALL: I just mention one
22 thing because it's just happened. For the past
23 five days, ending on Sunday, we had the World
24 Science Festival in New York City. This was a
25 brainchild of a professor from Columbia

1
2 University, but CUNY partners with them. The last
3 day of the World Science Festival was really a
4 street fair down in Washington Square Park that
5 was all about introducing kids to cool science. I
6 was down there last Sunday and there were hundreds
7 and hundreds of families with their kids doing
8 cool science. It shouldn't be just once a year
9 that we have the World Science Festival. It
10 should be throughout the summer that we do events
11 like that.

12 CHAIRPERSON SEABROOK: I think it's
13 certainly good that you all are saying that,
14 because one of the things we do and we should put
15 more monies in is that I fund a program at the
16 Botanical Gardens that allow young people to be a
17 part of nature planning. Our kids are eating
18 every day and they've never seen some of these
19 same foods that they're eating ever grown. So I
20 think that that's important. But I think the
21 statement that was made as it relates to the
22 mentoring, caring and nurturing one to develop a
23 love for the science is important. You raised the
24 issue about the students who couldn't do the
25 algebra, but all of the other students were

1 foreign students except for him as a citizen.

2 I've traveled to almost all of the black colleges
3 and they have graduated students magna cum laude,
4 summa cum laude in physics, science, and chemistry
5 all over. Perhaps there needs to be an exchange
6 because they're not giving them an affirmative
7 action physics test, they give them the same test
8 that everybody else has to take. There should be
9 a program that allows a diverse faculty coming
10 from those historically black colleges in an
11 exchange with CUNY so that students can see these
12 professors who take people that no one else said
13 could ever pass, could ever do and they can do the
14 same thing and nurture them. So when our students
15 see that faculty from those historically black
16 colleges that that's a form of diversity that
17 needs to be exchanged with the faculty so that
18 people will get a chance and an opportunity to
19 see. I would hope that CUNY could work on a
20 program that allows that. In order to graduate
21 with a degree from a historically black college
22 you have to take physics, you have to take
23 chemistry; you have to take geometry and all these
24 things. They're not just giving out grades, so
25

1
2 obviously somebody is doing something right. So
3 we need to find out how they do it to allow that
4 to happen. I think that CUNY is doing a fantastic
5 job here, but I think that exchange and that level
6 of diversity that can come about to work an
7 exchange program with historically black colleges
8 would be a tremendous asset to CUNY as well as to
9 the historically black colleges. I think that's
10 what I have to say.

11 CHAIRPERSON BARRON: Thank you very
12 much. I have two of my colleagues that want to
13 ask questions. We have a doctor, Dr. Mathieu
14 Eugene. He's a doctor himself and we have another
15 doctor, Dr. Kendall Stewart and Larry and Ulrich
16 and Gale, we are scientists. We are political
17 scientists. So we're scientists too. So we're
18 loaded down here with scientists and doctors.

19 COUNCIL MEMBER EUGENE: Thanks a
20 lot my friend and colleague, Charles Barron. I
21 was going to ask a few questions, but you've
22 already answered my questions. I just want to
23 congratulate you and commend you for your
24 presentation. As a medical doctor, I know
25 everything that you say, I agree with you. I

1
2 remember when I started medicine; everybody was
3 taking about biochemistry being hard. Some of my
4 friends dropped out because they believed they
5 couldn't do biochemistry. In fact, it was not
6 true. One other thing, I was reading the paper
7 and it seems like the reason some of the minority
8 students didn't get into is because they've been
9 discouraged, as you said, and also they don't have
10 exposure or mentors. You said everything already.
11 We have to start mentoring those children, give
12 them exposure. I think you've started doing that
13 in Hunter College already. How can we all
14 together do a big, strong and powerful movement
15 and expand what you have been doing at Hunter
16 College? Because this is good, but the reality is
17 a lot of black, Spanish, minority students, they
18 still believe that science is something they
19 cannot reach or they cannot do. How can we work
20 together, elected officials, schools, faculties,
21 students and you? What can we do together to
22 really make a difference and change the
23 perception?

24 GILLIAN SMALL: I mean, obviously,
25 the first answer that usually comes to mind is

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2 resources because with resources you can pretty
3 much do anything. We have various examples of
4 pockets. There was a faculty member at City
5 College who said to me I'm making a relationship
6 with this high school in the Bronx. I'd like to
7 start a Saturday science program where we bring
8 the kids over on a Saturday morning and run a
9 science program. Can you help me fund it? I
10 said, sure, absolutely, we're 100% behind that.
11 We need more of those types of activities. We
12 could advertise something like that and provide a
13 few resources to bring the high school kids into
14 the labs on a weekend and run a little science
15 course for them. The kids love it. That's one
16 example, but you can think of many examples of
17 this type of thing, but we have limited resources.
18 I think the will is there to do it.

19 CHAIRPERSON SEABROOK: I think it
20 also is one of the things that we should look at
21 by partnering up with CUNY. I'm sorry, Gale. We
22 get our dollars that we should be putting in and
23 funding these types of Saturday programs.
24 Everybody doesn't do it. I do it with Botanical
25 Gardens. I'm saying that we could encourage all

1
2 of the others around the table to do it too. If
3 everybody did it, 51 members did it; we would be
4 in great shape. That would mean we could have one
5 in every district and the city will be covered if
6 everybody did it.

7 CHAIRPERSON BARRON: Council Member
8 Brewer?

9 COUNCIL MEMBER BREWER: Do you know
10 what Urban Advantage is? Have you ever heard of
11 it? Does anybody ever participate or anything?
12 Do you want to talk about? It's in the middle
13 schools. It's phenomenal. So go ahead, because
14 I'm the founder of it. That's why I wanted to
15 talk about it.

16 DR. MANDE HOLFORD: I'm familiar
17 with it through the American Museum of Natural
18 History. They've done it for a couple of years
19 where they invite students from different middle
20 schools to come to the museum and they experience
21 different projects. They spend a couple of times
22 a week actually or sometimes just on Saturdays,
23 depending on the commitment of the students and
24 the school that they're partnering with.

25 COUNCIL MEMBER BREWER: You just

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made my day. You have no idea. Go ahead.

COUNCIL MEMBER EUGENE: The program is set for what grade?

DR. MANDE HOLFORD: This one is focused on middle schools, so I think seventh through ninth grade, depending on the middle school you're attending, or sixth through ninth.

COUNCIL MEMBER BREWER: You all voted for it in the budget.

COUNCIL MEMBER EUGENE: What I'm trying to say is that I remember that my motivation--

CHAIRPERSON BARRON: [interposing] First I've got to ask, is the Council Member yielding her time to the gentleman?

COUNCIL MEMBER BREWER: Yes, as long as I get more time later.

CHAIRPERSON BARRON: Yes, ma'am.

COUNCIL MEMBER EUGENE: What I'm trying to say is my motivation to go into medicine and science I remember it started when I was in primary school in my country. It was very early. I'm from Haiti. I remember my teachers were talking about science and plants and things like

1 that and I was motivated since I was very young.
2 I think that we should start motivating the
3 children very early and put the love of science in
4 their mind very early and not only for science,
5 but everything that we are doing. We've got to
6 start very early in the schools to make sure we
7 give the right guidance in order for them to make
8 the right choice. I know that certain students
9 have been discouraged by their own teachers.
10 They're told they cannot go to science, that they
11 cannot do that. So we've got to think about that.

13 COUNCIL MEMBER BREWER: Thank you.

14 I think my issue is not to duplicate what already
15 exists. My colleagues, we don't always know
16 everything that's on the budget. I'll give them
17 that. But the issue is that the City Council
18 initiated all scientific institutions in the City
19 of New York, so all five boroughs is part of this
20 consortium. The City Council puts in some money
21 and this year they got a lot of corporate support
22 despite the recession, so that in addition to the
23 middle schools it's Saturday and all summer. So
24 any high school student, and my high school
25 students already know, who wants to apply for

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2 summer science at a museum, a scientific
3 institution, can do so. You've just got to let
4 them know about it. That will be continuing next
5 summer also. The reason I say this is I think
6 it's really important to partner. So if CUNY
7 wants to partner to have your labs, middle school
8 students and college students working together, I
9 think that would be terrific. This has become a
10 model for the world. There are people coming from
11 overseas and from other cities to see how they can
12 have the Department of Education and the
13 scientific institutions partner. It started
14 because a lot of the teachers have an English
15 license and they were teaching science, which was
16 not a good thing. The whole notion was to have
17 the scientific institutions partner with the State
18 Department of Education so that those teachers
19 become knowledgeable in the course which they're
20 teaching and not teach English when they're
21 supposed to be teaching science. Now we have
22 science teachers in the middle school teaching
23 science and we have this amazing consortium
24 multimillion funded. I just say this because I
25 don't want to duplicate what already exists. I

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2 suggest that when we talk about science, yes we
3 should start at earlier grades, but while we have
4 this amazing consortium we should partner and not
5 duplicate. So I just throw that out. It's
6 certainly in the Bronx, it's certainly in all five
7 boroughs where there's a scientific institution.
8 I just went to the fair, which I'm sure you were
9 at, at the American Museum of Natural History.
10 There were 2,500 middle school students. I was
11 the only Council Member, everybody was invited.
12 I'm saying we need to expand that program. You go
13 to the Botanical Gardens.

14 CHAIRPERSON SEABROOK: My point is
15 if every member would chip in, we could have it in
16 every district. Some people don't like going to
17 the Botanical Gardens.

18 COUNCIL MEMBER BREWER: The issue
19 is I think we should partner with the Botanical
20 Gardens and the American Museum and Science Museum
21 in Queens and make sure that CUNY is part of it
22 and that's my thing.

23 CHAIRPERSON BARRON: Thank you very
24 much for your comments. I'm going to stop this
25 little battle here. The bottom line is that we

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2 all have to do more. There is not enough done
3 around science in our communities. The reason why
4 we're having this hearing is to come up with ideas
5 on how we can expand on that which exists and
6 create that which does not exist to be able to get
7 our young people involved at a very early age and
8 those even later in life that might want to choose
9 to do this.

10 JILL BARGONETTI: Partnership I
11 think is a great thing. We're talking about
12 getting people interested early, but I also want
13 to point out that science is very creative.
14 Although I am now a scientist, when I went to
15 college, I went to SUNY Purchase, I was a dance
16 major. I think the partnership idea and when I
17 was talking about getting people to see that it's
18 cool, maybe partnering some music with science.
19 We talk about not being able to pass these tests.
20 Putting ideas about the math into rap and music
21 and having people do dance that associates things.
22 I think partnerships across will make young people
23 see different aspects. Science is very visual and
24 it's creative. So if somehow we can have these
25 programs that already exist, but couple in artists

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2 into these programs and get rid of this fear of
3 science and the recognition that science is really
4 around us in everything we're looking at. Picasso
5 was a scientist. All these ideas go across. So
6 if somehow we can make more of these science
7 programs less scary to people who maybe don't
8 think they want science but somehow it just
9 attracts them. It just caught me. It wasn't as
10 if I was saying I wanted to be a scientist.

11 CHAIRPERSON BARRON: Have you all
12 heard of the Liberty Science Center? I really
13 want to get one of those for East New York because
14 they make science fun. From forensic science to
15 oceanography or environmental science, they create
16 a lot of fun activities dealing with science and
17 that's very important. The other thing is to let,
18 particularly people of African ancestry, to know
19 that they're the fathers and mothers of science.
20 Most of it came right out of Africa. What
21 happened to us as are the fathers and mothers of
22 science? We brought most sciences to the world,
23 even though the Greeks took credit for stuff that
24 the Africans actually created. So how did we come
25 out of that continent coming into this American

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2 experience and we've got problems with numbers,
3 we've got problems with science when we're the
4 creators of science? We've got a lot of work to
5 do. I want to thank you very much for your
6 testimony. We have another panel. Thank you so
7 much. This was most enjoyable and valuable for
8 our committee.

9 TRACY UDELL: Virginia Valian,
10 Neepa Maitra, and Regina Miranda.

11 CHAIRPERSON BARRON: I want to
12 announce that Council Member Darlene Mealy from
13 Brooklyn has joined us.

14 TRACY UDELL: Please raise your
15 right hands. Do you swear and/or affirm that the
16 testimony you're about to give is to the best of
17 your knowledge truthful and accurate? Thank you.
18 Please remember to state your names for the record
19 before beginning your testimony.

20 VIRGINIA VALIAN: My name is
21 Virginia Valian. I'm a distinguished professor at
22 Hunter College and the CUNY Graduate Center. I'm
23 also the co-director of the Hunter College Gender
24 Equity Project. These are two of my colleagues
25 Neepa Maitra and Regina Miranda. The Hunter

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2 College Gender Equity Project, known as the GEP at
3 Hunter, was founded in 2002 through a five-year
4 award from the National Science Foundation of
5 \$3.75 million. Vita Rabinowitz, the current
6 Provost of Hunter College, and I were the co-
7 founders with the support of Hunter's president,
8 Jennifer Raab. You've heard a lot about Hunter
9 College so far today and we're happy to tell you a
10 little more about our initiatives. The GEP has
11 subsequently other awards from the National
12 Science Foundation totaling another \$860,000 with
13 the support of President Raab, Chancellor Matthew
14 Goldstein and Vice Chancellor for Research Gillian
15 Small, whom you heard from earlier. Our mission
16 is to lead the way in demolishing the glass
17 ceiling for women in science at CUNY and in the
18 nation. I'll tell you today of a few of our
19 initiatives and give you some data showing their
20 effectiveness. We believe we know how to improve
21 science and scientists at CUNY through a
22 combination of direct innovative programs,
23 analysis of hiring and promotion patterns and
24 periodic reviews of institutional procedures.
25 We've prepared a video of our sponsorship program,

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2 which shows our first signature. That's one of
3 the items that you received in your packet. In
4 that program we provided women with funds for
5 research, provided a sponsor, a senior and
6 distinguished person in the woman's field, but not
7 in her department, who received an honorarium in
8 exchange for reading and providing comments on all
9 of her paper and grant submissions, suggesting
10 conferences and meetings for her to attend,
11 introducing her to other senior people in her
12 field and providing advice about her career. The
13 GEP also provided workshops to address every
14 aspect of academic life, from the first three
15 minutes of a presentation to handling rejection to
16 balancing one's responsibilities. Finally, the
17 GEP co-directors and senior staff provided
18 professional advice on an ongoing basis. Two of
19 the beneficiaries of that program are here today
20 to my right, Regina Miranda and Neepa Maitra.
21 More of those beneficiaries would be here, but
22 they are conducting research in Ghana, giving
23 presentations in South Africa, attending
24 scientific meetings in the United States, or
25 finishing final revisions on papers to journals.

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2 Thirty women faculty in the natural and social
3 sciences participated in the sponsorship program
4 between 2002 and 2008. Sixty percent of the women
5 were women of color. During that period, the
6 faculty earned over \$4.9 million in external grant
7 funding. That was more than six times the amount
8 of money that the GEP invested in them.

9 Statistical analyses show that they significantly
10 increased their research productivity, as measured
11 by the average number of papers and grants that
12 they submitted. Finally, the course releases that
13 some women used their research funds for gave them
14 time to provide one-on-one attention and mentoring
15 to students, giving the students the background
16 they needed to attend graduate school. Of the two
17 women here today, for example, Dr. Maitra had an
18 undergraduate who went to Harvard for graduate
19 work and Dr. Miranda had a master's student who
20 went to Yale. Students also play a role in the
21 GEP itself as work study students, interns and
22 research assistants at the undergraduate and
23 graduate levels. We used the sponsorship program
24 as a model for two new initiatives, a grant
25 writing program and a workshops program. We

1 secured funding from the NSF for three years,
2 \$500,000. Both of those programs are open to CUNY
3 faculty at the major senior colleges. The grant
4 writing assistance program is only open to women
5 because CUNY-wide data showed that women were
6 underrepresented among major grant recipients. To
7 evaluate the success of our program, we compared
8 participant's funding from just before they
9 entered the program in 2007 or 2008 to their
10 funding as of January of this year. In total, the
11 ten participants earned 23 grants, totaling over
12 \$2 million. Three statistic analyses showed that
13 participants submitted more grant proposals, had
14 more grants funded and published more articles,
15 books and book chapters after being in the program
16 than when they began. Our workshop series for
17 junior faculty, which is three days of workshops,
18 is open to men as well as women. Statistical
19 analyses that we ran showed that one year after
20 participating in the workshops, participants
21 published significantly more articles, books and
22 book chapters, had more grants funded, made more
23 keynote or invited addresses, and presented at
24 more conferences than when they began. In short,
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2 we have good evidence that our programs provide
3 faculty in the sciences with the resources, skills
4 and information they need to become successful in
5 their field and to develop students access to
6 research and science. Our major challenge is
7 funding. We are always looking for support.

8 Although the most gratifying part of the GEP is
9 helping to develop the talent of our faculty and
10 students, developing sound institutional practices
11 and reviewing equity benchmarks is equally
12 important. I will give just one example and refer
13 you to our website for other examples. We
14 conducted an analysis of offer letters sent to new
15 faculty in the sciences at Hunter and discovered
16 wide disparities from department to department in
17 how much relevant information was included in the
18 letters. There was also some indication of gender
19 differences. To correct that situation, the GEP
20 created a sample narrative template for the
21 letters and a template organized by category. The
22 offices of the deans now distribute both versions
23 of the template to all science department chairs
24 and require that they include all relevant
25 categories and offers made to new hires. The

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2 offices of the provost and the deans review all
3 science offer letters to ensure that they include
4 all the relevant categories before the letters are
5 sent out. We compared offer letters written
6 before and after introduction of the templates and
7 found that both the overall amount of information
8 in the letters and the amount of information in
9 women's letters relative to men's showed
10 improvement. This initiative demonstrates one of
11 our mottos. Gender is a window on institutional
12 effectiveness. When we query whether women and
13 men are receiving equal information and equal
14 treatment, we can discover that the practices need
15 improvement for everyone. What helps women helps
16 everyone. Thank you.

17 NEEPA MAITRA: I'm Neepa Maitra.
18 I'm on the physics faculty at Hunter College. I
19 benefited greatly from the Gender Equity Project a
20 few years ago when I first joined Hunter. There
21 are three major areas where I greatly benefited.
22 The first is the mentor aspect of it. When I
23 joined the Gender Equity Project it was in one of
24 my first summers at Hunter and it was the summer
25 in which I was writing the NSF career proposal.

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2 The funding that the GEP for a sponsor, a senior
3 professor in my field to review the proposal was
4 invaluable as I got very constructive feedback and
5 I could restructure the proposal and it was
6 ultimately successful. But also more broadly, the
7 mentorship of Virginia and Marie, the directors at
8 the time of the project, in a broad sense keeping
9 me on track as a beginning faculty member was
10 really very valuable and the support was great.

11 The second aspect I'd like to mention very
12 tangibly was the release time from teaching. I
13 had one semester of teaching and this really
14 helped me focus on my research, get stuck into the
15 projects. In particular, my children were very
16 young at this time, so the extra time that I had
17 was especially valued. Third, I tried to take my
18 students to the national physics and chemistry
19 conferences, but I used Gender Equity Project
20 money to fund an outstanding undergraduate student
21 to attend and international conference and present
22 his work. To this day he says it was one of the
23 best experiences he's ever had. He presented a
24 poster which was actually selected as one of the
25 four best in the conference and he was competing

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2 against graduate students and post-docs from
3 Europe and the U.S., so this was really exciting.
4 He's the student who is now pursuing a PhD at
5 Harvard. It was great that due to the Gender
6 Equity Project money that he could attend this.
7 It was a great experience. Thank you.

8 REGINA MIRANDA: My name is Regina
9 Miranda. I'm an assistant professor of psychology
10 at Hunter College. I conduct research on social,
11 cultural and cognitive factors that increase risk
12 for thoughts of suicide and suicidal behavior
13 among teenagers. The Gender Equity Sponsorship
14 Program, or GEP, was instrumental in providing
15 guidance in my career as a researcher and mentor
16 of students. As a junior faculty member who is
17 currently navigating the process of tenure and
18 promotion, I've just completed my fourth year at
19 Hunter; participation in the GEP afforded me an
20 advantage in understanding the requirements for
21 tenure and promotion. My relationship with my GEP
22 sponsor provided practical guidance in balancing
23 the research, teaching and service components of
24 my position and also assisted me in maintaining
25 focus in my research. Finally, the GEP's

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2 financial sponsorship enabled me to involve more
3 students in my research. Outside of my classroom
4 teaching, since the fall of 2005, I've provided
5 individual research mentorship to close to 30
6 undergraduate, master's level and post-
7 baccalaureate students, some of whom have co-
8 authored manuscripts with me. Others have
9 enrolled or will enroll in mental health related
10 graduate programs at institutions such as the
11 University of Miami, Yale University, Columbia
12 University and Adelphi University. The GEP
13 sponsorship was very critical in allowing me to
14 provide that mentorship to students.

15 CHAIRPERSON BARRON: Well thank you
16 very much for your testimony. Is the suicide rate
17 increasing and what are some of the variables?

18 REGINA MIRANDA: Variables that we
19 study? Actually I study suicide among teenagers
20 and young adults. It's one of the top three
21 leading causes of death around the world among
22 individuals between the age of 15 and 44. What I
23 study specifically are ways of thinking that lead
24 people to consider suicide and specifically
25 hopelessness, how people develop hopelessness

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2 about the future, which is a strong predictor of
3 completed suicide above and beyond mental health
4 variables like depression and substance use.

5 CHAIRPERSON BARRON: Like
6 hopelessness really leads to the depression and
7 some of the other things?

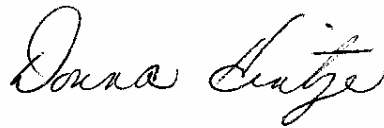
8 REGINA MIRANDA: Hopelessness leads
9 to depression, but also independently of
10 depression, it actually predicts suicide. It's
11 the point at which people feel that there are no
12 other options available that they fall into
13 complete despair and consider suicide. The
14 process by which that happens is one of the things
15 that we're studying. Also, there are very few
16 studies among racial and ethnic minorities and
17 specifically among young people of racial ethnic
18 minority background. So some of the research that
19 we're conducting is seeking to examine culturally-
20 related variables like stress around the process
21 of acculturation, or adapting to the dominant
22 culture and also perceptions of discrimination or
23 experiences with discrimination and their impact
24 on suicidal behavior and suicidal thoughts among
25 young people.

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CHAIRPERSON BARRON: Thank you.
Any of my colleagues have any questions? Thank
you very much for your testimony. This has been a
great hearing for us and we have it all recorded.
Certainly we heard some of the ideas and
suggestions and there's a need for more funding to
keep things going. We want to thank you so much
because you added so much to the great information
that we received from this hearing and we'll be
gathering that information together and put it to
some good use. Thank you very much for your
testimony. I want to thank all of you for coming
out and that ends our hearing. This hearing is
adjourned.

C E R T I F I C A T E

I, Donna Hintze certify that the foregoing transcript is a true and accurate record of the proceedings. I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.



Signature_

Date July 23, 2009