

ROAD TO THE CUNY CONSORTIUM FOR MINORITY PARTICIPATION IN SMET

We have discussed in these pages our ideas on the structure, activities and interactions that will continue as we proceed through LSAMP Phase II, into LSAMP Phase III, and continue to aggressively address the continuing challenges with which we are faced, with regarding minority participation in SMET. We have also looked to CUNY and other LSAMP programs around the country for models of funding, management and operational structures, and strategic partnership formations that will complement the expectations and historical mission of CUNY. What follows is excerpted from the Executive Summary of the proposed CUNY Consortium for Minority Participation in Science, Mathematics, Engineering and Technology.

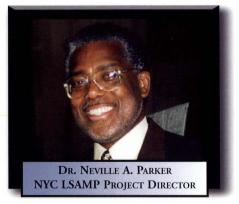
International competitiveness in the science, mathematics, engineering and technology (SMET) arena in the 21st Century will increase the demand for a scientific and technologically skilled and literate workforce. Participation in

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the enterprise from all segments of the population is paramount to our nation's continued success. We have proposed the formation of the City University of New York (CUNY) Consortium for Minority Participation in Science, Mathematics, Engineering, and Technology (CCMP-SMET) as a successor to the New York City Louis Stokes Alliance as we move into our tenth year of existence in CUNY. The consortium will be charged to continue to use a comprehensive approach to this critically important issue and continue the progress made in the City University of New York over the last nine years.

The mission of the proposed City University of New York (CUNY) Consortium for Minority Participation in Science, Mathematics, Engineering, and Technology (CCMP-SMET) is maximum contribution to full participation of traditionally underrepresented minorities in local, state, and national SMET enterprises. The goal is to increase minority SMET enrollment and graduation rates in associate, baccalaureate and graduate degrees at CUNY colleges to a level of parity, consistent with overall enrollment demographics. Underrepresented minorities are defined here as African American, Hispanic American, Native American and Native Pacific Islanders.

The groundwork for the CUNY Consortium for Minority Participation



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in SMET (CCMP-SMET) has been laid by the New York City Louis Stokes Alliance for Minority Participation implemented (LSAMP), as 2 Cooperative Agreement with the National Science Foundation (NSF) in 1992, and funded through October 31, 2002 at a level of \$1M per annum. Matching funds from the University have risen to \$430K per annum, to which has been added collective campus cost sharing of \$2M per annum. These funds have been devoted to:

- Restructured curricula in SMET
- Research assistantships for undergraduate and graduate students
- Salaries for activity coordinators and tutors
- Release time for faculty participants
- An extensive faculty mentoring network

This has facilitated the continuing development of a comprehensive system-wide approach to SMET in CUNY, and cultivation of a heightened interest in SMET among underrepresented minority students.

NEW YORK CITY ALLIANCE NEWS

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NATIONAL SCIENCE FOUNDATION, LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

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New York City Alliance News

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The New York City Louis Stokes Alliance for Minority Participation is funded under a cooperative agreement with the National Science Foundation. Since 1992, minority undergraduate enrollment in SMET courses has increased from 4,216 to 6,976 in 2001. In that same period, those baccalaureate degrees earning increased from 404 to 755 per year. The total number of minority graduates since 1992 exceed 5,800. These represent enrollment and graduation increases of 65% and 86%, respectively. CCMP-SMET will intensify these activities to provide the conditions needed to more than double the graduation rate to 1,500 per year in the SMET disciplines by 2007. Similarly, graduation at the two year colleges will be a sig-

nificant contributor to the SMET pipeline, and must reach levels of 500 per year by 2007.

The University continues to maintain its role as one of the

largest public Urban University systems, combining and balancing the roles of teaching, research, and service. CUNY's progressive role as a leader in workforce development, education and research at the undergraduate and graduate levels will be significantly enhanced by moving this comprehensive approach to a platform that will produce programmatic synergy system-wide. Investments via federal, state, local, and industry stakeholders in the University with emphasis on the SMET disciplines, will be enhanced by creating CCMP-SMET as an established and chartered unit within CUNY. It will enhance the University's traditional role in New York City as the provider of access to excellence.

CUNY's role as a Minority Serving Institution (MSI) gives the University preeminence in the nation on issues that resonate on the national agenda of opportunity, remaining vigilant on issues central to the continued role of preparing minority students for the 21st century. The University's minority graduates have returned as faculty members and administrators, contributed to the financial, political, education, arts, and cultural institutions of the New York City area. The institution remains as a pipeline for minority graduates in the SMET disciplines, and feeder institutions at the baccalaureate, graduate levels, and professional schools.

The consortium will assemble Governance, Advisory, and Support Boards aimed at substantially increasing the number of underrep-

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resented minority students who participate in the science, mathematics, engineering and technology programs of the University. The consortium will provide leadership, consultation, strategic

planning, implementation, and support to the University and its partners. The multicampus initiative will analyze and recommend grants, and work collaboratively with faculty, administrators and staff to enhance and promote student, faculty and staff success. The consortium will work cooperatively with key stakeholders and CCMP-SMET partners to place students in experiences for professional development. The consortium will work in concert with University project directors, project administrators, steering committee members and faculty to further develop and implement a comprehensive program that will result in increased philanthropic endowment and grant funding, private contracts, recruitment of top caliber students and faculty, and awareness of the CCMP. The initiative we are proposing would be approved to start in the Summer of 2002, with expansion and implementation during the Fall of 2002.

New York City Alliance News

"A NEW TAPESTRY OF SCIENCE" INTERWEAVES HISTORY AND EXPERIENCE Reproduced with permission from the Society for Advancement of Chicanos and Native Americans in Science (SACNAS)

It is hard to describe the feeling of 1600 like-minded people gathering in one place. The amount of energy and intellect that is present in a room of SACNAS: scientists who are learning from each other, mentoring each other, and encouraging each other is tremendous. Perhaps it is best described by the hoop dance that was performed during SACNAS the 2001 National

Conference annual Pow Wow. The hoop dance is an intricate balance of grace and concentration, where the dancer spins around and simultaneously creates a web of designs out of multicolored hoops. Dancer Kevin Locke explained that the hoop dance "is a vision dance, celebrating cohesion, unity, and the blossoming of a community that is soaring on the wings of knowledge."

In the aftermath of the

September 11th attacks on America, the SACNAS Conference stood out as a beacon of community and healing. 1600 people gathered in Phoenix, Arizona from Wednesday, September 26th through Sunday, September 30th to pay tribute to the diversity of the scientific community and to celebrate the endurance and success of Chicano and Native American scientists.

The conference was successful even before it officially began. The Native American Cancer Research Initiatives held a Genetic Education for Native Americans (GENA) pre-conference session where cultural issues related to genetic research, science, education and careers were addressed. One participant marveled, "We are having the kind of intimate and challenging discussions that I have come to expect from SACNAS meetings."

Dr. Maria Elena Zavala, SACNAS President, formally launched the conference on the night of September 26th with a moment of silence in recognition of the lives lost on September 11th and a call to work for peace, understanding and respect. Mr. Jose Ramon of the Tohono O'odham lit sage, blessed all directions, and invoked a spirit of endurance when he said, "Good evening



Evers College), Lois Johnson (NYC Technical College), and Dr. Thomas Windham (SOARS Program)

relatives. I am honored and privileged to offer this blessing for you. You have every right to be here and to pursue your careers. We have come a long way."

Dr Eloy Rodriguez of Cornell University further cultivated a sense of purpose for the evening when, during his dynamic keynote address, he urged students to foster "the love and wonderment of research to the point where you are dreaming, eating, and sleeping science!" Dr. Rodriguez was first in the line of keynote speakers throughout the conference that included Drs. Ana Cristina Cadavid, Judith Salmon Kaur, Don Davis, Peter Bennet, Gladys Escalona De Motta, and Carlos Castillo-Chavez.

Following on Wednesday night's keynote address the annual "Conversations with Scientists" was held. As SACNAS was honored to have many of its founders in attendance, stu-

dents were able to meet informally with people like biologist Dr. Vernon Avila, mathematician Dr. William Velez, and physical scientist Dr. George Castro. "Conversations with Scientists" is a true intergenerational forum where a distinguished biomedical scientist like Dr. Maggie Werner-Washburne can lean across the table, make a direct connection with a nineteen year old undergrad-

> uate and say, "So, what do you want to study?"

Starting Thursday on morning, the conference ran on two concurrent tracks: K-12 Teacher Workshops and Student and Professional Development. The K-12 workshops provided hands-on science curricula for teachers as well as helping address the cultural backgrounds of their students. Sessions topics included creating equitable math and science learning environments, bringing eld-

ers into the classroom, experiencing chemistry, and integrating hands-on earth and space science into the K-12 curriculum. The Student and Professional Development Track included poster presentations by undergraduates, oral presentations by graduate students, and scientific symposia in a wide range of disciplines including adaptive optics, earth sciences, developments in chemistry and the evolution of social and sexual behavior. In addition there were a number of workshops on a wide range of topics including writing grants, creating successful graduate school applications, and balancing home, work, and culture.

There were three off-site visits during the conference. On Wednesday night teachers were invited to the Arizona Science Center where all of the exhibits were open for leisurely exploration. On Friday, potential graduate students continued on page 6

Alliance Summer activities have grown to include a CUNY based Summer Research i LSAMP and Carver scholars, NASA Research and Teaching components, Transitio



ENTERING FRESHMEN AND TRANSFER STUDENTS, CO PROYECTO ACCESS AND CUNY PIPELINE PROGRAM COMPONENTS INCLUDE COLLABORATIONS WITH BROO OTHER DEPARTMENT OF ENERGY RESEARCH SITES. OVER

> IN RESEARCH AND OPPORTUNITIES AROUND TH Universities, Industry settings. Three scholars in MIRT programs.

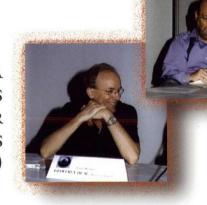
LSAMP Summer Research Conference

The NYC LSAMP Undergraduate R e s e a r c h P r o g r a m continues to be the heart of the NYC Alliance. The approach I n c L u d e s



PRE-RESEARCH EXPERIENCES ON OR OFF CUNY CAMPUSES, RESEARCH ENRICHMENT AND CAREER DEVELOPMENT, AND RESEARCH. THE 2001 LSAMP CUNY SUMMER RESEARCH COMPONENT DREW PARTICIPATION FROM 50 LSAMP SCHOLARS. FROM INCEPTION, 230 LSAMP SCHOLARS HAVE EARNED BA OR BS DEGREES. IN 2001, 200 AMP RESEARCH SCHOLARS WERE INSTITUTIONALIZED.

The NASA Goddard's Institute for Space Studies (GISS)

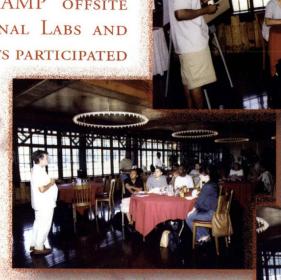


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29 OF THE SELECTED ACTIVITY COORDINATORS RECEIVED UNDERGRADUATE DEGREES IN SMET FROM CUNY, AND 15 HAVE OBTAINED MASTERS DEGREES FROM CUNY. 17 ARE CURRENTLY PURSUING MS DEGREES. FOR THE 2000-2001

ACADEMIC YEAR, 15 OF THE SEVENTEEN ACTIVITY COORDINATORS WERE NYC LSAMP RESEARCH SCHOLARS OR PEER TUTORS. FROM 1997-2001, 1 HAS COMPLETED A DOCTORAL DEGREE AND 4 ARE CURRENTLY PURSUING PH.D. DEGREES IN CUNY IN CHEMISTRY, CIVIL ENGINEERING, AND EARTH AND ATMOSPHERIC SCIENCES. Activity Coordinator Retreat

NYC LSAMP, AND CUNY'S COOPERATIVE AGREEMENT FOR THE NASA GISS INSTITUTE ON CLIMATE AND PLANETS (ICP) HAS BEEN IN OPERATION SINCE 1994. THE NASA-ICP IS SEEN AS A MODEL FOR THE NASA'S INTERACTION WITH MINORITY UNIVERSITIES ON THE NATIONAL LEVEL. THE ICP INVOLVES NYC LSAMP STUDENTS AND FACULTY FROM FIVE CUNY CAMPUSES,

> AND MINORITY STUDENTS AND FACULTY FROM NEW YORK CITY HIGH SCHOOLS IN RESEARCH PROJECTS WITH NASA SCIENTISTS. NASA data and multimedia courseware based on ICP research findings are being placed on the Internet for dissemination to all CUNY campuses and NYC high schools, as well as for national distribution (http://icp.giss.nasa.gov/).

AMP MENTOR AND GOVERNING BOARD REPRESENTATIVE WINS NAVY LEAGUE AWARD Reproduced with permission from CUNY Matters

A Hunter College physicist highly regarded for his mentoring of minority science students, Dr. Steven Greenbaum, will receive the Roosevelts Gold Medal for Science from the New York Council of the Navy League of the United States, a civilian organization.

A very productive researcher in advanced forms of energy storage, Greenbaum's work has produced applications in many areas, including more efficient household electrical consumption, electric cars, compact power

SACNAS continued from page 3

toured Arizona State University where a panel of faculty and graduate students discussed the facilities and operations of various research laboratories housed on campus. Other conference participants toured the federal laboratories at the Agricultural Research Service (ARS), which is the main research arm of the U.S. Department of Agriculture.

On Saturday evening, the 29th of September, SACNAS was proud to present awards to promising students, distinguished teachers, and scientists. Undergraduate and graduate students were awarded monetary prizes and fellowships sponsored by SACNAS, Eli Lily, and the Endocrine Society, for the quality and accuracy of their scientific work in their poster and oral presenta-Undergraduates were awarded tions. \$250 and graduate students were awarded \$2,500. SACNAS and the National Institute of General Medical Sciences (NIGMS) presented five SACNAS Neuroscience Fellowship Scholarship Awards, where students were awarded attendance at numerous conferences, including SACNAS and the Society for Neuroscience Annual Meeting, participation in summer research at NINDS or other academic research institutions, and meetings with prominent neuroscientists to plan careers in basic and clinical research in the neurological sciences.

sources for smaller spacecraft, and lighter, more efficient power sources for military communications gear. The Roosevelts Medal will cite him for "contributions to our country and particularly our national security."

Among students who have served on Greenbaum's research group are two of only six African American women to earn Ph.D.s in physics at the Massachusetts Institute of Technology.

He earned his own doctorate at Brown

Mr. Mario Godoy-Gonzalez was honwith the 2001 SACNAS ored Distinguished K-12 Educator Award. Mr. Godoy-Gonzalez, a teacher at Royal City High School in Royal City, Washington, was unable to attend but sent a message of gratitude via colleague Ben Orth, in which he said, "Thank you SACNAS for this great honor. Thank you for keeping Caesar Chavez's dream alive and proving that 'Si se puede' is still 'el grito de la raza.'" The 2001 SACNAS Community College/Tribal College Mentor award was presented to Dr. Vama Robson of Dine Community College. Dr. Robson thanked her team of colleagues saying that this award was made possible only through the spirit of collaboration. She also reminded the audience of Chief Manuelito's guiding words, "My grandchild, education is the ladder. Tell our people to take it." Dr. Carlos Robles of California State University, Los Angeles, received the SACNAS Undergraduate 2001 Institution Mentor Award. In a moving speech where he emphasized the importance of grasping opportunities, he said, "I am awestruck by the possibilities in the air at this SACNAS conference. At SACNAS we celebrate ethnic diversity and difference in a world in which ethnic hatred is rampant and where genocide is a normative behavior. We embrace the equality of women when their subordination is often a matter of

University, has been a Fullbright Scholar

at the Weizmann Institute of Science, and has conducted research with both the Naval and Army research Laboratories.

Greenbaum is also a key Hunter organizer of the "College Now" collaboration between CUNY and the NYC Board of Education that introduces outstanding high school students to credit-bearing college-level work.

convention or doctrine. Most importantly, at SACNAS we work for opportunities. Opportunities that break down class differences and give our community access to institutions that have been the most exclusive and elitist in our societv." The last presentation of the evening, the 2001 SACNAS distinguished Scientist Award, went to Dr. Carlos Castillo-Chavez of Cornell University. Dr. Castillo-Chavez said with great emotion that although he had been the recipient of other awards, "There is no greater honor in life that being recognized by your own community."

In a country where Chicano and Native American scientists are often pressured to choose success at the cost of identity, the SACNAS conference provides a vital forum that blends science and tradition. This coming together of parts was exemplified by the conference's cultural events, scientific sessions, intergenerational collaboration, and Dr. Maria Elena Zaval's words, "If you don't know where you are from, you can never know where you are going." The 2001 SACNAS gathering was truly a celebration of the past and a time to fortify the future generation of Native American and Chicano scientists for the long journey ahead.



A MESSAGE FROM ICP STUDENT RESEARCHERS

Hope Stevenson New York University Leon Abbo Bronx Science

clouds

Marquise McGraw Bronx Science

carbon and climate, and the study of

Consequently, as the summer goes by,

our collective knowledge will grow

future

storms.

and

Angela Padilla Hunter College Sonjae Wallace York College



The GISS Institute on Climate and Planets (ICP) exposes us to the true research experience. ICP provides indepth knowledge about climate that is our main research focus. This is

accomplished through working with a diverse community of scientists, educators, and students at many levels.

Doing research is analogous to looking at a problem; it requires a solution. The true research experience enables us, as researchers, to be in the driver's seat on that road to a better from our separate inquiry. The new understandings we are a part of creating will contribute to benchmarks in the study of climate. Knowing that we are actively involved in this ongoing and endeavor makes the experience most true rewarding. gies a s innat is Every day we are challenged to think We a mun **INTERNATIONAL AFFAIRS**

studying a problem that is driven by science questions, looking at facts that climate data offer, and being open to whatever research results we get. We learn to think for ourselves, to be inquisitive, and to seek out our own answers - skills that are vital in today's workplace. In addition, we are able to interact with people of many backgrounds, cultures, and political ideologies and learn from one another.

We are proud to be a part of a community that is ever-growing and



actively contributing to furthering knowledge about the world's climate and in turn, allowing the average person to be more informed about climate change in our society. We recognize that our awareness and knowledge can make the

understanding. Collectively, as a community of researchers, we have one goal - to understand global climate. As we have learned, this is far more complex than it sounds. Therefore, we are delving into several current questions about climate and climate change dealing with: ocean modeling, vegetation and climate, aerosols and asthma, alternative climate scenarios, global methane, are gaining the ability to be objective about climate change, a problem that is making the news and requiring average citizens to form opinions about decisions concerning the environment and our lifestyles.

The climate problem is global in scope and often blurred by various political views. Our objectivity will come from difference between passive and active citizenship.

For more information on the NASA-ICP, visit the Nasa ICP web site *AT* http://icp.giss.nasa.gov

DECEMBER 2001



THE 5TH ANNUAL URBAN UNIVERSITY CONFERENCE Celebrating Ten Years of Alliance Activities

The Fifth Annual Urban University Conference – Celebrating Ten Years of Alliance Activities, will be held at the City College on April 18th and 19th, 2002.

Dr. Rita R. Colwell, Director of the National Science Foundation is scheduled to deliver the Keynote Address on Thursday April 18th.

Held annually since 1998, the conference has attracted 200 participants in 1998, and over 500 participants in 1999, 2000 and 2001. The conference serves to highlight the research work done by faculty and CUNY students involved in undergraduate and graduate research, serve as a networking event for other minority scientists and engineers, and as a forum for students to gather information on internships, graduate programs, and employment.

There is a considerable need to encourage more minority students to pursue careers in Science, Mathematics, and Engineering, be it in government, industry or academia. Alerting these students to the pathways at the earliest stage is important. It is also extremely important that we demonstrate that these pathways exist and can be achieved.

Central to the City University's mission of access and excellence are the undergraduate research programs across the University supported by the National Science Foundation, the National Institutes of Health, the Department of Energy, the Mellon Foundation, Carver Bancorp Foundation, the Pfizer Foundation, Bristol Myers Squibb Foundation, the Sloan Foundation, the Department of Education, New York State Education Department, and NASA.

Learning communities across CUNY have contributed immensely to the University graduating over 5,800 minority graduates between 1992 and 2001. Building on existing strategies and successes of the past, and initiating new relationships between, industry, academia, foundations and agencies, the event should serve as a forum for key stakeholders, minority students, scientists and other professionals.

REGISTER ONLINE FOR THE 5TH ANNUAL URBAN UNIVERSITY SERIES @ HTTP://NYC-AMP.CUNY.EDU



The City College of New York Convent Avenue and 138th Street Building Y - Room 313A New York, NY 10031

New York City Louis Stokes Alliance