

NYC LSAMP Scholars discussing their research in a group setting.

Opportunities for student development across the City University of New York are central concepts of the NYC LSAMP model. It is a model that includes seventeen units of the City University and has for over a decade allowed for research training of students at the community colleges, the comprehensive colleges, senior colleges, and the CUNY Graduate Center.

Early intervention via the research assistantship in the freshman or sophomore years at the community college, comprehensive college or senior college proves invaluable to students. It allows for suc-

A MODEL OF CUNY COLLABORATION

cessful transfer to programs such as the Minority Access to Research Careers (MARC) program. Six LSAMP Scholars from the New York City College of Technology, Brooklyn College and Queens College will be MARC scholars for the upcoming 2004-2005 academic year. From 2000-2004, eight LSAMP scholars have continued their research training as participants in MARC programs at the City College, Hunter College and Brooklyn

College. Faculty collaborations at the New York City College of Technology and Medgar Evers College often lead to direct placement in a research laboratory.

University support of Biomedical Science initiatives through the Alliance reach beyond the undergraduate level. Currently, six LSAMP graduate scholars have been advanced to candidacy at the CUNY Graduate Center in Biomedical Science related disciplines. From 2000-2004, seven have been awarded the doctoral degree, and three have completed the MS degree and are now first or second year doctoral candidates at the CUNY Graduate Center. Collaborations with the Biomedical

AMP Facts

FROM 2002-2004

- 16 LSAMP Activity Coordinators enrolled in Doctoral programs.
- 11 LSAMP Activity Coordinators continued their graduate studies in Doctoral Programs at the CUNY Graduate Center.
- 11 LSAMP Scholars completed their Doctoral Degrees at the CUNY Graduate Center.
- 80 LSAMP Scholars received Baccalaureate degrees.
- 30 graduates are now enrolled in professional school or graduate school.

Engineering Program at the City College over the last four years have produced five LSAMP research scholars receiving BS degrees with a Biomedical Engineering option, and six are participating at the graduate level.

An integral component of LSAMP is the participation of community college students in research activities at their home campus, and the successful transfer to a senior college for BS degree completion. For the 2000-2002 period, thirty-five LSAMP Scholars at community colleges transferred to senior colleges within CUNY for degree completion. Borough of Manhattan

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**NATIONAL SCIENCE FOUNDATION,
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Design/Printing: 3D Studios

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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.

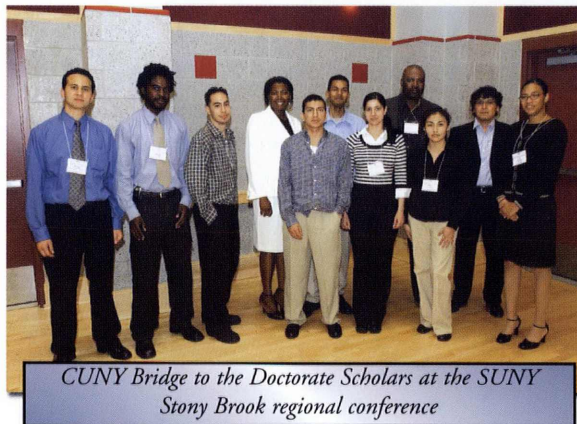
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Community College (BMCC), Bronx Community College (BCC) and LaGuardia Community College (LaGCC) led with ten, eight and six transfers, respectively. Hostos Community College (2), Kingsborough Community College (4), and Queensborough Community College (5) account for eleven of the thirty-five transfers. Three LSAMP Scholars who began their research assistantships at community colleges are now NYC LSAMP Bridge to the Doctorate Scholars. Three community colleges of CUNY (BMCC, BCC and LaGCC) as well as NYC

College of Technology, and to a lesser degree York College and Medgar Evers College, serve as feeder institutions to the City College School of Engineering.

As the only doctoral degree granting unit of CUNY, the Graduate Center benefits from the at-large faculty pool and senior college units where the majority of Science and Engineering research is conducted. From 2000-2004, eighteen LSAMP Scholars enrolled in Doctoral degree programs at the CUNY Graduate Center.

AGEP at SUNY Stony Brook: A Gathering of Science Scholars



The Center for Inclusive Education at Stony Brook University hosted a regional conference on Friday, April 30th, 2004 geared towards undergraduate and graduate underrepresented students in science, mathematics and engineering. A series of workshops provided

students with valuable skills on scientific public speaking, the graduate school admissions process, and successfully securing graduate fellowship opportunities. Notable presentations included the keynote luncheon address delivered by Dr. Carlos Castillo Chavez, Joaquin Bustoz Jr. Professor of Mathematics at Arizona State University - 'Building and Linking Communities through Mathematics', and Dr. John Delano, Distinguished Teaching Professor of Earth and Atmospheric Sciences & Chemistry, University at Albany 'The Joy of a Career in Teaching and Research'.

The CUNY contingent included students from Medgar Evers College, Hunter College, Lehman College, Brooklyn College, College of Staten Island, City College and the NYC LSAMP Bridge to the Doctorate Scholars. Participants also had the opportunity to present their research findings and interact with faculty and administrators at the symposium in networking sessions.

For more information on the SUNY AGEP program visit the web site at <http://www.sunysb.edu/agep>

NYC LSAMP Scholars - In Their Own Words

Ivan Ramirez

*Borough of Manhattan CC/Hunter College - Environmental Science
Mentor: Haydee Salmun*

I completed my Associates Degree at Borough of Manhattan Community College, and I am currently pursuing a BS degree in Environmental Studies at Hunter College. After ten years of working in marketing,



sales, and advertising, I decided to embark on a more intellectually rewarding career path that will better prepare me to contribute to society in more meaningful ways. During the winter break of 2004, I participated as a research assistant in the Earth and Environmental Science Laboratory, identifying large data sets of atmospheric field observations and compiling information on meteorological stations, land-surface types, and the instruments used in field campaigns conducted over



the Southern Great Plains. This unique opportunity has afforded me a preview of scientific research in an academic setting and has motivated me to pursue a higher degree. After completing my studies at Hunter, I plan to enroll in a doctoral program and investigate the impacts of anthropogenic changes on climate due to land use such as agricultural practices and deforestation, and its social and economic implications.

ESTIMATING PLANETARY BOUNDARY LAYER HEIGHTS FROM BOREAS DATA

The work is a component of a larger research project which aims to understand and assess the impact of land surface heterogeneity on the global water cycle and hence on global climate. The height of the planetary boundary layer (PBL) is an important indicator of processes that occur near the earth's surface. The seasonal changes in PBL heights are related to how much carbon is released into the free atmosphere, and daily variations are related to the timing and amount of cumulus convection, cloudiness, and rainfall. This research estimates of PBL heights based on radiosonde observations taken over the Boreal forest in Canada. The turbulence in the PBL mixes the air properties, and so the PBL height is identified as the level at which there is a sharp change in the temperature and relative humidity. PBL heights are found to be higher in springtime than in the summer at all stations, despite the warmer summertime temperatures. The PBL estimates agree well with independent aircraft observations of inversion heights at one station.

Yurintzy Estrada

*Civil Engineering - City College
Mentor: Michel Ghosn*



I was born in Mexico, and have been living in New York City for over nineteen years. My interests in science and mathematics started very early, but I did not learn about careers in these fields until high school. I attended Brooklyn Technical

High School, majored in Architecture, and participated in two engineering programs during high school at Manhattan College and an ACE sponsored Mentor program. Currently I am attending The City College of New York and working towards my BE degree. Working with Professor Ghosn gives me an opportunity to learn from graduate students in the civil engineering department, and to familiarize myself with the research of other professors. After finishing my

degree in civil engineering I plan to continue my education in graduate school, and work several years as a civil engineer before taking the PE exam. I believe it would be most beneficial for my career goals to earn either a MS degree in Civil Engineering with a concentration in structures or a graduate degree in Business Administration. With this extensive education and its credentials, the world of engineering would be open for my success.

ANALYSIS OF MEMS DATA FOR SAFETY ASSESSMENT OF CONCRETE STRUCTURES

Concrete infrastructure systems in the United States are deteriorating at an alarming rate due to their increased exposure to harsh environmental conditions and increased loads that are higher than those for which they were originally designed. The objective of this research project is to study the possibility of using new sensors capable of monitoring the existing damage in concrete structures using the latest technology in Micro-Electronic-Mechanical systems (MEMS) devices and utilize this information to predict the future expected life of concrete structures. The analysis will be based on a Finite Element simulation of the interaction between embedded MEMS and the surrounding concrete medium.

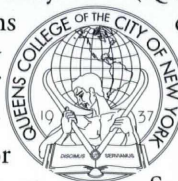
Carlos Penalzo

*Queensborough CC/Queens College
Biology - Mentor: Zahra Zakeri*

I was born in Valencia Venezuela, and completed my high school education at John Adams High School in Queens, New York. I continued my education at Queensborough Community College and obtained an Associates



Degree from Queensborough in May 2003. I then transferred to Queens College and plan to continue my education in the field of Biochemistry. After taking my first year of biology, I applied for a summer research program at State University of New York at Stony Brook, where I was able to conduct an independent research project. Most recently, I was named the Human Genome Scholar



(Queensborough CC) and participated in a genomics short course at the NIH for one week. I have also presented my work at the 226th undergraduate presentation conference for the ACS and at Cold Springs Harbor Laboratory. My future aspirations are to obtain a Ph.D. in biochemistry and to continue my research at a much higher level.

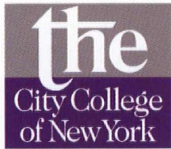
Carlos Penaloza

GENDER DIFFERENCES AFFECT CELLULAR RESPONSE

Many autoimmune diseases have exhibited variations in how they affect men and women. Genetic differences in somatic cells from deviations in chromosomal composition could in fact play a key role in how these variations are expressed. It is alleged that these gender differences are solely due to hormones, but this hypothesis does not account for the increased incidence rather than severity of some diseases in women. To investigate innate cellular characteristics, male and female ED 10.5 whole embryo; ED 17.5 liver, kidney, lung; postnatal 4 and 17 day kidney tissues were cultured in vitro then separately treated with the Influenza A virus, ethanol and camptothecin. Cell death was quantified 24–48 hours post-treatment. In general, our results indicate that there are differences between the sexes and how they respond to the different death inducers at the different developmental stages.

Okason Morrison

City College - Mechanical Engineering
Mentor: Jackie Li



I am a third year Mechanical Engineering major, with a minor in Science Education at The City College of New York. I complete high school in Jamaica and migrated to the United

States in 1999. I intend to pursue doctoral studies in aerospace engineering—primarily in the area of aero-structures. I was recently awarded a summer research internship at the University Corporation for Atmospheric Research (UCAR) in Boulder, Colorado. I am currently involved in a teacher preparation program aimed at producing competent Math and Science teachers in New York State. If I take this route, I will teach Mathematics or Physics at the high

school level, and perhaps later in academia. I am a mentor and advisor for student science fair projects in Washington Heights, as well as an assistant to Middle School teachers using hand-held computers in their science lessons. I am a student member of the American Society of Mechanical Engineers (ASME), the American Institute of Aeronautics and Astronautics (AIAA), Golden Key and Tau Beta Pi.

PROCESSING AND FABRICATION OF COMPOSITES USING VACUUM BAGGING

Composites are diverse mixtures of two or more homogeneous phases or materials, which have been bonded together. They possess properties unattainable from a single material and are lower in weight and higher in strength, and are used for numerous applications ranging from making lighter baseball bats to stronger, faster aircraft. Carbon fiber composite specimens were manufactured using a vacuum bagging technique. These composites consist of interlaced carbon (graphite) fibers in an epoxy matrix. The composite samples made thus far are simple in nature (primarily rectangular). However they exhibit a combination of high stiffness and low weight. Future work includes the mechanical testing of the composites as well as the manufacturing of more intricately shaped specimens. The mechanical testing will be done by applying biaxial loads to determine their mechanical properties in order to compare them with “Industry made” carbon fiber composites. Our long term goal is to use the vacuum bagging technique in an autoclave instead of an oven where the temperature can be controlled with more precision and a greater vacuum (negative pressure) can be reached thus producing a higher quality of composite specimens.

Moses Feaster

Brooklyn College - Biology
Mentor: Jennifer Basil

I am a junior at Brooklyn College, and I am pursuing a Bachelor of Science degree in Biology. After I earn my degree I plan to go on to complete a doctoral program in either Genetics or

Physiology. At some point, I would like to teach at my high school, The Lawrenceville School, where they maintain a trimester long Marine Biology/ Ecological studies program called the Island School in Eleuthera, Bahamas. The Island School has a 12-week long program that serves



Lawrenceville and other high school students, as well as a 2-week long summer program for members of the After School Academy of the Boy's Club of New York, where I currently work part-time. I would also like to conduct field research on how reef ecology affects the coastal populations, in comparison with those that live inland.

TACTILE EXPLORATION AND SPATIAL NAVIGATION IN PROCAMBARUS CLARKII

Crayfish primarily receive tactile information about their environment from their second antennae, which are long and flexible, and may extend up to a full body length from the animal. Crayfish may use their advanced tactile sense in order to navigate to escape predators and return to their burrows during nocturnal excursions or during particularly turbid conditions. In these conditions, it is especially important for the crayfish to learn and remember the topography of their home areas. In our laboratory setting, the crayfish were blindfolded in order to simulate these lightless conditions. We observed their exploratory behavior, which consists of a sustained contact with the arena wall using their antennae, and measured for habituation, a decrease in exploratory behavior, in which less contact was made with the arena boundaries after regular exposure to the arena. Cooling these ectothermic animals serves as an anesthetic, and we will determine whether cooling affects habituation by disrupting the learning process and preventing the formation of memories of the arena, which would result in an increase of exploratory behavior (dishabituation) in the successive trial runs.

Heavenly Anne Pilar

*York College - Biology
Mentor: Jack Schlien*

I am a Biology major with a minor in Literary Studies. I plan on completing my degree in Biology and going on to graduate school. Someday I would like to



be a professor of Biology and a mentor to help and encourage students to pursue a career in research and the sciences. I provide tutoring at York College in Biology, English and Physics. I am part of an upcoming association at York called North West North which has been started to

enhance the student community and its activities. I spent 2003 doing research at Hunter college in Dr. Victoria Luine's biopsychology lab under the tutelage of Marisa Gordon. I studied the effects of prenatal stress on monoaminergic neurotransmitters in rats using High Performance Liquid Chromatography (HPLC).

TECHNIQUES OF SCANNING ELECTRON MICROSCOPY AND THE STRUCTURE AND FUNCTION OF MOUTH SPINES AND PROPRIOCEPTORS IN THE LIMULUS POLYPHEMUS, HORSESHOE CRAB

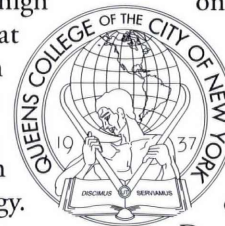
Known chemoreceptors are located around the mouth of the Limulus Polyphemus, Horseshoe Crab and are referred to as mouth spines. Known proprioceptors are located in the book gills of the Limulus Polyphemus, Horseshoe Crab. Both chemoreceptors and proprioceptors contain nerves within the cuticle. Sensations pass through channels in the cuticle to the nerves within. In order to view the nerves within the mouth spines both longitudinal and cross sections were made. To view the nerves within the proprioceptors only longitudinal cross sections were made. With the aid of the scanning electron microscope and the Image-Pro imaging system the nerves within the mouth spines and proprioceptors as well as other structures were made visible.

Steve Milord

*Queens College - Biology
Mentor: Prof. Pokay Ma*

I am an undergraduate senior at Queens College in the second year of my Biology major. I am also majoring in Anthropology. Though my journey into the discipline of Biology is a new one, I am excited at the challenge and impressed with the range of fields I can

go into within Biology. I received my elementary education at St. Jeromes in Brooklyn, New York. Part of my high school education was fulfilled at William Grady High School in Brooklyn and was completed at Valley Stream Central High School. In grade school I enjoyed a rich atmosphere is Science and Technology. Numerous mandatory science fair competitions increased and contributed to the cultivation of my interest in the Life



and Physical Sciences. Choosing Biology as my major was a decision I made based on my future interests, my past performance and interest in this subject. I have committed myself to becoming a scientist. My current research interest is now centered on Developmental Neuroscience. I plan to continue with my education and research at the graduate level.

PATTERNS OF NEUROMUSCULAR JUNCTIONS IN ZEBRAFISH

The purpose of this study is to examine the distribution of neuromuscular junctions on the muscles of goldfish to determine patterns distinct to specific muscles. Using Acetylcholinesterase enzyme histochemistry nerve endplates on dissected jaw, trunk, and rib muscles were stained and measured. Qualitatively, observations that displayed neuromuscular innervations with a higher proportion of junctions at one end of the muscle tissue were characteristic of the jaw muscles (adductor mandibulae). Poly-innervations in the trunk muscles were evenly distributed along the muscle fibers. Typical innervation patterns in the rib muscles showed a high distribution of nerve endplates towards the ends of the fibers as opposed to the middle. Quantitative analysis of the trunk, jaw and rib muscles have verified specific endplate patterns. The data attests that patterns in jaw endplate distances exhibited the smallest and least variable relative to trunk and rib endplates. Average trunk endplate distances were between jaw and rib distances and had a high variability. Rib endplate distances were the largest relative to the muscle groups studied, and had high variability among them.

Diogenes Trejo

*NYC College of Technology/
Brooklyn College - Chemistry
Mentor: Peter Spellane*

I am a recent graduate of the Chemical Technology program in New York City College of Technology and will be attending Brooklyn College in the Fall of 2004 majoring in Chemistry. I am a



graduate of Charles Dewey Junior High and John Dewey High School. After my first year at New York City College of Technology I quickly found that the chemistry department was the department for me. The courses were both challenging and stimulating. The professors always kept me on my toes and pushed me along the learning path. The attention provided by

the faculty and staff kept me going back for more. In the months and weeks leading up to graduation I grew anxious about what my academic future had in store for me. Knowing that I made the best of my time at New York City College of Technology calms me because I am prepared to take on whatever obstacles lie ahead.



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Diogenes Trejo

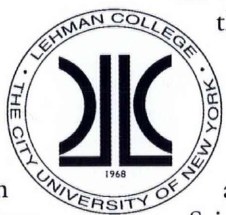
PREPARATION OF PORPHYRINS LEADING TO LINKED CONJUGATED POLYENES

Porphyrins are stable, highly colored, aromatic macrocycles that play an important role in many energy conversion processes. With these compounds we hope to model naturally occurring chlorophyll systems in which a Mg—porphyrin is covalently bonded to beta-carotene. Optical spectroscopy will be used to understand the energetic effects of the polyene substituent on the porphyrin macrocycle. Our target compounds are porphyrins covalently bonded to conjugated polyenes. We prepared freebase tetraphenylporphyrin (H2TPP) by the condensation of benzaldehyde and pyrrole in propionic acid. This product was isolated by chromatography on a wet silica gel column. Mono-nitration of H2TPP was achieved using fuming nitric acid. The product, mono-nitrophenyl-tri-phenylporphyrin, NO2TPP (purple crystals), was then separated and chromatographed. The mono-nitrated porphyrin was then reduced to an amino-porphyrin by tin(II) chloride in hydrochloric acid. The mono-aminophenyltriphenylporphyrin, NH2TPP, was then separated and chromatographed.

Jennifer Ross

*Lehman College - Anthropology
Mentor: Eric Delson*

I woke up one morning in 1998 and realized that my life was not going anywhere. I was seventeen years old and a high school drop out. I was in the wrong high school, and was getting into fights everyday. Being surrounded by drug dealers was not the way I wanted to spend the next four years of



my life. After that fateful morning, my life changed. I was in college by the fall of 1999. Over the course of my undergraduate career, I molded my plans by searching for where I fit best. My interests were always related to the Natural Sciences, so I started on the track to major in Biology. At that time, my greatest interests was in animal behavior, but my interests quickly broadened. I soon became interested in

Neurophysiology, and took on Psychology as a second possible major. During that time, I had also taken a course in Archeology and Human Evolution. This excited my interests further, because it encompassed such a wide range of possibilities - behavior and biology. I felt most at home. Today I continue to study Physical Anthropology in and out of a formal setting, conducting research and reading as many books as I can get my hands on.

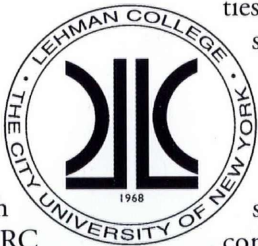
VISUALIZING ANCESTORS ON A PHYLOGENETIC TREE

Recent developments in geometric morphometric analysis have made it possible to better understand evolutionary patterns. Data has been collected digitally with a high resolution laser scanner, which takes millions of landmarks and creates a clear 3D image of the specimen, and with a multi-joint arm digitizer, with which landmarks are chosen and entered on the basis of their relation to one another. These specimens were incorporated as endpoints into a previously constructed cladogram or evolutionary tree which could be traversed to find intermediate or ancestral forms between them. This program can be used to determine the morphology of intermediate forms between living species (i.e. chimpanzees and humans). It can also be used to make inferences about specimens in the fossil record. An existing fossil can be compared to images created by traversing the cladogram to decide on its place in the timescale relative to its ancestors or it can be placed in the cladogram itself as an endpoint. The focus of this study is to test this technique on cercopithecines, a type of Old World monkey.

JoAnn Caban

*Bronx CC/Lehman College - Biology
Mentor: Liesl Jones*

Currently I am working with Dr. Liesl Jones analyzing calcium binding proteins involved in signal transduction. Having had research experience as a former MARC



scholar, confirms my desires for pursuing this as an ultimate career goal. The Hispanic and Black communities are underrepresented as scientific researchers. As a Hispanic woman, I would like to participate in the advancement of medical research to better serve these socio-economically challenged communities. I am working



towards a professional career in biomedical research, possibly in the field of Neuroscience. I plan to someday head my own laboratory researching the Neuropathophysiology of diseases such as Schizophrenia and Parkinson's disease.

ANALYSIS OF LOCAL CIRCUITRY IN THE PREFRONTAL CORTEX.

Schizophrenia is one of the most disabling of neuropsychiatric disorders. Much evidence suggests that a combination of multigenic factors and early developmental insults could lead to a variety of brain abnormalities involving both the cortical and subcortical structures. Scientific research has consistently demonstrated a hypoactivity of the prefrontal cortex (PFC) in schizophrenic subjects. This leads us to suspect brain abnormalities involving the local circuitry of the PFC. The local circuitry includes both pyramidal cells (excitatory inputs) and GABAergic interneurons (inhibitory inputs). These cells contain calmodulin, an important calcium binding protein fundamental in phosphorylation, CAM kinase cascades, and in preventing cytotoxicity of a cell. Given the central role of interneurons in the regulation of pyramidal cells, we hypothesize that the inhibitory inputs of the GABAergic neurons onto the pyramidal cells may be altered in subjects with schizophrenia.

**Annual Biomedical Research Conference
for
Minority Students
(ABRCMS)**

*National effort produces largest gathering of
undergraduate biomedical student researchers*

More than 2,500 head to Dallas.

Twenty-five hundred undergraduate minority student researchers and their mentors will gather in Dallas, Texas, to attend the 2004 Annual Biomedical Research Conference for Minority Students (ABRCMS), November 10-13, at the Hyatt Regency Dallas.

Believed to be the largest gathering of undergraduate minority biomedical student researchers in the nation, ABRCMS provides the needed forum for these researchers to showcase the strength of an underrepresented group, to present their research findings, and to demonstrate the success of a national 30-year effort.

For three decades, National Institute of General Medical Science (NIGMS) has been engaged in a strategic effort to increase the participation levels of underrepresented groups in scientific fields. Momentum for this effort is noted in programs like the NIGMS's Minority Access in Research Careers and Minorities in Biomedical Research Support programs that provide scholars with support and research opportunities at universities across the nation.

Annually, ABRCMS features the research of student scientists who are at the forefront of biomedical research. The conference is designed to encourage students to pursue advanced training the biomedical sciences, behavioral sciences or mathematics and to provide faculty mentors and advisors with resources for facilitating student success. The conference is also an opportunity for these students to flex scientific muscle by presenting their findings and compete for awards granted by national scientific associations.

"My experience at ABRCMS solidifies my passion and aspiration to pursue a biomedical career in the future,"

Conference Participant

These scholars are captivating the scientific community nationwide. In Orlando, New Orleans, and San Diego, their scientific presentations have shown remarkable research capacities and are giving hope to the biomedical field. But, it is not surprising that these young minority biomedical researchers are catching the eyes and ears of noted scientists and researchers, including Nobel laureates and surgeon generals.

The conference, "Meeting the Biomedical Research Challenges of the Future: A Celebration of Achievement," will include: Keynote address by Jackson, who is also president of the American Association for the Advancement of Science (AAAS); and a Think Big motivational talk by Dr. Carson; Scientific discussions on "Tgs101:HIV's Personal ESCRT"; "Nanotechnology: Tools Devices, and Biology"; "Health Disparities Among Underserved Populations;" and "Conus Peptides: From Venoms to Drugs;" Professional development sessions on career pathways in biomedical sciences; and Student research competitions in nine scientific categories with closing awards ceremony speaker John Alderete, Ph.D., professor of microbiology at the University of Texas Health Science Center at San Antonio.

This November, the president of Rensselaer Polytechnic Institute, Shirley Ann Jackson, Ph.D., along with renowned neurosurgeon Benjamin Carson, M.D., of Johns Hopkins University; and a host of other leading scientists will meet the students.

ABRCMS is sponsored by the National Institute of General Medical Science, Division of Minority Opportunities in Research and managed by the American Society for Microbiology. For more information, visit www.abrcms.org or email abrcms@asmusa.org.

ABRCMS 2004 National Conference, Dallas, Texas • November 10 - 13, 2004
"Meeting the Biomedical Research Challenges of the Future: A Celebration of Achievement"
 For more information call 202-942-9228 or visit our website at www.abrcms.org

IONIC LIQUID WORKSHOP AT BROOKHAVEN NATIONAL LABS



liquids have a broad range of applications, from replacing hazardous and polluting organic solvents New Solvents That Do Not Evaporate or Burn to making nuclear fuel and waste processing inherently much safer.

The CUNY Louis Stokes Alliance for Minority Participation and the BNL Chemistry and Environmental Science (ES) Departments sponsored the meeting. It was organized by BNL's James Wishart of Chemistry and A.J. Francis of ES; Sharon Lall-Ramnarine of Queensborough Community, CUNY; and Sanjay Malhotra of New Jersey Institute of Technology — all members of the New York Regional Alliance for Ionic Liquids Studies (NYRAILS), a new, informal organization of BNL researchers and university faculty dedicated to exploring environmental and other applications of ionic liquids and to providing undergraduates with research opportunities in these areas. For more information, contact Wishart at wishart@bnl.gov, or Ext. 4327. Roger Stoutenburgh D0740304 James Davenport James Davenport

An all-day "Informational Workshop on Chemistry and Applications of Ionic Liquids" was held on Wednesday, April 7, at the BNL Chemistry Department. About 50 people attended, representing BNL, three City University of New York (CUNY) campuses, New Jersey Institute of Technology, and Rutgers University. The workshop was held to facilitate collaborations between BNL and local universities in the development and study of ionic liquids, a remarkable new class of materials. Like table salt, ionic liquids are made entirely of positive and negative ions, but instead of being a crystalline solid at room temperature, they are liquid. Unlike ordinary solvents, they do not evaporate and cannot burn. Ionic

Mark Your Calendar

**NYC Alliance's 8th Annual Urban University
Conference • April 2005 • For more info contact
the NYC LSAMP office at 212-650-8854**



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