



NIGMS MINORITY PROGRAMS UPDATE

NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES • SPRING/SUMMER 2002

INSIDE THIS ISSUE

Important Events in MARC and MBRS History	2
MBRS Charter Schools	6
Initial MARC Honors Undergraduate Institutions	6
From the MORE Director MARC and MBRS: A Reflection	7
National Meeting to Commemorate Anniversaries	8
NIGMS Director Leaves for "QB3"	8
NIGMS Research Training Programs	9
Komisaruk Joins NIGMS	9
Profile: Annette Brewster	10
News and Notes	12
Selected Publications	16
Upcoming Meetings	17
Recent Awards and Fellowships	18

Dr. Erich Jarvis, a former MBRS and MARC program participant, was named the recipient of the 2002 Waterman Award. For more on the award, see page 12.



MARC AND MBRS PROGRAMS

Reach 30 Years

BY SUSAN ATHEY, NIGMS

This is a special year for the National Institute of General Medical Sciences (NIGMS). Not only is 2002 the year the Institute commemorates its 40th anniversary, it also marks a special commitment the Institute made 30 years ago—an investment in minorities pursuing careers in biomedical and behavioral research.

July 30, 2002, marks the 30th anniversary of NIGMS' Minority Access to Research Careers (MARC) and Minority Biomedical Research Support (MBRS) programs. These programs support research and research training and are designed to increase the number of minority biomedical scientists.

For 30 years, the MARC and MBRS programs have supported undergraduate, graduate, and postdoctoral students, as well as faculty members. The programs have also provided funds for education and research infrastructure improvements at institutions throughout the United States. The MARC and MBRS programs have provided participants with training opportunities, laboratory equipment and supplies, mentors and role models, and, very often, a student's first experience in a "real" research lab.

Opportunities provided through the MARC and MBRS programs inspire and motivate the next generation of biomedical scientists and provide a solid foundation for success. ●





1962 1974 1982

Important Events in MARC and MBRS History

1962 Congress creates NIGMS with Public Law 87-838, authorizing the Surgeon General of the U.S. Public Health Service (PHS) to establish an institute to support research and research training in the basic medical sciences and in related natural or behavioral sciences.

1963 The Secretary of the Department of Health, Education, and Welfare approves establishment of NIGMS, with Dr. Clinton C. Powell as its first director. The National Advisory General Medical Sciences (NAGMS) Council holds its first meeting.

1964 Dr. Frederick L. Stone is named NIGMS director. Dr. Geraldine P. Woods is appointed to the NAGMS Council.

1965–1969 An analysis indicates that minority institutions receive less than \$2 million in research grants from NIH, 80 percent of which goes to Howard University in Washington, DC, and Meharry Medical College in Nashville, TN. Approximately 1 out of every 400 NIH grants is awarded to a minority institution.



Dr. Geraldine Woods

1969 Stone asks Woods to serve as a special consultant to the Office of the Director, NIGMS, with the assignment of working out a plan for developing training and research programs for historically Black colleges and universities. Woods, Stone, and other NIGMS

staff members, including Dr. Charles Miller and Dr. Carl Kuether, write to and visit a number of these schools. During these visits, they assess faculty, institutional, and student needs.

1970 Woods presents her findings at a meeting that includes NIH Director Dr. Robert Q. Marston and the directors of the individual NIH institutes. She reports that minority institutions are eager to improve their research facilities, to increase student and faculty research training capabilities, to enhance science curricula, and to provide for faculty development. She

also contacts Senator Edward Brooke of Massachusetts, Representative Louis Stokes of Ohio, and Representative Augustus Hawkins of California to discuss the Institute's activities and proposed support mechanisms. Dr. DeWitt Stetten, Jr., is named NIGMS director.

1971 In February, President Richard Nixon includes a section titled "Special Help for Black Institutions" in a message to Congress. The Senate Committee on Appropriations of the 92nd Congress, under the leadership of Senator Edward Brooke, issues a report in July that recommends that \$2 million be used under the authority of Section 301(c) of the amended PHS Act to launch the Minority Schools Biomedical Support (MSBS) program in 1972.

1972 The MSBS program awards grants to 38 "charter" minority institutions in June. The program, administered by the NIH Division of Research Resources (DRR), involves 199 faculty members, 288 undergraduates, 44 graduate students, and 1 postdoctoral student. It includes 32 predominantly Black, 1 Native American, 1 Hawaiian, 1 Puerto Rican, and 3 mainland Hispanic institutions. Encouraged by Senator Brooke, the MARC Visiting Scientist and Faculty Fellowship programs are officially established. The first faculty fellows receive their awards in August.

1973 The first MSBS symposium is held in April at Xavier University in New Orleans, LA. In attendance are 250 faculty members and students, as well as several invited speakers from NIH. The attendees present 76 papers. MSBS expands in September to include tribal colleges run by Native American reservations. As a result of this expanded eligibility, it is considered inappropriate to retain the word "schools" in the program's title, which is changed to the Minority Biomedical Support (MBS) program.

1974 Dr. Ruth L. Kirschstein is appointed NIGMS director. The second



Dr. Ruth Kirschstein

The *NIGMS Minority Programs Update* is produced by the Office of Communications and Public Liaison of the National Institute of General Medical Sciences. The material is not copyrighted and we encourage its use or reprinting.

Editor: Susan Athey
athneys@nigms.nih.gov

Editorial Assistant:
Jilliene Mitchell
mitchelj@nigms.nih.gov

Office of Communications
and Public Liaison, NIGMS
Room 1AS.25
45 Center Drive MSC 6200
Bethesda, MD 20892-6200
Tel: 301-496-7301
Fax: 301-402-0224



annual MBS symposium includes the first meeting of the program directors with NIH MBS program staff.

1975 MARC is officially established as a program under the authority of Section 301 of the Public Health Service Act to assist minority institutions in developing strong undergraduate curricula in biomedical sciences and to stimulate undergraduates' interest in biomedical research. NIH Director Dr. Robert S. Stone requests the coordination of all existing or planned minority research and training support activities. The National Heart, Lung, and Blood Institute and the National Cancer Institute are the first NIH components to co-fund MBS grants.

Dr. Ciriaco Q. Gonzales is appointed MBS program director. The MBS program becomes a separate branch in the Division of Research Resources.

1976 Elward Bynum is appointed MARC program director.

1977 The MARC Honors Undergraduate Research Training (HURT) program begins with 12 grants supporting 93 trainees and a budget of almost \$1 million. The May issue of the *NIH Research Resources Reporter* states that 399 MBS-trained students have graduated with degrees in science and of these, 297 are pursuing advanced degrees. In December, the MBS Program Directors Organization is formed.

1978 The sixth annual MBS symposium features for the first time an address by a Nobel laureate, Dr. William Lipscomb (chemistry, 1976). The meeting, held at the Atlanta University Center in Georgia, is expanded to include paid exhibitors. The meeting is dedicated to Woods.

Dr. Richard M. Eakin, professor emeritus of zoology at the University of California, Berkeley, becomes the first MARC Visiting Scientist. He spends a semester at Tougaloo College in Mississippi.

1980 The MARC HURT program receives its largest budgetary increase to date—from \$1.8 to \$3.3 million, allowing 13 new programs to be

added. The Federation of American Societies for Experimental Biology (FASEB) begins its Visiting Scientists Program for Minority Institutions with support from the MARC program.

1981 The MARC Predoctoral Fellowship is established to provide further incentive to graduates of the MARC honors undergraduate program to obtain research training in the nation's best graduate programs. In September, the first MARC Scholars Conference and Program Directors Meeting takes place in Bethesda, MD. Several NIH scientists attend and give seminars on their research. Special workshops provide students with information on graduate schools, test-taking skills, and summer research opportunities.

1982 MBS is renamed the Minority Biomedical Research Support (MBRS) program to reflect the program's research scope.

1983 The MBRS Associate Investigator program is founded to provide an opportunity for minority students to participate in ongoing biomedical research under the supervision of established investigators at certain institutions.

1984 The MARC HURT program has 389 undergraduate trainees in 52 programs involving 56 institutions, and over 800 alumni. The MARC budget is almost \$5 million. By the end of the year, all categorical institutes at NIH are co-funding MBRS projects.

1985 The MARC program grants 15 faculty fellowships, the highest number in any single year to date. The Institute of Medicine of the National Academy of Sciences publishes *Minority Access to Research Careers: An Evaluation of the Honors Undergraduate Research Training Program*. Written by Dr. Howard H. Garrison and Ms. Prudence W. Brown, the report states that 76 percent of former MARC trainees had enrolled in graduate or professional school.

1986 The MBRS program grows to include 100 institutions. At the 14th annual MBRS symposium, program directors express their desire for a history of MBRS to be written from the perspective of grantees. The document, *The History of the Minority Biomedical*



1962 1974 1982

Research Support Program, is written by Dr. Joyce Verrett and published in 1988. The American Society for Microbiology (ASM) begins its Visiting Scientists Program with support from MARC.

1987 NIH celebrates its centennial. The first combined meeting of the MARC and MBRS programs, titled the “NIH Centennial MBRS-MARC Symposium” takes place in Arlington, VA, in October.

The MBRS and MARC programs, in collaboration with Howard University in Washington, DC, produce a 15th anniversary video titled “A Time for Celebration.”

1988 The Task Force on Women, Minorities, and the Handicapped in Science and Technology issues an interim report to President Ronald Reagan titled *Changing America: The New Face of Science and Engineering*. The task force concludes that the United States can meet future potential shortfalls of scientists and engineers only by reaching out and bringing members of underrepresented groups into research careers. The report states that the MARC program is “closest to what we need today. MARC is a prime example of a successful Federal intervention program.” The report also found MBRS to be “effective in enhancing the research careers of faculty.”

1989 The administration of the MBRS program is transferred from DRR to NIGMS. NIH establishes the Research Supplements for Underrepresented Minorities program in April to support minority scientists working with NIH grantees. NIGMS makes its first 15 awards under the program.

1990 The first annual NIGMS Minority Programs Symposium, a combined meeting of the MARC and MBRS programs, takes place in October at the Convention Center in Nashville, TN. More than 1,800 students and faculty members from over 125 grantee colleges and universities attend. Dr. Stanley Cohen, a 1986 Nobel Prize winner in physiology or medicine, gives the keynote address.

1991 The NIGMS Minority Opportunities in Research (MORE) programs branch (now known

as the MORE Division) is established to serve as the focal point for the Institute’s efforts to increase the number and capabilities of minority individuals engaged in biomedical research and teaching.

NIGMS grants individual predoctoral fellowships to 65 minority students; another 36 awards are made through co-funding arrangements with the NIH Office of Minority Programs and several other NIH components. NIH awards over \$20 million through the Research Supplements for Underrepresented Minorities Program. NIGMS grants the highest number of supplements throughout NIH, providing almost \$4 million in funding. The MBRS budget is approximately \$31 million, and the MARC budget is approximately \$13 million.

The first issue of the *NIGMS Minority Programs Update* is published.

1992 The MARC and MBRS programs celebrate their 20th anniversary. NIGMS celebrates its 30th anniversary.

1993 The first Bridges to the Future awards are made to 12 institutions. The total cost of the 2-year awards is \$3.4 million. The program is a joint initiative of NIGMS and the NIH Office of Research on Minority Health.

1994 Dr. Clifton Poodry is named first director of the MORE Division, Dr. Adolphus Toliver is appointed MARC program director.



Dr. Clifton Poodry

1995 Under the leadership of Poodry, the MORE Division begins a review and assessment of its programs’ goals and objectives. As part of this review, in January 1995 the NAGMS Council endorses a set of “guiding principles” for all present and future programs of the MORE Division.



NIGMS conducts a series of surveys to gather information on the outcomes of the MARC HURT program and to determine specific characteristics of the training pathways of MARC students. The results are published in the report, *A Study of the Minority Access to Research Careers Honors Undergraduate Research Training Program*. The study notes that MARC students have pursued and obtained graduate degrees at higher rates than minority bachelor's degree recipients in biology and chemistry who did not participate in the MARC program.

1996 The MARC HURT program is replaced by the MARC Undergraduate Student Training in Academic Research (U*STAR) program in order to reflect the need for continual improvement in institutional programs. The U*STAR program enables each applicant institution to design a program that emphasizes its environment, mission, and strengths and to set specific objectives and measurable goals against which it will be evaluated when it recompetes for funding.

The MORE Faculty Development and Initiative for Minority Student Development (IMSD) awards are established.

Dr. Ernest Marquez is named MBRS program director. Dr. Marvin Cassman is appointed NIGMS director.

1997 In an effort to increase the number of participants and flexibility of student development activities, the MBRS program announces major changes in its grant programs. The traditional MBRS grant mechanisms are replaced with two new initiatives: Support of Continuous Research Excellence (SCORE) and Research Initiative for Scientific Enhancement (RISE). These programs join the existing MBRS IMSD program.

1998 The Institutional Research and Academic Career Development Award (IRACDA) is announced in an effort to facilitate the progress of postdoctoral candidates toward research and teaching careers in academia.

1999 NIGMS and the Indian Health Service (IHS) bring together Native American scientists from around the country to discuss the research training needs of Native Americans. Recommendations

include encouraging Native American tribes to participate in research as applicant organizations; supporting and extending successful training activities of Native American scientific societies, including programs targeting pre-college students; and enhancing the outreach activities of existing clinical and community-based research programs.

2000 As a result of the 1999 meeting with Native American scientists, NIGMS and IHS begin collaborating on the Native American Research Centers for Health program.

NIGMS publishes the report *The Careers and Professional Activities of Former NIGMS Minority Access to Research Careers Predoctoral Fellows*. Overall, the results of this study show a favorable achievement pattern for former MARC predoctoral fellows.

2001 The MORE Division announces the Post-Baccalaureate Research Education Program (PREP) to encourage underrepresented minorities who hold a recent baccalaureate degree in a biomedically relevant science to pursue a research career.

In 2001, 683 faculty members at 113 institutions worked on 407 MBRS research projects, and 1,195 undergraduate and 765 graduate students participated in these projects as research assistants. The number of MBRS student participants has nearly doubled since 1997.

MARC support in 2001 went to 647 students at 63 institutions that participated in the undergraduate program; 45 students who received MBRS predoctoral fellowships; 2 faculty members who received training and/or degrees through the faculty fellowship program; and 75 NIH predoctoral fellowships, 25 of which were new in fiscal year 2001.

2002 NIGMS celebrates its 40th anniversary, and the MARC and MBRS programs commemorate 30 years.

The MARC program budget is nearly \$31 million, and the MBRS program budget is approximately \$92 million. ●



MBRS Charter Schools — 1972

Albany State College	Lincoln University (Missouri)
Atlanta University Center	Lincoln University (Pennsylvania)
Atlanta University	Meharry Medical College
Clark College	New Mexico Highlands University
Morehouse College	Norfolk State College
Morris Brown College	North Carolina A&T State University
Spelman College	North Carolina Central University
Bennett College	Oakwood College
Bishop College	Pan American University
Catholic University of Puerto Rico	Rust College
Central State University	Shaw University
Cheyney State College	South Carolina State College
Chicago State University	Southeastern State College
Coppin State College	Southern University, Baton Rouge
Delaware State College	Southern University, New Orleans
Dillard University	Texas Southern University
Federal City College	University of Hawaii
Fisk University	University of Texas at El Paso
Hampton Institute	Virginia Union University
Howard University	Winston-Salem University
Jackson State College	Xavier University
Johnson C. Smith University	

Initial MARC Honors Undergraduate Institutions — 1977

Atlanta University Center	Prairie View A&M University
Clark College	Talladega College
Morehouse College	Texas Southern University
Morris Brown College	Tougaloo College
Spelman College	University of New Mexico
Benedict College	
City University of New York, Medgar Evers College	
Jackson State University	
Johnson C. Smith University	
New Mexico State University	
Northeast Oklahoma State University	



FROM THE MORE DIRECTOR *MARC and MBRS: A Reflection*

BY CLIFTON POODRY, PH.D.

Anniversaries are special occasions. They give us the opportunity to reflect on the past and our accomplishments over the years, as well as the chance to think about the future and things we'd like to change.

I came to NIGMS as MORE director in 1994. At that time, the MARC and MBRS programs were well established. However, change was anticipated with my arrival and, in many cases, was met with much anxiety. The long-time director of the MARC program, Elward Bynum, had retired. The MBRS program was still adjusting to the move from DRR to NIGMS. An advisory group that met in 1992 gave a strong message that student apprentice positions should only be placed in actively publishing labs that had extramural funding. Competition for NIH funding was fierce, as the number of applications was many times more than could be funded. Applicants for MBRS funding worried that they would not get a review that considered the context of the applicant institution. Others worried that any new initiatives would only come at the expense of existing programs—a worry that pitted grantees of long standing with potential new applicants.

The big issue before us was how to level the playing field so that small schools weren't competing head to head with larger, better-funded schools without resorting to set-asides. That led to the MORE Division's guiding principle that all programs would be developmental rather than merely sustaining—and that all institutions could improve.

We reasoned that the improvement of an institution could be measured against its own baseline, thus avoiding a competition between the large and the small. The applicants could set goals and objectives that were pertinent to their specific institutional ambitions. They could evaluate their progress toward their own stated objectives. Merely allowing the applicants to specify their own objectives and to evaluate themselves did not reduce anxiety. In fact, the burden of evaluation may have been an added problem.

Over the past 8 years, the MORE Division has enjoyed unflagging support from the NIGMS director and other components of the Institute. The budget has grown threefold, a reflection, in part, of new initiatives and of strong progress by grantees. We are pleased to see a promising upturn in the percentages of underrepresented minorities getting Ph.D.s.

In the MORE Division, we are always seeking ways to improve our programs. We listen carefully to concerns raised by grantees and would-be grantees at various meetings, both public and private. Input from the community is essential to our doing our job well, and we invite your comments and suggestions for continued improvement. ●

*Dr. Clifton Poodry, poodryc@nigms.nih.gov,
Director, MORE Division, NIGMS, Room 2AS.37,
45 Center Drive MSC 6200, Bethesda, MD 20892-6200,
301-594-3900*





National Meeting to Commemorate Anniversaries

BY SUSAN ATHEY, NIGMS

The second Annual Biomedical Research Conference for Minority Students (ABRCMS) will mark the 40th anniversary of NIGMS and the 30th anniversary of the MARC and MBRS programs in grand style—from a panel discussion with Nobel laureates to an awards ceremony and dinner. Sponsored by NIGMS and managed by the American Society for Microbiology, the national meeting will be held November 13–16 in New Orleans, LA.

The ABRCMS brings together MORE program participants, academic administrators, grant officials, and the scientific community. The meeting features scientific sessions, professional development workshops, a student poster session, exhibits, and networking opportunities.

Anniversary-related festivities begin on Thursday, November 14 with a panel discussion titled “Leaders in Scientific Discovery: Conversations with Nobel Laureates and a Potential.” Featured speakers include Dr. Alfred G. Gilman, winner of the 1994 Nobel Prize in physiology or medicine;

Dr. Thomas R. Cech, winner of the 1989 Nobel Prize in chemistry; and Dr. Erich D. Jarvis, recipient of the 2002 Waterman Award, the highest honor bestowed by the National Science Foundation (NSF) to a young investigator. Also featured will be a panel of MARC and MBRS program alumni who will discuss their scientific accomplishments and career pathways in the biomedical sciences. Later that evening, an awards banquet will include remarks by Dr. Ruth L. Kirschstein, NIH deputy director; and a keynote address by the Honorable Louis Stokes, former U.S. Congressman. Kirschstein played a key role in creating the MARC and MBRS programs while she was director of NIGMS, and Stokes was the programs’ advocate and strong supporter in Congress. ●

More information on the 2002 ABRCMS meeting, including the full conference agenda, can be found on the ABRCMS meeting Web site at <http://www.abrcms.org>.

NIGMS Director Leaves for “QB3”

BY ALISA ZAPP MACHALEK, NIGMS

After 27 years at NIGMS—the last 5 as its director—Dr. Marvin Cassman left the Institute in May to become the first director of “QB3,” the California-based Institute for Quantitative Biomedical Research.

During his tenure as NIGMS director, Cassman broadened the Institute’s focus to promote quantitative, interdisciplinary approaches to problems of biomedical significance. He championed these studies as the gateway to understanding normal cellular functioning and ultimately to advances in disease diagnosis, treatment, and prevention. In addition, he was a strong supporter of, and an advocate for, NIGMS’ minority programs.

Cassman has served NIGMS in various capacities since 1975. He started as a health scientist administrator, then founded and directed the NIGMS program in biophysics and physiological sciences, rose to deputy director, and finally became director of the Institute in August 1996.

Consistent with his interest in science policy, Cassman served as a legislative fellow on the staff of the House Subcommittee on Science, Research, and Technology; and as senior policy analyst in the Office of Science and Technology Policy.

While at NIGMS, Cassman developed policies to encourage researchers to bridge the gap between the physical and life sciences. At QB3, he will be working closely with scientists doing just that. QB3, a consortium of University of California schools in San Francisco, Berkeley, and Santa Cruz, was established in December 2000. The institute focuses on areas such as bioengineering, structural biology, bioinformatics, and the analysis of complex biological systems.

“The opportunity to implement something that we’ve tried to facilitate is very exciting, especially at institutions of the caliber of UCSF, UC Santa Cruz, and Berkeley,” said Cassman. ●



NIGMS Research Training Programs

NIGMS sponsors research training programs in a variety of areas to ensure that there are adequate numbers of highly trained biomedical and behavioral scientists. The programs recognize the interdisciplinary nature of biomedical research today and stress approaches to biological problems that cut across disciplinary and departmental lines. Information on NIGMS research training programs can be found on the Web at <http://www.nigms.nih.gov/funding/trngmech.html>.

Certain NIGMS training programs address areas in which there is a particularly serious need for well-prepared scientists. One of these, the Medical Scientist Training Program, provides investigators who can bridge the gap between basic and clinical research by supporting research training leading to the combined M.D.-Ph.D. degree. Other programs train scientists to conduct research in the rapidly growing field of biotechnology and at the interface between the fields of chemistry and biology. NIGMS also has a Pharmacology Research Associate Program, in which postdoctoral scientists receive training in pharmacology in NIH and FDA laboratories and clinics. Information on the PRAT Program can be found on the Web at http://www.nigms.nih.gov/about_nigms/prat.html. ●



NIGMS has flyers available for the following research training programs: Medical Scientist, Biotechnology, and Clinical Pharmacology. The flyers contain an overview of the programs, eligibility requirements, and lists of participating institutions. Free copies of the flyers can be requested by contacting:
NIGMS Office of Communications and Public Liaison

45 Center Drive MSC 6200

Bethesda, MD 20892-6200

301-496-7301

pub_info@nigms.nih.gov



Komisaruk Joins NIGMS

BY SUSAN ATHEY, NIGMS

Dr. Barry R. Komisaruk recently joined NIGMS as a program director in the MORE Division. He comes to NIGMS from Rutgers, The State University of New Jersey, where he was a professor in the department of psychology and director of the university's MBRS program.

Komisaruk earned a B.S. in biology from the City University of New York, City College, and a Ph.D. in psychobiology from Rutgers. He conducted postdoctoral research as a National Institute of Mental Health fellow at the Brain Research Institute at the University of California, Los Angeles. His research interests include the neurophysiology, pharmacology, and endocrinology of reproductive behavior, and analgesia in laboratory animals and humans.

Komisaruk has authored over 140 research articles and is a member of several professional societies, including the Society for Neuroscience and the American Physiological Society. ●



Profile

ANNETTE BREWSTER

This special section profiles former MORE participants who have excelled in their fields. We hope that the profiles will give students an idea of the types of careers available with science degrees and the paths others have taken to achieve those careers.

A Large Dose of Strength and Determination

BY JILLIENE MITCHELL, NIGMS

“I first became interested in science in high school,” said Annette Brewster, a recent graduate in biochemistry from Hunter College of the City University of New York.

“I was always fascinated with how things worked or functioned,” she added.

Brewster’s fascination for science motivated her to pursue a college degree. In the spring of 1996, she left her public service job and entered LaGuardia Community College of the City University of New York to study to become a science teacher. But going to school would be a challenging task for

“If I can teach one child a little of what I have learned, it would be worth it.”

Brewster—she was already a wife and the mother of three children.

One can infer that Brewster’s college experience was different from that of the average undergraduate student. Carrying more responsibilities than most students, Brewster said her formula for success was “hard work, planning, and discipline.” She had to manage helping her children with homework while trying to complete her own assignments, and there were even times she had to take her children to class with her. In addition, there were financial concerns to deal with.

Despite the many obstacles Brewster faced, she persevered. She eventually entered the Bridges to the Baccalaureate program, which provided her with financial support to continue her education.

“The Bridges program was indeed motivation for me to continue, and it also provided me with a buffer when things got tough,” Brewster said.

The program allowed her to work under the mentorship of Dr. Clara Wu, a professor in the department of natural and applied science at LaGuardia Community College, whom she refers to as her “second mother.” Wu gave Brewster the opportunity to perform hands-on experiments and make presentations of her research to peers and professors.

In addition, the Bridges program, which helps students make the transition from 2-year community colleges to 4-year baccalaureate programs, enabled Brewster to transfer to Hunter College. At Hunter, Brewster also participated in the MBRS program.

Brewster said she loves science because it allows her to learn new things. She enjoys working in a lab, conducting research, and seeing the outcome of her projects. Her enthusiasm for science is what inspired her to continue her education and to eventually become a teacher, so that she can share her knowledge with others.

“If I can teach one child a little of what I have learned, it would be worth it,” she explained.

Brewster’s drive and determination come not only from her passion for science, but from the encouragement



of her mother, whom she considers her role model.

“My mother grew up in the Caribbean and was a housewife, but she always made us feel that there was nothing we couldn’t do,” she said.

Her mother, like herself, struggled and sacrificed for her children, and emphasized the importance of education to them. This, in turn, motivated Brewster and her siblings and gave them the strength to strive for excellence.

Although she faced difficult circumstances, Brewster was able to reach her goal of earning her bachelor’s degree. ●

If you know an outstanding former MARC, MBRS, or Bridges participant who has excelled professionally and you would like to nominate that person as a future Update profile subject, please let us know. Your suggestions are always welcome.





NEWS

and Notes

- **Dr. Erich D. Jarvis**, a former participant in two NIGMS minority programs, received the 2002 Alan T. Waterman Award, which honors a U.S. scientist who is at the forefront of science or engineering. It is the highest honor for a young researcher given by NSF.

Jarvis participated in the MARC and MBRS programs as an undergraduate student at the City University of New York, Hunter College, where he received a bachelor's degree in biology and mathematics in 1988. He went on to become a MARC predoctoral fellow at The Rockefeller University, where he received a Ph.D. in molecular neurobiology and animal behavior in 1995. Following postdoctoral work at Rockefeller, he became an assistant professor in the department of neurobiology at Duke University Medical Center in Durham, NC. His research interests include the neurobiology of vocal communication in songbirds, with an emphasis on the molecular pathways involved in the perception and production of learned vocalizations.

Jarvis received the award, which consists of a medal and a grant of \$500,000 over 3 years for his scientific research, during a ceremony in Washington, DC, on May 7.

- Two MORE program directors were among the most recent recipients of the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. The awards, which are presented annually, recognize influential institutions and individuals who have been leaders in encouraging minorities, women, and disabled persons to pursue careers in the scientific and engineering labor force. The recipients included **Dr. Therese Markow**, a Regents professor of ecology and evolutionary biology at

the University of Arizona, Tucson, and **Dr. Bharati Mehrotra**, a professor of biology at Tougaloo College in Mississippi.

Markow is the former MARC program director at Arizona State University and is currently the IRACDA director at the University of Arizona. Mehrotra was the MARC program director at Tougaloo College prior to her retirement in May.

Markow and Mehrotra were among 10 individuals and 10 institutions who received awards. The awards were established by the White House Office of Science and Technology Policy in 1996 and are administered by NSF. Award recipients attended a ceremony in December in Washington, DC, and were presented with a \$10,000 grant and a commemorative Presidential certificate.

- **Dr. Chellu Chetty**, the MBRS program director and a biology professor at Savannah State University (SSU), was selected to receive the American College of Toxicology President's Award for the best paper of the year in the field of toxicology. The paper, "Perinatal Lead Exposure Alters the Expression of Neuronal Nitric Oxide Synthase in Rat Brain," was published in the *International Journal of Toxicology* (for the full citation, see the Selected Publications section). Chetty received the award during the society's annual meeting in November in Washington, DC.

- **Dr. Laura J. Robles**, the MBRS program director at California State University, Dominguez Hills (CSUDH), received the Cesar Chavez Education, Equity, and Justice Award from the Latino Student and Faculty Association of CSUDH in April. Robles, a biology professor, was recognized for her efforts to enhance the quality of life and educational experience at the university.

- **Dr. Ben Yaspelkis**, an MBRS investigator at California State University, Northridge (CSUN), was elected a fellow of the American College of Sports Medicine. Yaspelkis is an assistant professor in the department of kinesiology at CSUN, where he also serves as director of the exercise physiology and biochemistry laboratories. The American College of Sports Medicine promotes and integrates scientific research, education, and practical applications of sports medicine and exercise science to maintain and enhance physical performance, fitness, health, and quality of life.

- **Dr. Ernest Márquez**, director of the MBRS program at NIGMS since 1996, left the Institute in January to accept a position with the National Institute of Mental Health, another NIH component. In his new position, Márquez serves as associate director for special populations, where he leads the strategic planning effort to reduce mental health disparities and increase diversity among the nation's scientists conducting brain and behavioral research.

- The **Society for Advancement of Chicanos and Native Americans in Science** (SACNAS) received the 2002 National Science Board Public Service Award for outstanding contributions to communicating, promoting, and helping to develop broad public policy in science and engineering. SACNAS was recognized for "giving information, support, guidance, and mentoring to budding young Latino and Native American scientists and engineers." At its annual conference, which NIGMS co-sponsors, SACNAS provides opportunities for undergraduate and graduate students to participate in their first scientific meeting and hear talks by leading scientists.



- The **CSUDH Chapter of Sigma Xi** received the organization's first annual Diversity Award for its support of the CSUDH annual Students Trained in Academic Research Symposium, which features the research results of the university's MBRS, MARC, and Bridges to the Baccalaureate program participants.

- The **Federation of American Societies for Experimental Biology (FASEB)** Visiting Scientists Program for Minority Institutions sponsored 13 faculty members recently. The program is designed to strengthen the research and teaching capabilities at minority institutions by sponsoring visits of prominent scientists who are active members of FASEB societies. The visiting scientists, listed with their home/host institutions, were: **Dr. Durisala Desai**, University of Mississippi Medical Center/SSU; **Dr. Stephen Dewhurst**, University of Rochester Medical Center/University of the Virgin Islands; **Dr. Margarita Dubocovich**, Northwestern University/Morehouse School of Medicine; **Dr. Richard Dukelow**, High Meadows Enterprise/Jackson State University; **Dr. Robert Glew**, University of New Mexico School of Medicine/Barry University; **Dr. Malcolm Gordon**, University of California, Los Angeles/InterAmerican University of Puerto Rico; **Dr. Sam Helgerson**, Baxter Biotechnologies, Inc./University of Texas at San Antonio; **Dr. Thomas Landefeld**, CSUDH/Prairie View A&M University; **Dr. George Littleton**, Howard University/CSUDH; **Dr. John Mansfield**, University of Wisconsin-Madison/Alcorn State University; **Dr. Victor Rodwell**, Purdue University/Albany State University;

Dr. Dileep Sachan, University of Tennessee/Barry University; and **Dr. Frank Talamantes**, University of California, Santa Cruz/Ponce School of Medicine.

- **Dr. Seble Wagaw**, a former NIGMS minority program participant, was recognized in April at the annual National Women of Color Health, Science, and Technology Awards event held in Nashville, TN. Wagaw, a research chemist at Abbott Laboratories in Abbott Park, IL, is involved in the discovery of new methods of preparing drug candidates for clinical study. She received the Most Promising Scientist of the Year Award for her outstanding contributions to the field of health care, as well as for her initiative and professional and technical achievements. Wagaw was the recipient of an NIH research supplement for underrepresented minorities while pursuing a Ph.D. at the Massachusetts Institute of Technology.

- Four former MBRS program participants at New Mexico State University (NMSU) earned their doctoral degrees during winter commencement ceremonies. **Robert Marquez** received a Ph.D. in analytical chemistry and was awarded an NIH postdoctoral fellowship at the University of Virginia School of Medicine; **Quincy Quick** received a Ph.D. in neurobiology and is performing a postdoctoral fellowship at the Worcester Foundation in Waltham, MA; **Elizabeth Quintana** received a Ph.D. in physiology and is planning to pursue a postdoctoral research position; and **Johette Brown-Silva** received a Ph.D. in ruminant microbiology and is performing postdoctoral research at NMSU.

- Many participants in NIGMS' minority programs made presentations about their research at the ABRCMS meeting last fall in Orlando, FL.

The following MARC, MBRS, and Bridges to the Baccalaureate program participants at Barry University in Florida presented posters: **Eaully Brautigam, Ines Macias, Roody Pierre-Charles, Davecia Ragoonath, Randolph Roberts, and Gesulla Toussaint.**

Luis Jacome, a MARC undergraduate student at the City University of New York, Hunter College, was recognized by the Endocrine Society for his outstanding poster presentation.

Five Bridges to the Baccalaureate program participants at the Medgar Evers College/Kingsborough Community College in New York presented posters: **Oreoluma Abidakun, Wendy Barrerio, Paul Calder, Kawasi Lett, and Elinor Rodriguez.** Barrerio and Rodriguez also made oral presentations of their research.

Seven MARC trainees at Pontifical Catholic University of Puerto Rico made presentations: **Adail Alicea-Martinez, Alma Castilloveitia-Rose, Dania Medina-Emmanueli, Karina Resto-Santiago, Carol Rivera-Lopez, Jose Rodriguez-Medina, and Yendi Serrano-Irizarry.**

Bianca Matos, a Bridges to the Baccalaureate program participant at the State University of New York, Purchase College, was awarded best presentation in the biochemical sciences category for her poster.

Five MBRS program participants from the University of Iowa presented posters: **Marc Doobay, Nonso Enekwechi, Elizabeth Homan, Necole Streeper, and Diane Tran.** Homan and Doobay also made oral presentations, and Doobay

continued on page 14



won an award for the best oral presentation in the physiological sciences category.

Three Bridges to the Baccalaureate program participants at Western Michigan University made poster presentations: **Nabeeh Hasan, Greg Williams, and Amber Walker.** Hasan and Williams' poster presentation won first place in the interdisciplinary sciences category.

- Participants in NIGMS' minority programs made presentations about their research at other recent scientific meetings:

Charita Collins, a MARC undergraduate student at the University of Maryland, Baltimore County (UMBC), received second place in the biological sciences category for her poster presentation at the American Institute of Chemical Engineers student conference held in Indianapolis, IN, in November.

Jaime Lopez, a MARC undergraduate student at CSUN, gave a poster presentation at the Society for Neuroscience annual meeting in San Diego, CA, in November.

Mona Singh, an MBRS program participant at CSUN, won the 2001 student research award for her presentation at the annual meeting of the Southwest Chapter of the American College of Sports Medicine in Salt Lake City, UT, in November.

Necole Streeper, an MBRS participant at the University of Iowa, gave a presentation at the International Society for Developmental Psychology annual meeting in San Diego in November.

Ari Miller, an MBRS graduate student participant at CSUDH, received second place for her poster presentation at the American Society for Cell Biology annual meeting in Washington, DC, in December. The award was presented by the society's Minority Affairs Committee. **Katie Shannon**,

an IRACDA program participant at the University of North Carolina, Chapel Hill, also presented a poster at the meeting.

Eight MBRS program participants at the University of California, Irvine, received awards for their presentations at the American Association for Advancement of Science annual meeting in February in Boston, MA. Four of the students won first-place awards in various categories: **Rafael Gonzalez**, organismal biology; **Matilde Gonzalez**, ecology and environment; **Sylvia Jaramillo**, molecular and cell biology; and **Bonnie Poytress**, social and behavioral sciences. **Cheryse Furman, Kathi Hamor, David Hernandez, and Sarah Lopez** received honorable mentions.

Five MARC and pre-MARC trainees at UMBC attended the 8th Biennial Symposium on Minorities, the Medically Underserved, and Cancer in Washington, DC, in February. They were: **Robyn Miller, DeAnna Baker, Letitia Thompson, Nicole Reynolds, and Jasmine McDonald.** Thompson made an oral presentation at the meeting and Miller presented a poster.

Braddy Nykeba, an MBRS program participant at SSU, received a third-place award for his poster presentation at the Historically Black Colleges and Universities Undergraduate Program conference held in February at Albany State University. Nykeba also received a Society of Toxicology student travel award to present a paper at the society's 41st annual meeting in Nashville, TN, in March.

Dang Huynh, a Bridges to the Doctorate program participant at CSUN, presented a poster on his research at the Biophysical Society annual meeting in February in San Francisco, CA, and at the university's 6th annual student research and creative arts competition last fall.

Three MARC undergraduate students at Grambling State University in Louisiana made presentations at the Louisiana Academy of Sciences annual meeting at Louisiana State University in Baton Rouge in March. The projects were presented by **Jerrel Gibson, Leonard Moore, and Marcus Chew.**

Three MARC undergraduate students at the University of North Carolina A&T State University made presentations of their research at the Collegiate Academy of the North Carolina Academy of Science annual meeting in March. **Ryan Kinloch** was awarded second place for his presentation, **Bryant Suite** received a third-place award, and **Tennille Presley** received an honorable mention. Two MARC students at the university made presentations at the 59th annual Beta Kappa Chi/National Institute of Science/Brookhaven Semester Program in Columbia, SC, in March. **Bryant Suite** received a third-place award in the chemistry category and **Tiffany Boyce** received a third-place award in the psychology and science education category.

Eleven MARC undergraduate students at Pontifical Catholic University of Puerto Rico made oral presentations at the 37th American Chemical Society Junior Technical Meeting/22nd Puerto Rico Interdisciplinary Scientific Meeting in Arecibo, Puerto Rico in March: **Dania Medina-Emmanueli, Maryliz del Gonzales-Santos, Ivan Vidal-Gonzalez, Jose Rodrigues-Medina, Carol Rivera-Lopez, Karina Resto-Santiago, Alma Castilloveitia-Rosa, Gil Marie Alicea-Cruz, Yared Vazquez-Madera, Yendi Serrano-Irizarry, and Edgardo Santiago-Martinez.**

Marietta Oduori, a Bridges to the Baccalaureate program participant at



Towson University in Maryland, made a poster presentation on her research at the National Conference for Undergraduate Research in April at the University of Wisconsin, Whitewater.

Jennifer Greene, a UMBC pre-MARC student, received a travel award from the American Society for Biochemistry and Molecular Biology to attend the Experimental Biology 2002 meeting in April in New Orleans, LA. **April Ochoa** and **Pamela Villasenor** of CSUN made presentations at the meeting. Ochoa is an MBRS program participant and Villasenor is a MARC student.

- **FASEB** presented numerous faculty members and students with MARC travel awards to attend the following meetings: Experimental Biology 2001, the Radiation Research Society annual meeting, the American Peptide Society annual meeting, the Endocrine Society annual meeting, the 15th Symposium of the Protein Society, the Society for the Study of Reproduction annual meeting, the American Society of Human Genetics annual meeting, and the American Society for Bone and Mineral Research meeting.

- The **Biophysical Society** presented MARC Travel Awards to 16 faculty members and students recently, providing funds for these individuals to attend the Biophysical Society annual meeting in February in San Francisco, CA.

- In recent months, we have received word about the following current and former student participants in NIGMS minority programs • **Anthony Beas**, a MARC undergraduate student at the University of Arizona, was named an outstanding undergraduate researcher by

the university's College of Science at its recent seniors awards ceremony • **Monica Frazier**, a former MBRS and MARC program participant at Alabama State University, is now a research assistant professor at the Carver Research Foundation at Tuskegee University • **Linda Hammond**, a MARC predoctoral fellow at the University of North Carolina, Chapel Hill, was recently awarded the American Society for Clinical Nutrition's Young Investigator Award. In addition, Hammond was among 12 finalists for the American Society for Nutritional Sciences' Proctor and Gamble Graduate Student Research Award • **Johnny Johnson**, a former MBRS program participant at SSU, is now pursuing a Ph.D. in physiology at the State University of New York at Stony Brook • **Alejandro Morales**, an MBRS program participant at CSUDH, has been accepted into a doctoral program in counseling psychology at the University of Nebraska • **Diane Tran**, an MBRS program participant at the University of Iowa, was recently named a Barry M. Goldwater scholar. The award provides a 2-year scholarship to students intending to pursue careers in math, science, and engineering • **Bridget Williams**, a former MARC undergraduate student at Xavier University, is pursuing a doctoral degree at Tulane University's Health Sciences Center, where she is a Bridges to the Doctorate program participant • **Nora Vasquez**, a former MBRS program participant at the University of Washington, was among nine individuals selected to participate in the NIH Academy, a program for recent college graduates who have an interest in health disparities. Vasquez is currently

performing research in a lab at the National Institute of Allergy and Infectious Diseases in Bethesda, MD. •

We are always interested in hearing about NIGMS minority program faculty, alumni, and students. Photographs of your students, research labs, and activities are also welcomed and encouraged.

*Please send information to:
Editor*

*NIGMS Minority Programs Update
Room 1AS.25
45 Center Drive MSC 6200
Bethesda, MD 20892-6200*

*Tel: 301-496-7301
Fax: 301-402-0224
atheys@nigms.nih.gov*

**SELECTED PUBLICATIONS**

by *MORE Faculty and Students* (listed by institution)

CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS

Campos LM, Dang H, Ng D, Yang Z, Martinez HL, Garcia-Garibay MA. Engineering reactions in crystalline solids: predicting photochemical decarbonylation from calculated thermochemical parameters. **J Org Chem** 2002;67:3749–54.

CALIFORNIA STATE UNIVERSITY, LOS ANGELES

Ishimaru RS, Leung K, Hong L, LaPolt PS. Inhibitory effects of nitric oxide on estrogen production and cAMP levels in rat granulosa cell cultures. **J Endocrinol** 2001;168:249–55.

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Cohen RW, Mahoney DA, Can HD. Possible regulation of feeding behavior in cockroach nymphs by the neurotransmitter octopamine. **J Insect Behav** 2002;15:37–50.

Yaspelkis III BB, Davis JR, Saberi M, Smith TL, Jazayeri R, Singh M, Fernandez V, Trevino B, Chinookoswong N, Wang J, Zhi QS, Levin N. Leptin administration improves skeletal muscle insulin responsiveness in diet-induced insulin-resistant rats. **Am J Physiol Endocrinol Metab** 2001;280:E130–42.

DELAWARE STATE UNIVERSITY

King MD, Ehrigh MF, Lindsay DS. Effects of recent methyl mercury exposure on acute toxoplasmosis on CBA/J mice. **J Eukaryotic Microbiol** 2001;199S–200S.

Ngutter LK, Kofler JM, McCollough CH, Vetter RJ. Update on patient radiation doses at a large tertiary care medical center. **Health Phys** 2001;81:530–5.

Richards GP, Watson MA. Immunochemiluminescent focus assays for the quantitation of hepatitis A virus and rotavirus in cell cultures. **J Virol Methods** 2001;94:69–80.

Stetten G, Tamburo R. Real-time three-dimensional ultrasound methods for shape analysis and visualization. **Methods** 2001;25:221–30.

FLORIDA INTERNATIONAL UNIVERSITY

Bogozi A, Lam O, He H, Li C, Tao NJ, Nagahara LA, Amlani I, Tsui R. Molecular adsorption onto metallic quantum wires. **J Am Chem Soc** 2001;123:4585–90.

Piatigorsky J, Norman B, Dishaw LJ, Kos L, Horwitz J, Steinbach PJ, Kozmik Z. J3-crystallin of the jellyfish lens: similarity to saposins. **Proc Natl Acad Sci (USA)** 2001;98:12362–7.

Sierra-Montes JM, Freund AV, Ruiz LM, Szmulewicz MN, Rowold DJ, Herrera J. Multiple forms of U2 snRNA coexist in the silk moth *Bombyx mori*. **Insect Mol Biol** 2002;11:105–14.

MAYO GRADUATE SCHOOL

Carrasco AJ, Dzeja PP, Alekseev AE, Pucar D, Zingman LV, Abraham MR, Hodgson D, Bienengraeber M, Puceat M, Janssen E, Wieringa B, Terzic A. Adenylate kinase phosphotransfer communicates cellular energetic signals to ATP-sensitive potassium channels. **Proc Natl Acad Sci (USA)** 2001;98:7623–8.

NEW MEXICO HIGHLANDS UNIVERSITY

Masthay MB, Sammeth DM, Helvenston MC, Buckman CB, Li W, Cde Baca MJ, Kofron J. The laser-induced blue state of bacteriorhodopsin: mechanistic and color regulatory roles of protein-protein interactions, protein-lipid interactions, and metal ions. **J Amer Chem Soc** 2002;124:3418–30.

PONTIFICAL CATHOLIC UNIVERSITY OF PUERTO RICO

McCollum AM, Ganko EW, Barrass PA, Rodriguez JM, McDonald JF. Evidence for the adaptive significance of an LTR retrotransposon sequence in a *Drosophila* heterochromatic gene. **BMC Evol Biol** 2002;2:5–11.

SAVANNAH STATE UNIVERSITY

Chetty CS, Reddy GR, Suresh A, Desaiiah D, Ali SF, Slikker WJ. Effects of manganese on inositol polyphosphate receptors and nitric oxide synthase activity in rat brain. **Int J Toxicol** 2001;20:275–80.

Chetty CS, Reddy GR, Murthy KS, Johnson J, Sajwan K, Desaiiah D. Perinatal lead exposure alters the expression of neuronal nitric oxide synthase in rat brain. **Int J Toxicol** 2001;20:113–20.

Reddy GR, Suresh A, Murthy KS, Chetty CS. Lead neurotoxicity: heme oxygenase and nitric oxide synthase activities in developing rat brain. **Neurotox Res** 2002;4:33–9.

STILLMAN COLLEGE

Singh J. Gestational protein supplementation reduces developmental toxicity of carbon monoxide. **Frontiers in Fetal Health** 2001;3:120–2.

UNIVERSITY OF MARYLAND, BALTIMORE COUNTY

Amarasinghe GK, Zhou J, Miskimon M, Chancellor K, McDonald JA, Matthews AG, Miller RR, Rouse MD, Summers MF. Stem-loop SL4 of the HIV-1 *psi* RNA packaging signal exhibits weak affinity for the nucleocapsid protein. Structural studies and implications for genome recognition. **J Mol Biol** 2001;314:961–70.

Frey DD, Narahari CR, Butler CD. General local-equilibrium chromatographic theory for eluents containing adsorbing buffers. **AIChE J** 2002;48:561–71.

UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL

Pereira M, Rybarczyk BJ, Odrlijn T, Hocking DC, Sottile J, Simpson-Haidaris PJ. The incorporation of fibrinogen into extracellular matrix is dependent on active assembly of a fibronectin matrix. **J Cell Sci** 2002;115:609–17.

Send in your references for inclusion in Selected Publications. We would appreciate your contribution to this section in order to represent as many MORE programs as possible. Complete bibliographical citations can be phoned, faxed, mailed, or e-mailed to the Editor (see page 2).



UPCOMING Meetings

AUGUST

17–21, 2002

PROTEIN SOCIETY

16TH SYMPOSIUM

San Diego Marriott Hotel
San Diego, CA
CONTACT: The Protein Society
9650 Rockville Pike
Bethesda, MD 20814
Tel: 301-530-7009
jlash@faseb.org
<http://www.faseb.org>

18–22, 2002

AMERICAN CHEMICAL SOCIETY

224TH NATIONAL MEETING

Hynes Convention Center
Boston, MA
CONTACT: ACS Meetings
1155 16th Street, NW
Washington, DC 20036-4899
Tel: 202-872-6009
natlmtgs@acs.org
<http://www.acs.org>

SEPTEMBER

26–29, 2002

SOCIETY FOR ADVANCEMENT OF CHICANOS AND NATIVE AMERICANS IN SCIENCE NATIONAL CONFERENCE

Anaheim Convention Center
Anaheim, CA
CONTACT: SACNAS
P.O. Box 8526
Santa Cruz, CA 95061-8526
Tel: 831-459-0170
info@sacnas.org
<http://www.sacnas.org>

OCTOBER

15–19, 2002

AMERICAN SOCIETY OF HUMAN GENETICS

52ND ANNUAL MEETING

Baltimore Convention Center
Baltimore, MD
CONTACT: ASHG
9650 Rockville Pike
Bethesda, MD 20814-3998
Tel: 301-571-1825
mryan@ashg.org
<http://www.ashg.org>

NOVEMBER

2–7, 2002

SOCIETY FOR NEUROSCIENCE

32ND ANNUAL MEETING

Orange County Convention Center
Orlando, FL
CONTACT: Society for Neuroscience
11 Dupont Circle, NW, Suite 500
Washington, DC 20036
Tel: 202-462-6688
info@sfn.org
<http://www.sfn.org>

7–10, 2002

AMERICAN INDIAN SCIENCE AND ENGINEERING SOCIETY

24TH NATIONAL CONFERENCE

Tulsa Convention Center
Tulsa, OK
CONTACT: AISES
2305 Renard Street, SE
Suite 200
Albuquerque, NM 87106
Tel: 505-765-1052
info@aises.org
<http://www.aises.org>

10–14, 2002

AMERICAN ASSOCIATION OF PHARMACEUTICAL SCIENTISTS ANNUAL MEETING AND EXPOSITION

Toronto Convention Centre
Toronto, Canada
CONTACT: AAPS
2107 Wilson Boulevard, Suite 700
Alexandria, VA 22201-3046
Tel: 703-243-2800
aaps@aaps.org
<http://www.aaps.org>

13–16, 2002

ANNUAL BIOMEDICAL RESEARCH CONFERENCE FOR MINORITY STUDENTS

Hyatt Regency
New Orleans, LA
CONTACT: ASM Education Department
1752 N Street, NW
Washington, DC 20036-2804
Tel: 202-942-9228
abrcms@asmusa.org
<http://www.abrcms.org>

DECEMBER

14–18, 2002

AMERICAN SOCIETY FOR CELL BIOLOGY 41ST ANNUAL MEETING

Moscone Convention Center
San Francisco, CA
CONTACT: ASCB
8120 Woodmont Avenue, Suite 750
Bethesda, MD 20814-2762
Tel: 301-347-9300
ascbinfo@ascb.org
<http://www.ascb.org>

ACRONYMS USED IN THIS ISSUE

ABRCMS	Annual Biomedical Research Conference for Minority Students	MSBS	Minority Schools Biomedical Support
ASM	American Society for Microbiology	NAGMS	National Advisory General Medical Sciences
CSUDH	California State University, Dominguez Hills	NIGMS	National Institute of General Medical Sciences
CSUN	California State University, Northridge	NIH	National Institutes of Health
DRR	Division of Research Resources	NMSU	New Mexico State University
FASEB	Federation of American Societies for Experimental Biology	PHS	Public Health Service
HURT	Honors Undergraduate Research Training	PREP	Post-Baccalaureate Research Education Program
IHS	Indian Health Service	RISE	Research Initiative for Scientific Enhancement
IMSD	Initiative for Minority Student Development	SACNAS	Society for Advancement of Chicanos and Native Americans in Science
IRACDA	Institutional Research and Academic Career Development Award	SCORE	Support of Continuous Research Excellence
MARC	Minority Access to Research Careers	SSU	Savannah State University
MBRS	Minority Biomedical Research Support	UCLA	University of California, Los Angeles
MBS	Minority Biomedical Support	UCSF	University of California, San Francisco
MORE	Minority Opportunities in Research	UMBC	University of Maryland, Baltimore County
		U*STAR	Undergraduate Student Training in Academic Research

**RECENT***Awards and Fellowships***PREDOCTORAL FELLOWSHIPS
FOR MINORITY STUDENTS***(listed by fellow and
graduate institution)***Jason Aglipay**Mount Sinai School
of Medicine,
New York, NY**Laura Arce**California State University,
Fullerton**Juan Baez**Yeshiva University,
New York, NY**Mark Baumeister**University of Pennsylvania,
Philadelphia**Amber Bradshaw**City University of New York,
Hunter College**Trevor Brown**Pennsylvania State
University,
University Park**Anthony Chambers**University of Virginia,
Charlottesville**Amber Coleman**Florida Atlantic University,
Boca Raton**Jewel Daniel**University of Virginia,
Charlottesville**Michael Davis**University of Virginia,
Charlottesville**Christian Dimaano**University of Utah,
Salt Lake City**Daphne Dionisio**University of Minnesota,
Twin Cities**Maxine Downs**University of Florida,
Gainesville**Senyene Eyo**University of North Carolina,
Chapel Hill**Asa Flanigan**University of Illinois,
Urbana-Champaign**Javier Garcia-Rivera**Yeshiva University,
New York, NY**Raul Gomila**Harvard University
Medical School,
Boston, MA**Suzanne Graham**Virginia Institute
of Marine Science,
Gloucester Point**Ayana Hinton**Wayne State University,
Detroit, MI**Victoria Love**Harvard University
Medical School,
Boston, MA**Adetokunbo Lukan**The Johns Hopkins
University,
Baltimore, MD**Arindel Maharaj**Harvard University
Medical School,
Boston, MA**Qiana Matthews**Meharry Medical College,
Nashville, TN**Lesla Miles**Morehouse School
of Medicine,
Atlanta, GA**Tiffany Miles**Carnegie Mellon University,
Pittsburgh, PA**Ayana Moore**University of Washington,
Seattle**Fadia Narchet**Florida International
University,
Miami Shores**Natasha Nesbitt**Pennsylvania State
University,
University Park**Susana Neves**Mount Sinai School
of Medicine,
New York, NY**Nicolas Perrusquia**University of Pittsburgh,
Pennsylvania**Alicia Reid**Weill Medical College
of Cornell University,
New York, NY**Rosamund Reynald**The Johns Hopkins
University,
Baltimore, MD**Ariel Rivera-Vincente**University of Hawaii
at Manoa**Luis Rodriguez**Cornell University,
Ithaca, NY**Miguel Talavera**Yale University,
New Haven, CT**Lora Wilson**University of Colorado
Health Sciences Center,
Denver**Ruiz Zavala**Massachusetts Institute
of Technology,
Cambridge**Carmen Zayas**University of Wisconsin,
Madison**BRIDGES TO THE FUTURE
AWARDS***(listed by institution and
principal investigator)***Bridges to the Baccalaureate****Georgia State University,
Atlanta**

George Kennedy

Grand Valley State**University,
Allendale, MI**
Mark Staves**Montana State University,
Bozeman**

Anne Rusoff

**Montclair State University,
Upper Montclair, NJ**

Scott Kight

**Montgomery College,
Rockville, MD**

Kenneth Weiner

**Northern Arizona
University,
Flagstaff**

Brandon Cruickshank

**Queensborough Community
College,
Bayside, NY**

Patricia Schneider

**University of Texas,
San Antonio**

Clyde Phelix

Bridges to the Doctorate**Rutgers, The State
University of New Jersey,
Newark**

Charlotte Thomas-Hawkins

**University of North Texas
Health Science Center,
Fort Worth**

Robert Kaman

MBRS RISE AWARDS*(listed by institution and
principal investigator)***California State University,
Northridge**

Maria Elena Zavala

**California State University,
San Marcos**

Victor Rocha

**Fayetteville State
University, NC**

Juliette Bell

University of Guam

Christopher Lobban

**University of Hawaii
at Hilo**

Daniel Brown

MBRS SCORE AWARDS*(listed by institution and
principal investigator)***California State University,
Long Beach**

Laura Kingsford

**Fisk University,
Nashville, TN**

Henry Moses

**Stillman College,
Tuscaloosa, AL**

Jarnail Singh

MBRS IMSD AWARDS*(listed by institution and
principal investigator)***Columbia University
Health Sciences,
New York, NY**

Ana Abraido-Lanza

**Vanderbilt University,
Nashville, TN**

Roger Chalkley

MARC ANCILLARY TRAINING**ACTIVITIES AWARDS***(listed by institution and
principal investigator)***Carnegie Mellon University,
Pittsburgh, PA**

Hugh B. Nicholas, Jr.

Sigma Xi

Robert Dottin

MARC U*STAR AWARD*(listed by institution and
principal investigator)***California State University,
San Marcos**

Victor Rocha

National Institute of General Medical Sciences
45 Center Drive MSC 6200
Bethesda, MD 20892-6200

*Official Business
Penalty for Private Use, \$300*

FIRST-CLASS MAIL
POSTAGE & FEES PAID
DHHS/NIH
Permit No. G-813



Printed on 50% recycled content paper
and can be recycled as white office paper.