

An official Publication of the **L**ouisiana **A**lliance for **M**inority **P**articipation (LAMP)

A word from the Director

This year has been a successful one for the Louisiana AMP program, as evidenced by the many Louisiana AMP project activities show-cased in this edition of the LAMP Journal.

I hope this publication will increase awareness of opportunities available to Science, Engineering, Mathematics and Technology majors and the importance of holistic student mentoring and graduate school readiness development.

We here at LAMP headquarters aspire for nothing less than continuing to raise the standards of excellence building an environment conducive to successful matriculation for minorities in SEM fields and to encourage, minority scientists, mathematicians, engineers and SEM instructors who will continue to enforce the LAMP objectives even after LAMP is nonexistent.

Faith.

Dr. Robert L. Ford LAMP Project Director

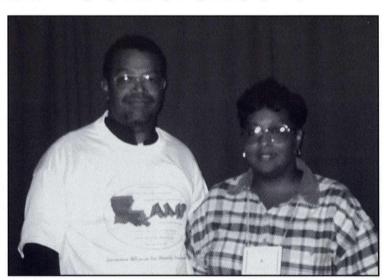
New Mexico Alliance hosts NSF AMP Conference '97

By Dawn D. Stephens, LAMP Research Associate

The New Mexico State University Alliance for Minority Participation (AMP) hosted more than 300 AMP scholars, faculty and staff at the 5th Annual National Sci-Foundation ence AMP Research Conference," Futures Rising Through Research," July 14-17, in Las Cruces, New Mexico, and the Louisiana Alliance was there in the

midst of the scientific and technological excitement.

The Louisiana AMP sponsored 14 scholars, nine of whom were presenters, three SMET Teaching Scholars, one campus coordinator, and two LAMP staff members to attend the conference. Louisiana AMP institutions represented were Dillard University with two participants, Xavier University with one participant and two presenters, Southern University New Orleans



Dr. William McHenry, LAMP Program Director, poses with LAMP Program Administrator Reba Poulson, while showcasing the latest in LAMP fashion during the 1997 NSF AMP Conference.

with two participants and Southern University and A&M College with six participants and three presenters.

The scholars were welcomed to the New Mexico State University campus by the NMAMP Project Director Ricardo B. Jacquez, AMP Program Director Dr. William McHenry and NSF Director of Human Research and Development Dr. Roosevelt Calvert.

Calvert said the AMP scholars "represent the future of this nation in Science, Engineer-

ing, and Mathematics.

"You are in a competitive market, your training must compete with that of countries all over the world," said Calvert, so "get all you can get."

Awards were given to the top three poster and oral pre-Conference cont'd page 2

Inside ...

GSU Book Scholarships, 4.0 Program increase LAMP enrollment pg. 4

Arthur Hicks named AMP Program Director pg. 5

NSF AMP Conference '97 Highlights pg. 7

sentations in each of the following categories: Life Science, Physical Science, Math Computer Science, and Teacher Preparation.

Two Louisiana AMP scholars from Dillard University in New Orleans walked away with awards. Monique Robinson, a sophomore physics major at Dillard, won second place in the Life Science category for her oral presentation entitled "Maintenance and Growth of Phaneochaete Chrysosporium on Solid Agar for Use in Liquid Bioreactor Systems Abstract."

Rose-Anne Blenman, also a sophomore physics major at Dillard University, won second place in the Computer Science/Physics category for her oral presentation, "Factorial Analysis of Experimental Data."

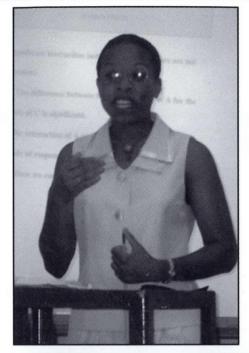
"Not bad for the first time," noted LAMP Program Administrator Reba Poulson, "but next year we'll really be prepared.

"All of the students did a wonderful job and we can be most proud of the talented students participating in our AMP. All are eager to attend the 6th Annual NSF AMP Conference," said Poulson.

Currently Louisiana AMP is in Year 2 and has eleven active institutions, three of which were represented at the conference. LAMP is one of 27 NSF AMPs nationwide. Each Alliance is bound by its goal to substantially increase the quantity and quality of minority students earning baccalaureate degrees in science, mathematics, engineering and technology (SMET) and subsequently, to increase the number of minority students entering graduate schools to earn doctoral degrees in SMET fields supported by NSF.

New Mexico not only exposed the scholars to new advances in technology, but also gave them a culturally and historically enlightened view of the host city.

The scholars toured the International Space Hall of Fame in Alamogordo, New Mexico and the White Sands National Monument, which is miles and miles of pure white gypsum dunes between two mountain ranges. Besides being surrounded by such breath taking scenery, Las Cruces also housed



Left: Dillard LAMP scholar Rose-Ann Blenman caught in action during her oral presentation on "Factorial Analysis of Experimental Data." Blenman won 2nd place in the Computer Science/Physics category.

Below: Southern University Baton Rouge LAMP scholar Kinesha Harris is quizzed about her poster presentation by one of the four judges evaluating her presentation.



some of the most notorious criminals and heroes of the Old West including Billy the Kid, who was allegedly hung in Old Messilla Plaza, located only a few miles from the university.

The conference also gave the AMP institutions a chance to bid farewell to Dr. William McHenry, who has served as the NSF AMP program director since LAMP's inception in 1991. McHenry was "roasted" Friday afternoon during a special farewell ceremony in NMSU's Corbett Center ballroom. Project directors and coordinators took this time to present him with appreciation gifts and words of admiration and encouragement as McHenry assumes his post as Assis-

tant Commissioner for Academic Affairs for the state of Mississippi.

Also present were 16 exhibitors from local and national industries, laboratories, and educational and graduate programs. Some of those present were the Boeing Company, Apple Computers Inc., IBM Corporation, Intel Corporation, Sandia National Laboratories, Los Alamos National Laboratory, Oakridge National Laboratory, University of Miami, University of Texas and a host of others.

The 6th Annual NSF AMP Research Conference is tentatively scheduled for July 18-21, 1998 and will be hosted by the All Nations AMP in Montana.

A summary description of systemic mentoring



By Diola Bagayoko, LAMP Campus Coordination Director

Systemic and holistic mentoring entails the following:

- *Professional recruitment*-with printed materials;
- Listening to the mentees, knowing their assumptions:
- Informing the mentees about expectations (the power law of human performance provides a scientific basis for high expectation for all students), long-term benefits of their work, proper course sequencing, available services, including those for tutoring;
- Supporting the mentees financially (from a diversified funding base, including Federal Financial Aid, TAP, Loui-

siana Honors Scholarship, Board of Regents Support Fund (BORSF) Superior Graduates Fellowship, and otherwise (with resources, seminars etc.); this support is to provide opportunities and must never give the impression of guaranteeing success without the mentees' sustained efforts to achieve:

- Challenging the mentees in course work, GRE Preparation, communication and computer skills enhancement, and in research and scholarly activities, including writing reports (practice), making presentations (practice), etc.;
- Monitoring the activities and results of the mentees; records of the perioding reviews are to be in the portfolios of the mentees; at an absolute minimum, there should be one review/meeting at the beginning of the semester (course sequenc-

ing and review of last semester grades), one to discuss midterm grades, one around the end of the semester (to prepare in time for finals); all activities and results, including research and general enhancement activities, are to be reviewed; without proper monitoring, one cannot write a well-informed recommendation for a graduate school or others;

- Congratulating when appropriate
 for good grades, research accomplishments, model behavior;
- *Admonishing*, stating disapproval, reproving, when needed;
- Guiding as to graduate school;
- Writing substantive and informed letters of recommendation, which requires maintaining a portfolio on each mentee.
- Please see the brochure of the Timbuktu Academy at http://www.phys.subr.edu for mentoring activities.

Louisiana Alliance for Minority Participation Project Profile

LAMP is one of 27 National Science Foundation (NSF) Alliances for Minority Participation (AMP) programs nationwide. AMP is designed to substantially increase the quantity and quality of minority students receiving baccalaureate degrees in science, mathematics, engineering and technology and subsequently, to increase the number of minority students entering graduate schools to earn doctoral degrees in SEM fields supported by the NSF.

The primary, five year goals of the Louisiana AMP program are to double the number of minority students receiving BS degrees in SMET disciplines at participating institutions (from 500-1,000) and for 20 percent of these students to be accepted into SMET graduate school programs. The basic strategy is the statewide replication and enhancement of exemplary mentoring and outreach programs currently underway at Southern University, such as the Timbuktu Academy, an undergraduate research and mentoring program.

LAMP's undergraduate enhancement activities, including financial support, rigorous mentoring, research participation, and guidance to graduate school, will be incorporated into the undergraduate SEM programs at the 10 participating LAMP institutions (Grambling State University, Louisiana State University, McNeese State University, Nunez Community College, Southern University at New Orleans, Southern University at Shreveport, Tulane University, University of New Orleans, University of Southwestern

Louisiana) and LUMCON.

Under the umbrella of the Louisiana Alliance are three supplementary programs: MainSTey, Teaching Scholars, and Social and Behavioral Sciences.

MainSTey is a Mathematics and Science-Technology based education/industry partnership between NSF, Texas Instruments Inc., the Mathematical Association of America, the Louisiana Board of Regents, and Southern University and A&M College. This program focuses on in-service technology-based training for math and science faculty of the 27 NSF AMP projects nationwide. The instruction methods utilize the TI-83 graphing calculators and data probes, which allow-real-time experimental data to be integrated into mathematics instruction and mathematical analysis to be integrated into science instruction.

The Teaching Scholars supplement targets elementary school mathematics and science teachers as these grades are critical in influencing later success in mathematics and science. The program also assists in creating advocates on the HBCU campuses to recruit and mentor teaching scholars, and provides a variety of learning experiences in standards-based reform.

The Social and Behavioral Sciences component is geared toward increasing the interest, matriculation and graduation of minorities in NSF recognized social and behavioral science areas, including anthropology, archeology, economics, geography, human cognition, linguistics, political science, psychology and sociology.

LUMCON offers opportunities for faculty, students

The LUMCON/LAMP Internship Program will sponsor two faculty/student teams from participating college and universities to conduct a short-term research project with a member of the LUMCON research faculty at its Marine Center in Cocodrie, La.

Some general areas of LUMCON faculty expertise include benthic ecology in estuarine and offshore waters, biogeochemistry of Louisiana's coastal waters, coastal geomorphology, chemical ecology of soft corals, ecology of phytoplanton and zooplankton, fishery biology and systematics and functional morphology of fishes.

The projects will be designed with the maximum flexibility needed to accommodate the needs and schedules of the students and faculty. Upon completion of the project, students will be required to write a project report and present a seminar to the LUMCON staff and other LUMCON/LAMP participants.

For additional information about faculty research interest, see the LUMCON web site a http://www.lumcon.edu/. or write LUMCON Marine Center, 8124 Highway 56, Chauvin, La., 70344-2124

Book award, Guaranteed 4.0 program boost GSU LAMP program enrollment

The Grambling State University book award has sent LAMP scholar enrollment to new heights with increases to more than 180 participants, says Dr. Allen Miles GSU LAMP campus coordinator.

While a large number of the scholars are juniors and seniors, the greater majority of GSU LAMP scholars are either sophomores or freshmen.

Currently the program is providing direct support to more that 60 percent of its scholars through the well-received GSU LAMP Book Award. This award provides free textbooks for Science, Mathematics, Engineering and Technology majors.

"This award serves as an added incentive to promote academic excellence," says Dr. Miles. "The students are very enthusiastic about their participation in the program."

Marlisa Stewart, sophomore biology major at GSU, says "The program paid

for all my books, saving me a lot of money. I am a biology major and science books are expensive."

"The book vouchers help the students to financially further their education since higher education is rather expensive," says Shondra Aubespin, fresh-

"The students are very enthusiastic about their participation in the program."

- Dr. Allen Miles, GSU LAMP Campus Coordinator

man biology major at GSU.

In addition to the regularly scheduled LAMP-sponsored tutorial sessions, the College of Science and Technology and LAMP initiated an academic enhancement program entitled "Guaranteed 4.0" for students of all classifications, but especially for freshmen and sophomores.

Donna O. Johnson, program originator, was a workshop speaker. The focus of the program is to help students increase their grade point averages to 4.0, increase student retention, and decrease drop out rates.

The first session held this semester introduced students to important concepts, such as time and stress management, good student techniques, and preparing for classes and examinations. The program was scheduled during orientation week to prepare students for the application of techniques prior to the beginning of classes.

The second part of the program involved follow-up work later in the semester to assure that the students are applying the techniques properly, and to provide additional information.

"Despite some minor obstacles, GSU-LAMP is making fine progress toward achieving the program's objectives," says Dr. Miles.

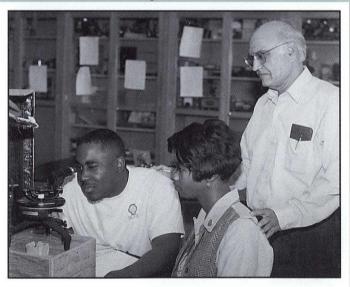
Attention LAMP Campus Coordinators: Your story should be here!

If you have had any newsworthy events take place on your campus or know of a LAMP scholar who could be profiled in the LAMP Journal, we want to know.

You may contact Dawn
Stephens at (504) 771-2777
or email
lampsubr@concentric.net
with your ideas.

LAMP Campus Brief

L to R: SUNO LAMP Scholars Treneh Tremayne and Naomi McGee conduct a spectroscopy experiment under the supervision of Dr. Vibhakar Dave



Currently Southern University New Orleans has 18 LAMP scholars.

Since the program's imple-

mentation it has graduated 13 Mathematics majors, 13 Biology majors, 10 Computer Science majors and one Physics major.

SUBR PAC program challenges high achieving students, teachers

Southern University-Baton Rouge, through the Department of Chemistry, conducted its second NSF-funded Precollege Analytical Chemistry (PAC) Program this summer for 14 students from six local high schools.

The primary goals of this intensive eight-week course in college-level analytical chemistry are to motivate high achieving high school juniors and seniors and precollege high school graduates to pursue careers in Science, Mathematics, Engineering and Technology (SMET) and to afford local high school chemistry teachers opportunities to work at the university level as teacher apprentices.

Students accepted into the program are given an early exposure to tools needed for matriculation at a college as SMET majors. Most participants have just completed their junior year in high school and have the senior year to further develop academic tools learned in the PAC program. Students who complete the course are recruited not only as chemistry majors, but also as physics, mathematics, computer science, and engineering majors at SUBR upon graduation from high school.

Students selected must have completed at least one year of high school general chemistry and have a minimum GPA of 3.00/4.00 in all chemistry, science, and mathematics courses. During the course, the students showed marked improvement in problem solving, laboratory techniques, critical thinking, and test taking skills, primarily due to the full days (9:00 am to

3:00 p.m.) of intensive instruction that included lecture, laboratory, computer-assisted instruction, examinations, and problem solving. Additionally, field trips to local industries exposed the students to career opportunities.

The program's culminating activities included an awards banquet where participant speakers iterated their experiences and benefits of the program as parents, university officials, LAMP administrators and PAC instructors listened intently. Each of the 14 students received a certificate of participation.

Three students received monetary awards for having earned the highest score on the pretest, final examination, or the post-test (American Chemical Society Examination in Analytical

SUSBO LAMP Scholars claim success through summer research

Several Southern University Shreveport LAMP scholars received an opportunity to conduct research for two months at local and national facilities this past summer.

Miranda Hicks, a SUSBO electrical engineering major, was selected as one of 40 students across the nation to participate in the National High Magnetic Field Laboratory 1997 Summer Internship Program in Tallahassee, Fla., sponsored by Florida State University. Hicks assisted Dr. Piotr Fajer in biochemical research involving the study of proteins through chromatography and electrophoresis.

Emmanuel Williams and Lamar Adams conducted research on cell culture, electrophoresis, DNA Fingerprinting and PCR techniques under the direction of Dr. Linda Phaire-Washington at Argonne National Laboratory in Argonne, Ill.

Demetrius Kellum, a computer science major at SUSBO, designed real time software under the supervision of Dr. John Kucisk at the Louisiana State University,

Baton Rouge, La. campus while 4 other scholars participated in programs at the LSU Medical Center in Shreveport, La.

April Lattier and Erika Seamster spent this past summer conducting research at the LSU Medical School. Lattier, a SUSBO chemistry major, investigated the effects of ethanol on brain cells under the direction of Dr. J. Bradley. Seamster, a SUSBO chemistry/biology major, studied the effects of chemicals on frog cells under the supervision of Dr. Nancy Leidnheimer.

Tariq Hill, also a chemistry/biology major at SUSBO, tested the effects of ethanol on stromal cells under Dr. Michelle Wollcott. Under the direction of Dr. Norman Harris, Eunice Johnson, a SUSBO chemistry/biology major researched the effects of mircrocirculaton in young and old rats at the LSU Shreveport cellular molecular biology laboratory.

"Overall this was a pretty good summer for us," said Dr. Barry Hester, SUSBO LAMP campus coordinator. "We hope next summer will be even better."

Arthur Hicks named AMP Program Director

Dr. Arthur Hicks has been selected as the new Program Director of the National Science Foundation's Alliances for Minority Participation (AMP) Program.

He replaces Dr. William E. McHenry, first AMP Program Director, who was appointed Assistant Commissioner of Educa-

tion for Academic Affairs by the Board of Trustees of Mississippi State Institutions of Higher Education.

Dr. Hicks' experience in proposal reviews and evaluations in research and



Dr. Arthur Hicks

past Intergovernment Personnel Act (IPA) assignment at NSF are expected to pay important dividends in his new role as AMP Program Director.

Dr. Hicks has administrative experience spanning 20 years at the levels of department chairperson, and college dean.

Most recently, Dr. Hicks served as Dean of the College of Arts and Sciences at North Carolina A&T State University and is well-known nationally for his work with the Council of Colleges of Arts and Sciences.

LAMP Affiliate given presidential award

LAMP Affiliate Dr. Isiah Warner of Louisiana State University is one of ten individuals and nine institutions to receive the second annual Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

The awardees were recognized during a Sept. 11 ceremony at the Old Executive Office Building in Washington, D.C.

The Louisiana AMP is certainly no stranger to this award. Dr. Diola Bagayoko,

LAMP Coordination Director, was a re-

Dr. Isiah Warner

cipient of the 1996 Presidential Award for Mentoring.

This award recognizes the outstanding mentoring efforts or programs that enhance the par-

ticipation of underrepresented minori-

ties in science, mathematics and engineering at the K-12 through graduate level. Up to ten institutions annually may qualify for the award, which includes a \$10,000 grant.

The awards are administered and funded by the National Science Foundation, an independent federal agency responsible for supporting scientific research and education programs in science, mathematics, engineering and technology.

SBS Conference '97

'Exploring the Role of SBS Careers in the 21st Century'



Top: Dr. Diola Bagayoko, LAMP Campus Coordination Director





Left: Student conference participants listen intently during panel discussion.



More than 200 Social and Behavioral Science (SBS) professionals and students attended the 1997 LAMP-SBS national conference held in New Orleans, La., April 18-19, 1997.

The strategy of the LAMP-SBS conference steering committee and Conference Coordinator Dr. Emmanuel Osagie was to target and invite nationally recognized individuals and/or institutions, other Alliances for Minority Participation (AMP) institu-

tions, SBS faculty members and students to join the debate and help articulate the issues.

Based on evaluations of the conference, more than 90 percent of those who completed the evaluation forms rated the conference sessions and presentations as good and excellent. The conference proceedings are currently being compiled and will be published in fall 97/spring 98.

SU takes initial step to institutionalize systemic mentoring

Southern University has made an initial step in its long-range goal to institutionalize systemic mentoring through an unprecedented move by university officials to approve a departmental mentoring initiative in each LAMP-targeted department.

The chairpersons of each SMET department (Science, Mathematics, and Engineering and Technology) selected the faculty members to serve as departmental mentoring coordinators.

The major objectives of departmental mentoring are to help increase the number and quality of SUBR majors earning Baccalaureate degrees in Science, Mathematics, Engineering and Technology (SMET) disciplines, and to increase the percentage of baccalaureates who pursue Ph.D. degrees in these fields.

The initial systemic effort earmarks SMET departments to enhance efforts of the SUBR Louisiana Alliance for Minority Participation (AMP), whose central component is mentoring.

Prior to the beginning of the 1997 Fall semester, Dr. Mildred Smalley, SUBR LAMP Coordinator, and Dr. Diola Bagayoko, LAMP Campus Coordination Director, conducted a one-day workshop, the second in a series, for mentoring coordinators, administrators, deans, chairs, and other interested persons.

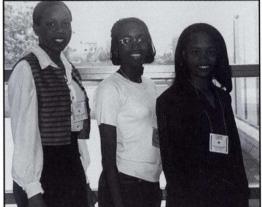
Nearly 30 Southern University faculty, staff and administrators attended the SUBR LAMP mentoring workshop, Aug. 18, including SUBR Executive Vice Chancellor Juanita Robinson.

Any interested persons who would like to obtain copies of the workshop meeting notes may contact Dr. Mildred Smalley at (504) 771-3990 or email mrsmalley1@aol.com.

COUTHERN

(L to R) Bernard Hollins, SUBR LAMP scholar; Reba Poulson, LAMP Program Administrator; and Donovan Harris, LAMP Teaching scholar, are all smiles for the camera at the farewell luncheon for LAMP Program Manager Dr. William McHenry. McHenry was leaving to assume the Assistant Commissioner for Academic Affairs position with the Board of Trustees of State Institutions of Higher Learning for the state of Mississippi starting Aug. 1, 1997.

NSF AMP Conference '97 Highlights



(L to R) Dillard
LAMP scholars
Rose-Anne
Blenman, Kimberly
Lewis and Monique
Roberson.
Roberson placed
second in the Life
Science category for
her presentation on
"Maintenance and
Growth of
Phaneochaete
Chrysosporium on
Solid Agar for Use
in Liquid Bioreactor
Systems Abstract"

Research New Mexico Style Style



(L to R) SUNO LAMP Teaching Scholars Jerolyn Smith and Zoranna Smith-Cowart, and SUBR LAMP Scholars Tracee Thomas and Kinesha Harris



(L to R) Tulane LAMP scholar Joan Green, Tulane Campus Coordinator Calvin Mackie and Tulane LAMP scholars Nakia Jackson and Stephanie Watson



(Above) SUBR LAMP Scholar Bernard Hollins captured midsentence during his oral presentation on "The Leaching of Phenol Derivatives from a Portland Cement Matrix"

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