



# Mid-South Alliance for Minority Participation NEWSLETTER

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## FROM THE PROJECT DIRECTOR

It is with warm regard that I greet you on behalf of the Mid-South Alliance for Minority Participation (MAMP). The Alliance for Minority Participation (AMP) is a nationwide initiative sponsored by the National Science Foundation that seeks to increase the number of minorities who earn baccalaureate degrees in Science, Mathematics, Engineering and Technology (SMET), and who ultimately complete graduate SMET degrees. The Mid-South Alliance for Minority Participation is one of many such Alliances that have been initiated in various colleges and universities throughout the country.

Since the MAMP combines the efforts and talents of eleven different institutions of higher education and community based organizations in the tri-state area of Tennessee, Arkansas and Mississippi, prospective student participants can, in a nurturing and challenging environment, draw upon a vast array of resources as they work towards their degree.

Studies tell us that as we approach the year 2000 and go beyond, members of minority groups will incrementally comprise a larger part of the workforce. As such, the need to educate and prepare minorities for careers where they have been traditionally underrepresented has never been more urgent. Moreover, as the United States

continues to forge its rich history as a world power and compete in global markets, minorities trained in the sciences and technology will play an extremely vital and integral role in making this possible. Thus, the timely contributions that the Mid-South Alliance for Minority Participation will make to minority students not only have domestic as well as global implications; they are also critical to the future of our nation and the world.

Therefore, we invite and welcome your interest in learning more about MAMP, its mission, and benefits to minority students and the larger society they will ultimately serve in SMET professions.



Dr. Andrea L. Miller

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MAMP 1997 @ LeMoyne Owen





Welcome to the Mid-South Alliance for Minority Participation's (MAMP) first official newsletter. MAMP began in 1995 as a partnership among eight institutions of higher education and three community based agencies located in the mid-south area of Tennessee, Arkansas and Mississippi. Today the Alliance has increased its membership to 11 institutions of higher education. MAMP includes four historically black colleges and universities, three community colleges, three comprehensive universities and one graduate-professional school. This past year our Alliance has made significant strides toward accomplishing our program goal of increasing the numbers of the highly qualified minority students who receive baccalaureate degrees in science, mathematics, engineering and technology and encouraging them to pursue graduate education after college.

The Mid-South Alliance for Minority Participation (MAMP) had a very successful and productive first year. The accomplishments were as follows:

- Held an open house and recruitment kick-off attended by area high school principals, guidance counselors, science and mathematics teachers to inform participants about the MAMP program and to solicit their assistance in identifying and recruiting talented minority students interested in pursuing SMET careers. As a result, we were able to effectively recruit minority students into SMET programs at Alliance institutions by working closely with these high school officials and consequently, we have full student participation in MAMP at Alliance institutions: April 1996.
- Held a student luncheon to review year long MAMP accomplishments: April, 1996.
- Increased the number of B.S. degrees awarded to minority students in science, mathematics, engineering, and technology (SMET) disciplines by 37.4%; from 195 in 1994-95 to 268 in 1995-96.
- Established the 1996 Summer Bridge Program; 120 recent high school graduates attended a seven-week academic enrichment program at seven MAMP institutions. The summer bridge was designed to ease a students' transition between high school and college. Students took enrichment and college courses, participated in weekly seminars, mentoring and orientation activities.
- Established a Summer Research Internship Program, and Business and Industry Internship Program with the assistance of Memphis Partners, Inc.
- Established the MAMP Homepage on the World Wide Web/Internet at <http://www.mecca.org/MAMP/mamp.html> with links to other AMP homepages. Christian Brothers University developed an additional homepage for their MAMP students.
- Organized a site visit attended by Dr. William McHenry, National AMP Program Director and other administrators from National Science Foundation that confirmed MAMP was effective in

achieving its program goals and objectives and was in full compliance with the terms set aside in the cooperative agreement with NSF: October, 1996.

- Expanded opportunities for MAMP students to work in other NSF-funded initiatives. MAMP students from all Alliance institutions served as tutors for students in the NSF-funded Memphis Urban Systemic Initiative "Algebra Labs," and acted as mentors/tutors for students attending "Boys and Girls Club" Afterschool Program.

- Participated in several high school recruitment fairs, the largest being the regional College-A-Rama attended by over 5,000 area high school seniors: October, 1996.

- Representatives from MAMP participated in the Memphis Mathematics, Science and Engineering Conference convened by The Quality Education for Minorities (QEM) Network: November, 1996.

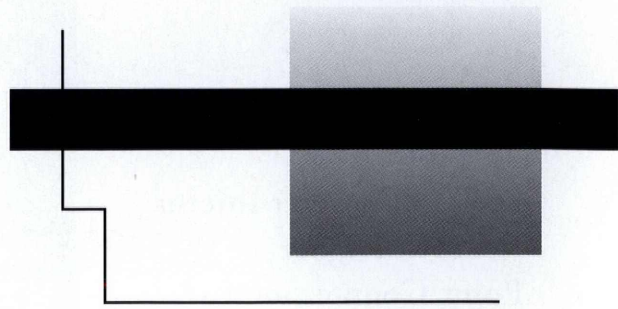
- MAMP and the mid-south area Society of Black Engineers co-sponsored a dinner meeting to recruit professional mentors for MAMP students: November, 1996.

- LeMoyne-Owen College received a grant for \$100,000 from the Packard Foundation (Dr.M.I. Shafi, Dir.) for additional scholarship support for MAMP students.

- MAMP sponsored a "TransFair" in February, 1997, to provide students, admissions requirements and financial aid information at four-year institutions within the Alliance. The primary purpose was to facilitate the easy transition of MAMP students from community colleges to four-year institutions.

- MAMP students at the University of Memphis and other MAMP institutions attended a public lecture given by Dr. Peter Doherty, winner of the 1996 Nobel Prize for Medicine for his research on MHC restriction of T-cell recognition of foreign antigens. Dr. Doherty is a researcher at St. Jude Children's Research Hospital in Memphis, Tennessee. This event held February 27, 1997, was sponsored by the College of Arts and Sciences at The University of Memphis.

- MAMP co-sponsored the Western Regional Tennessee Academy of Sciences Meeting, March, 1997. Several MAMP students presented the results of their scientific research. The guest speaker for the general session was Dr. George C. Hill, Project Director of National Science Foundation Minority Research Center of Excellence in Cell and Molecular Biology and Director for International Health Programs, Meharry Medical College, Nashville, Tennessee.

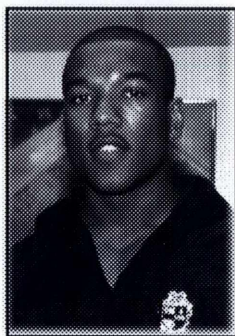




# Student Views

The MAMP program at Lemoyne-Owen College has sixty active sophomore and freshmen members. We are planning to participate in several activities which include Honda Challenge, a knowledge bowl competition and a mentoring/tutorial program for high school and grade school students. We will also participate in recruitment for the MAMP program for 1997-98 school year. Our MAMP members from the 1995-96 school year would like to express their deep appreciation to Memphis Partners, Inc. and UT-Memphis HCOP programs for providing summer science and math internships.

Ronald White, Sophomore  
LEMOYNE-OWEN COLLEGE

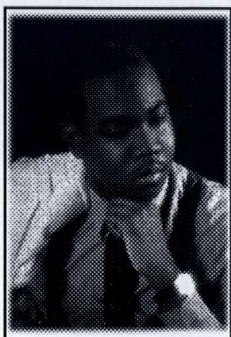


MAMP has been a helpful program because it provides the enrichment that I need to fulfill my goals. The program offers tutoring in the subjects that I need improvement in. The tutors are my peers and can explain to me on my level where I am going wrong.

The program also has helped me in finding a job. Through Memphis Partners, a resume workshop was held to help in writing a resume and answering actual interview questions.

The most important thing about MAMP is the money it provides to supplement a college student. The money has allowed me to do more studying instead of having to work during the school year. The program is very beneficial. I hope that the program continues to provide that extra push that a student needs to reach their goals.

Christopher Cummings, Junior  
CHRISTIAN BOTHERS  
UNIVERSITY



As a participant in the 1996 MAMP summer program at Rust College, I was introduced to college life. This summer program gave me a boost in preparing for college courses. The professors were very supportive and helpful. The one activity that I enjoyed the most was going to LeMoyne-Owen College every Friday. This gathering of MAMP students from various schools enhanced my knowledge of the work field and made me realize how important it is to be the best that I can be. It also gave me the opportunity to meet other students my age of different backgrounds and from different colleges. We discussed issues that will affect us as young adults facing the 21st century. This open forum of young gifted minority students represented the world's next leaders. In our group were future doctors, lawyers, engineers, scientists, philosophers, writers and teachers. This program made a difference in all of our lives by helping us shape our future.

Candace Curry, Freshman  
RUST COLLEGE

I feel that the MAMP program at Rust College gives students an opportunity to learn more about their heritage. The program does a fine job of encouraging students to remain in the math and science fields by allowing influential speakers to come and share their experiences and motivate students to become successful.



Danita Scott, Sophomore  
RUST COLLEGE



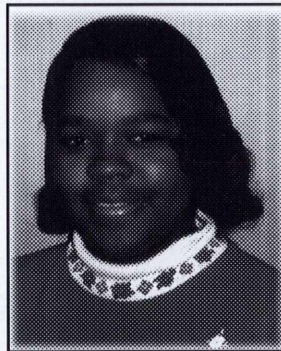
The Mid-South Alliance for Minority Participation (MAMP) program brings students together. We are taught the concept of teamwork and encouraged to believe we can achieve any goal. We use brainstorming to discover ways to make MAMP better now and for future students. For instance, we can get high school students involved in science and math, and encourage an interest in the engineering technology field.

The program helps the students become aware of the importance of good grades because a 3.0 grade point average is needed to become a MAMP participant. MAMP Students are inspired to strive for business ownership or management. Students are encouraged to get the experience needed from experience professionals and learn all about the business you would like to own in the future.

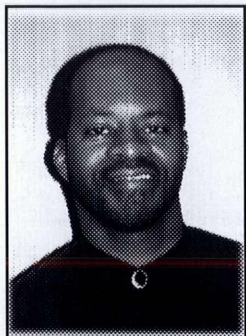
The MAMP program is a new program at State Technical Institute at Memphis. It offers minority students a stipend, as well as mentoring and tutoring, to further their education. Upon meeting the following requirements, the student receives a stipend payment of various amounts (depending on their classification) as an incentive to do well in school and to further their education

1. Students must be a member of an underrepresented minority group.
2. Students must have a 3.0 grade point average.
3. Students must be full-time (12 hrs).
4. Students must attend MAMP class for 1 hour per week.
5. Students must not miss three or more hours of class.
6. Students must attend lectures, seminars, and conferences for MAMP students

The National Society for Black Engineers (NSBE), faculty members, and other local and national societies act as mentors and offer their time and cooperation to the students. As a mentor, they give advice, help, time and wisdom to an individual or a group of students.



Charlett Golden  
State Technical Institute



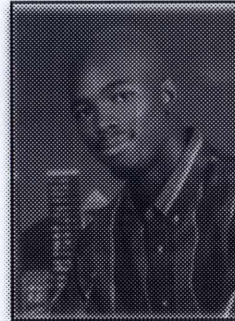
John McClough  
State Technical Institute

The program is off to a huge success this semester. Students meet with mentors the first Wednesday of each month at 12:30 p.m. In addition, program participants will get a one-hour session on the use of the Internet in doing research from the computer department at the next meeting.

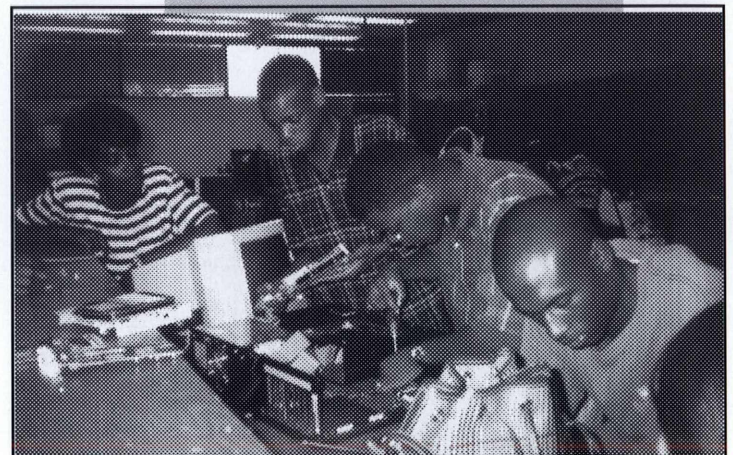
The MAMP program gives minority students the opportunity to succeed. It gives minority students an advantage in majoring in math and science programs with confidence. We started during the summer session. Although we started out with only a few students, the student participation has grown tremendously. This is a program where there are rewards for your efforts academically. Students have the opportunity to meet with mentors weekly and listen to science and math professionals who have achieved their professional goals. MAMP was organized to guide students who are willing to work hard to achieve future success.



Sophia Sanders, Freshman  
MID-SOUTH  
COMMUNITY COLLEGE



Anthony Gray, Sophomore  
MID-SOUTH  
COMMUNITY COLLEGE



MAMP Students @ State Technical  
Institute, Memphis.



# MAMP Summer Internships

## National Oceanic Atmospheric Administration

From June 12, 1997 until July 19, 1997 I was aboard the National Oceanic Atmospheric Administration research vessel, the Oregon II during the 1997 "Summer Ground Fish Cruise." The purpose of this cruise was to collect commercial fish of all types. We surveyed an area roughly 20 miles southeast of Pascagoula, Mississippi (the headquarters for the survey) all the way to Brownsville, Texas. Marine plants and animals collected were measured and weighed and then environmental surveys were conducted from which we collected scientific data. It was a rewarding summer, but sometimes dangerous. In one of our catches some sharks got aboard the ship by cutting through the fishing net. No one was injured.

Clifford Hollins, Junior  
Rust College.



Clifford Hollins, Junior Rust College aboard the Oregon II

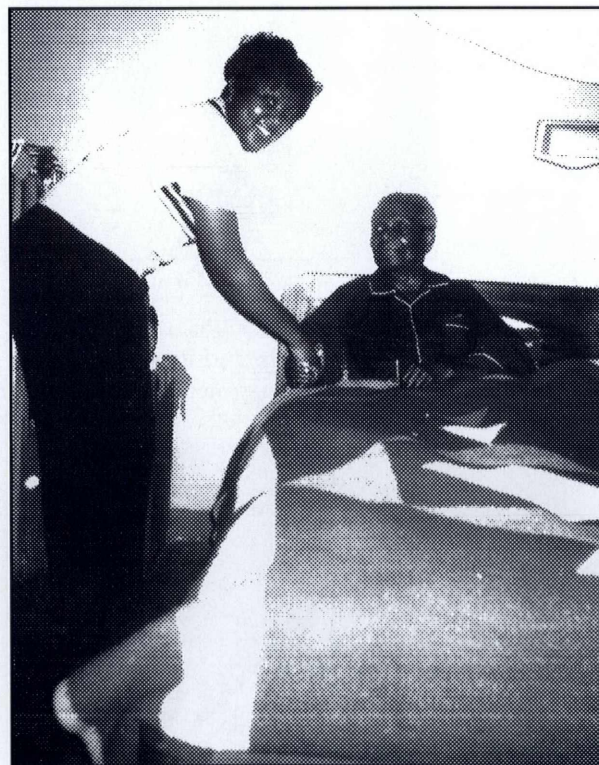
## Summer Internship In Africa

There is nothing greater than working with the first historic research center in Ghana, West Africa. This summer I worked at The Center for Scientific Research in Plant Medicine with the assistance of Rust College MAMP Coordinator, Dr. Baskerville. The center's purpose was to conduct research on and prepare herbal medication for possible use by humans. Before administering to humans, herbal medications were screened through several departments:

1. Clinical Unit
2. Production Unit
3. Pharmacology Unit
4. Phytochemistry Unit
5. Microbiology Unit

I helped conduct research on a medication that cures asthma called "Nibima." One of the most important things I learned was that herbal medicine has no side effects.

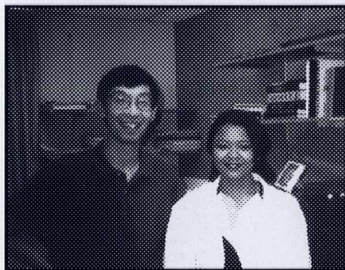
Doreen Hammond, Junior  
Rust College



Doreen Hammond with Founder of Center for Scientific Research, Ghana, West Africa

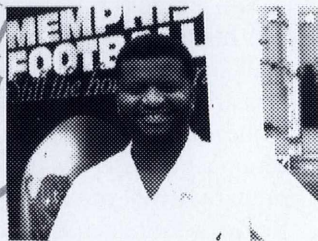


The following students participated in the Mid-South Alliance for Minority Participation Apprentice Program (MAMPAP) as Summer Research Interns at UT Memphis:

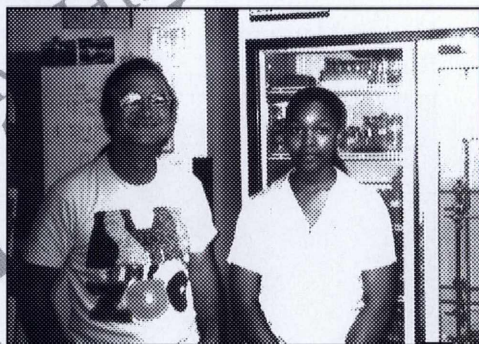


• **Latonya Spight**, a junior at Rust College, worked in the laboratory of Dr. Yi Zheng, Department of Biochemistry, UT Memphis

• **Darnell Echols** a sophomore biology major at Shelby State Community College, worked under the Direction of Gary King, Director of Radiology, The Med Hospital, Memphis, TN

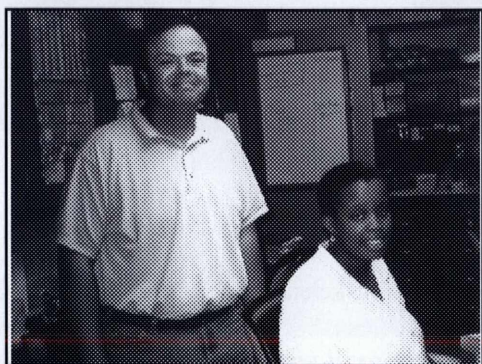


• **Debbie Yarbrough**, a sophomore biomedical engineering major at State Technical Institute, Memphis worked under the direction of Dr. Mohammed F. Kiana in the Biomedical Engineering Department, Baptist Memorial Hospital



Marnica Johnson

• **Marnica Johnson** a sophomore at LeMoyne-Owen College, worked in the laboratory of Dr. Harry Jarrett, Department of Biochemistry, UT Memphis



▼ Twanna Smith

• **Twanna Smith** a sophomore at LeMoyne-Owen College, worked in the laboratory of Dr. William Taylor, Department of Biochemistry, UT Memphis

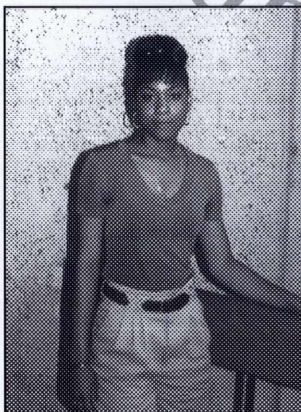
# MAMP Summer '97 Interns



Robbi Willis

• **Robbi Willis** a junior at Rust College worked in developing a communication system that involved the mechanisms by which Oakridge National Laboratory treat their hazardous wastes.  
**Mentor:** Dr. Juan Ferrada

• **Kandra McBride** a sophomore computer science major at State Technical Institute, Memphis. Ms. McBride worked in the Office of Science Education developing an interactive communications system for technical demonstrations at the Oak Ridge Reservation. The project involved creating an interactive system with the Internet that would allow access to information about technical deployment, technical assessment, operations and maintenance.  
**Mentor:** Dr. Linda Cain



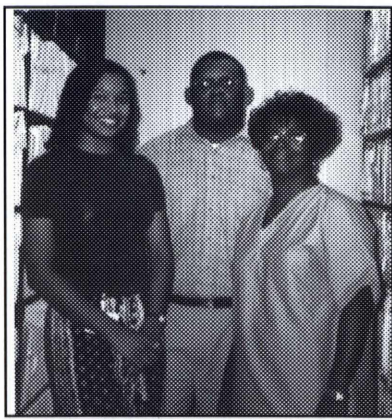
Kandra McBride



Franchesca Tyler

• **Franchesca Tyler** junior at LeMoyne-Owen College worked in developing a communication system that involved the mechanisms by which Oakridge National Laboratory treat their hazardous wastes.  
**Mentor:** Dr. Juan Ferrada





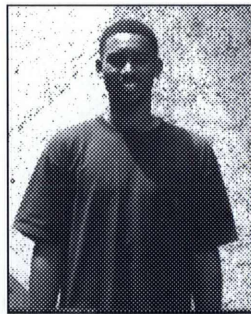
Tenille Hill, Roberick Anderson, and Mrs. Hill(VF)

- **Roderick Anderson and Tenille Hill**, both juniors at Christian Brothers University, worked for the Vitroretinal Foundation.
- **Karima Causey**, a junior at Christian Brothers University, participated in summer research program at UT Memphis.
- **Christopher Cummings**, a junior chemical engineering major at Christian Brothers University worked as a summer intern for Fisher & Arnold, Inc., Engineering Firm, Memphis.



Gene Bailey (Fisher & Arnold) and Christopher Cummings

- **Anthony Burton**, a sophomore computer science major at LeMoyne-Owen College worked under the direction of Mr. Larry Taque, UT Memphis and Mr. Wilson Ojwang, LeMoyne-Owen College as a html developer to define requirements and develop a web-site to support the MAMP project.



Anthony Burton



Angela Glass

- **Angela Glass**, worked on a research project at LeMoyne-Owen College in the laboratory of Dr. M. Rafique Uddin. Her project was entitled, "Effects of Heavy Metals and pH on the Interaction and Colonization of Conifer Roots by Armillaria."



Mrs. Cecile Prager(Memphis Partners), Nekia Slater, Twanna Smith, Kenneth Houston

The following students worked in the United Way's Career Connections with the Sciences.

- **Nekia Slater**, junior at Christian Brothers University
- **Twanna Smith**, sophomore at LeMoyne-Owen College
- **Kenneth Houston**, sophomore at LeMoyne-Owen College.

- **Rodriguez Rivas, University of Memphis** a sophomore engineering major at State Technical Institute, Memphis worked in the laboratory of Dr. Robert A. Malikin. His project was entitled " Construction of Electrodes for Cardiac Mapping."
- **Valarie Gray, University of Memphis** a sophomore chemistry major at State Technical Institute, Memphis worked in the laboratory of Dr. Don Franceschetti. Her project was entitled " Computer Simulation of DNA oligonucleotide binding"
- **Monica Wilson, University of Memphis** a sophomore chemistry major at State Technical Institute, Memphis worked in the laboratory of Dr. Ying-Singh. Her project was entitled " Electrochemical and Spectroscopic investigation of neurotransmitters"
- **P.K. George, University of Memphis** a sophomore Electrical Engineering at State Technical Institute, Memphis worked in the laboratory of Dr. Michael Daley. His project was Instrumentation to evaluate changes in cerebral volumes in neonates.
- **Pat Polania, University of Memphis** a sophomore Human movement sciences major at State Technical Institute, Memphis worked in the laboratory of Dr. Yuhua Li on a project entitled "Effects of exercise on neuromuscular/musculoskeletal function for the elderly."



# Mid-South Public Health Issues

## Point/Counterpoint

### This Point Is... by Nicholas Joseph, Jr., B.S., RRT

Hepatitis "A" vaccinations should be mandatory for persons working in high risk public areas or areas in which an endemic outbreak has occurred. The point is not to usurp anyone's civil rights, rather it is to contain and eradicate the infectious disease of Hepatitis A.

Hepatitis "A" (HAV) was originally called infectious hepatitis. It is an acute illness which is benign and self-limiting. The incubation period is 14 to 45 days. It does not cause a chronic hepatitis nor can it induce a carrier state. The virus is a small, non-enveloped, single stranded RNA virus. Its presence is detected as an acute infection by anti-HAV IgM in serum. IgG anti-HAV appears and increases with the decline of IgM (within a few months). The presence of IgG confers immunity.

HAV is fecal-orally spread accounting for 20-25% of acute hepatitis in developing countries. Inadequate isolation of human waste from the fresh water supply accounts for this phenomenon. Acute HAV, is primarily a childhood illness, spread by children who have not yet been taught proper handwashing technique.

In the last few years there have been several areas in the U.S. that are reporting endemic levels of acute hepatitis. Particularly in the Mid-South states, including Memphis, Tennessee, there are many counties sustaining endemic levels. For this reason, the Center for Disease Control has recommended precautionary measures such as, HAV vaccination and enforcement of OSHA infection control standards.

Organizations such as the Center for Disease Control, Environmental Protection Agency, and the U.S. Department of Health, Education, and Welfare have been established to collect data, institute policies, and enforce regulations regarding public safety.

Interpersonal interactions with the food industry as well as the child care industry are suspected to be the most common links in the mechanism of spread. It is now mandated upon employers in these industries that their employees be vaccinated or provide documentation of immunity. This raises an issue of Civil Rights to refuse HAV vaccination. It is my position, in this abstract, that it is not a violation of one's rights to be so mandated. There is serious "Star Trek," "the needs of the many outweigh the needs of the individual. I state this without reservation, "the public must be protected from environmental or industrial harms." The

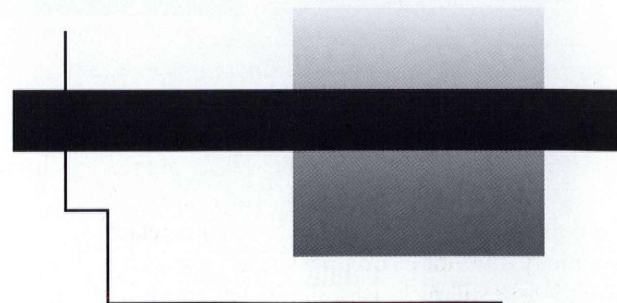
public has yielded certain rights to the government to provide and enforce environmental safeguards as deemed necessary. An example of such a trade off is the security we have against radiation from nuclear power plants or missiles housed in silos. Such powers are given to the government by the people and amended according to the public's perceived needs by the electoral process. For example, the government has no authority or mandates (at this time) to require all Americans be tested for Human Immunodeficiency Virus (HIV), nor is any individual required to receive "flu" vaccination.

The impact of endemic levels of acute HAV are well documented. There are personal time losses due to illness, rise in medical cost to diagnose, loss of employee time, and most importantly, the virulent spread of the virus. The endemic levels reported in certain areas of Memphis, Tennessee have made it necessary for the Health Department to offer free vaccination to anyone living in these areas of the city. Certainly, all food handlers in these areas should be required to accept these vaccinations.

The question at hand is "should a child be admitted to a public school if a mandate to vaccinate is not followed?" Notwithstanding a medical reason for refusal, a non-compliant child should not be allowed to attend school until compliance is made. This is analogous to children being required to complete measles, mumps, and rubella vaccinations prior to entering kindergarten. Public policy is clearly stated even in the care of a dog. The owner of a dog must have it vaccinated against rabies virus. Why? To protect the public from the risk of rabies. HAV vaccination should not be considered a violation of one's Civil Rights, but welcomed as a public protection policy.

When a policy clearly mandates on the basis of race, age, socio-economic standings, etc., then arguments of Civil Rights violation may be in order. Public policies are generated to be without a face, or religious creed, or ethnic background. These policies should protect us. In the past, local governments have issued curfew laws to lessen the opportunity for juvenile delinquency. Many such public policies have been recanted by Courts in the name of Civil Rights; however, new strategies continue to emerge that benefit the public. Again, challenges to civil policy changes are not discouraged by the Courts.

The public makes a large assumption, that is, that civil policy explicitly forbids the use of experimentation. Such a case like this could not be made regarding a mandate for vaccination in an endemic area. vaccination is the lesser of two evils, since quarantine clearly violates civil rights and is not supported by the judicial system.





# And the Counterpoint is...

by Anne Mitchel-Hinton, MT(ASCP),  
EMT, EdD

...that there is a different public who is outraged, outcrying and litigating, because there is the mistrust of the "government" (Center for Disease Control, Environmental Protection Agency, U.S. Department of Health) in its mandating Hepatitis A vaccinations without weighing the risks and benefits; conducting scientific investigations of humans without their informed consent; marketing investigations of humans without their informed consent; marketing new, therapeutic agents for human use less than two months after application to FDA; conducting experiments on the "powerless" and those who are vulnerable to domination by scientific authority; and, not only repeatedly denying treatment of conditions and infirmities incidence to those experiments, but denying the existence of the relationship among symptoms and adverse, random, unpredicted effects of the experiments.

The populations on whom the scientific investigations are conducted appear to be largely poor and require indigent health care, i.e., "picking social priorities." This population relates the "picking social priorities" attitude to a metaphor for metastatic racism and an act of genocide against this population rather than a preventive measure for the spread of a virus.

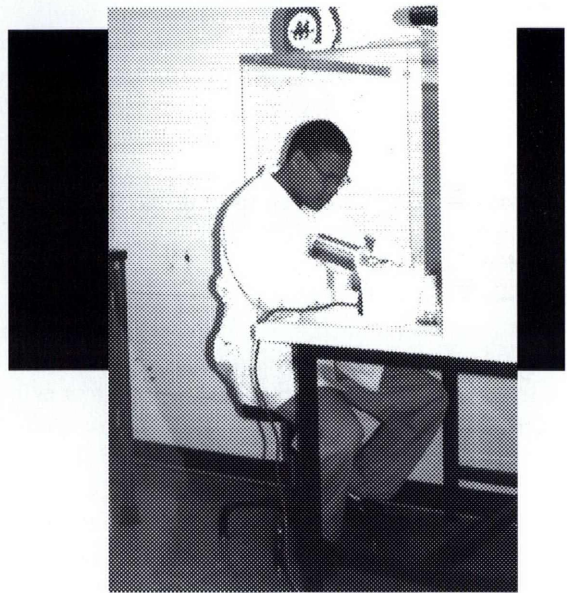
Perhaps this paradigm could be viewed as destructive paranoia except for the fact that paranoia is unfounded fear. This view is founded on historical precedence. In the public's mind, the questions related to historical precedence are:

1. If the government could carry out the Tuskegee Institute Syphilis Study; approve the use of the Bard Heart Catheters; use retarded children at Fernald School in Mass., as guinea pigs in radiation tests; and, expose retarded youngsters (Willowbrook) in New York to the hepatitis virus, how can one be certain that mandating the Hepatitis A vaccination is not an investigative study of the impact of the AIDS virus?

2. Viruses must have cell lines to be prepared, i.e., these organisms must be propagated in tissue cultures. Was the Hepatitis A vaccine propagated in human tissue or in the cell lines of HIV infected primates?

The literature reports that one of the species of monkeys harbors a virus similar to the HIV. To make the vaccine, the organisms from the tissue culture is attenuated so that it retains its pathogenicity, but not its original virility or toxicity. The attenuated virus still picks up a significant amount of the genome.

These are reasons enough to mistrust the mandatory vaccinations of an existing population.



**Micheal Coleman,**  
**MAMP Mentor,**  
**Senior, Biology major @ LeMoyne-Owen**

## Issues In Higher Education

by Donald R. Francescheti, Ph.D.

What degree do I need?

The vast majority of the scientist and engineers have not only a bachelors degree but also a graduate degree. Young students, facing four years of coursework and college bills, are often confused about higher degrees, and the process of obtaining them. This is intended to provide some answers.

For people with scientific interests the most common graduate degrees are the Masters of Science Degree and the Doctor of Philosophy Degree. A Master of Science Degree requires from one or two calendar years of full time effort. Unlike the undergraduate years, which are generally devoted to both general education and advanced work in a major subject area, study for the M.S. degree is generally restricted to one subject, with perhaps a few courses in a closely related field. M.S. degree programs also require a sequence of examinations which cover the major field of study and usually require that the student complete a major research project and write a thesis, to prove that the student is able to draw together what he or she has learned from individual courses, conduct further library research and then perform an independent investigation in the laboratory.

The Doctor of Philosophy Degree is the highest academic degree in the United States and is awarded only to individuals who have demonstrated that they can do independent research. The Ph D. degree usually requires four to six years of full time effort beyond



the bachelors degree, of which perhaps fifty percent of the effort will be devoted to research leading to a dissertation. as a candidate for the doctoral degree, the student is generally treated as a junior colleague by the faculty members in the department. He or she will usually become a member of a research group, be assigned laboratory space, and will have the opportunity to earn income as a teaching or research assistant. Earning a Ph.D. degree is almost always a full time effort.

The Ph.D. is generally required to teach at a college or university, to be employed as a project leader in industry, or to be hired as a research scientist in a government laboratory. Scientist with masters degrees may teach in a community college or find employment in industry, either as a junior member of a research group or as the individual with responsibility for a particular function, such as a quality control laboratory. For engineers, the masters degree is more usually considered the basic professional degree, although the doctorate is required for college level teaching and for some leadership positions. Persons with bachelor's degrees usually employed as technicians or research assistants and are usually expected to earn a masters degree by part time study if they expect to advance. Since starting salaries for individuals with doctoral degrees may be sixty to one hundred percent higher than for those with bachelors degrees, the delay of full time employment for a few years while earning an advanced degree is usually a very good investment.

#### **How much will it cost?**

Tuition and fees for full-time graduate study can range from about \$2500 per year at the least expensive public institution to ten times as much at the most expensive private universities. Most full-time graduate students in the sciences, and many in engineering have their tuition and fees waived (i.e., not charged) and receive a monthly stipend so that they can devote their full time to their studies. Superior students may be awarded fellowships, either by their institutions or by another agency or foundation, which require only that they make progress toward meeting degree requirements. Assistantships require work in addition to study. Graduate research assistantships, require work on a particular project, usually part of the students own dissertation research. Graduate teaching assistants are involved in teaching laboratory sections, grading papers and sometimes teaching entire classes. The experience gained as a graduate assistant is often an important factor in gaining subsequent employment.

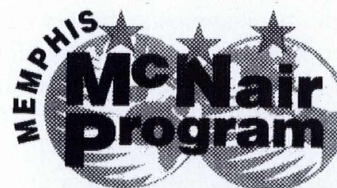
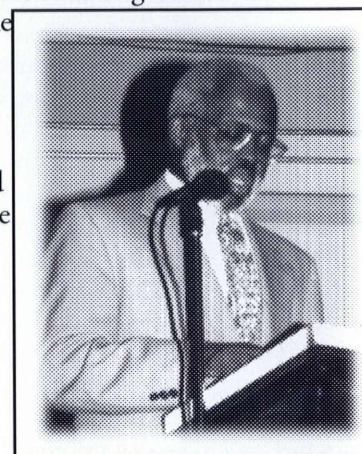
#### **What do I do then?**

Individuals with graduate degrees in the sciences, mathematics and engineering have numerous opportunities. Many will work in industry. Others will find jobs in university teaching or government laboratories. Some will have the opportunity to enter management. Increasingly, Ph.D. scientists are being employed by law firms, banks and investment firms, where their knowledge is needed to identify investment opportunities in high technology industries. Some will join or start their own businesses, based perhaps on an invention of their own. While the economy has its ups and downs and some flexibility is required, the majority of scientists, mathematicians and engineers enjoy challenging and rewarding careers within their chosen professions.

**Donald R. Franceschetti, Ph.D.**

## **Tennessee Academy of Science Western Regional Conference**

The Division of Natural Sciences, Mathematics, and Computer Science, LeMoyne-Owen College and the Mid-South Alliance for Minority Participation(MAMP) co-sponsored the Western Regional Tennessee Academy of Science Conference, held Saturday, March 22, 1997 on the campus of LeMoyne-Owen College. The guest speaker for the general session was Dr. George C. Hill, Project Director of the National Science Foundation Minority Research Center of Excellence in Cell and Molecular Biology and Director of International Health Programs at Meharry Medical College, Nashville, Tennessee. Twenty seven undergraduate and graduate students presented the results of their scientific research. Monetary awards were given to 1st place, 2nd place, and 3rd place winners. Gift certificates were presented to students receiving honorable mention.



### **Take the Ph.D. Challenge**

MAMP is working with the UT Memphis McNair Program to encourage underrepresented minority students interested in earning a Ph.D. in the Biomedical Sciences. Eligible students would participate in the MAMP program their freshman and sophomore year and the McNair program in their junior and senior year of college. Named for the Challenger astronaut, Dr. Ronald E. McNair, the second African-American to fly in space this trio program is designed to prepare underrepresented minority students to pursue doctoral studies in the biomedical sciences.

#### **For an application or more information, contact:**

The Memphis McNair Program  
Office of Health Career Programs  
The University of Tennessee, Memphis  
790 Madison Avenue, Room 317  
Memphis, Tennessee 38163  
(901) 448-4791  
Fax: (901) 448-7291



# Gathering of Achievers

Shelby State Community College MAMP program under the direction of Dr. Anne Mitchell-Hinton, sponsored a "Gathering of Achievers" reception and seminar, Sunday, February 23, 1997 on their campus. SMET Professionals came out to informally speak with and inspire MAMP students to continue their education and achieve their SMET career goals. Guest speakers included, engineers, chemists, pharmacists, research scientists, dentists, environmental scientists, and science educators. Dr. Floyd Amann, President of Shelby State Community College, a former research scientist and now a college administrator, gave students a very inspirational message about succeeding in life.



**Dr. FLOYD AMANN**

# TRANSFAIR MAMP

MAMP sponsored a "TransFair" in February, 1997, to provide students from Alliance community colleges with information about SMET programs, admissions requirements and financial aid available at four-year institutions within the Alliance. The primary purpose was to facilitate the easy transition of MAMP students from community colleges to four-year institutions. Representatives were present from LeMoyne-Owen College, Christian Brothers University, Rust College, University of Memphis and University of Tennessee, Memphis.

# IN LOVING MEMORY OF CARLOS PERRY

We lost a future leader, a fellow student and a good friend. The life of Carlos Perry, a freshman computer science major at LeMoyne-Owen College was cut short on October 30, 1996. Carlos was a victim of the needless violence that so often affects the lives of young African-American males.

AFRICAN-AMERICAN MALES AGE 12 TO 24 are almost 14 times as likely to be homicide victims as are members of the general population according to the U.S. Department of Justice, DECEMBER 1994.

*Carlos Perry*  
**WE MISS YOU !!!**

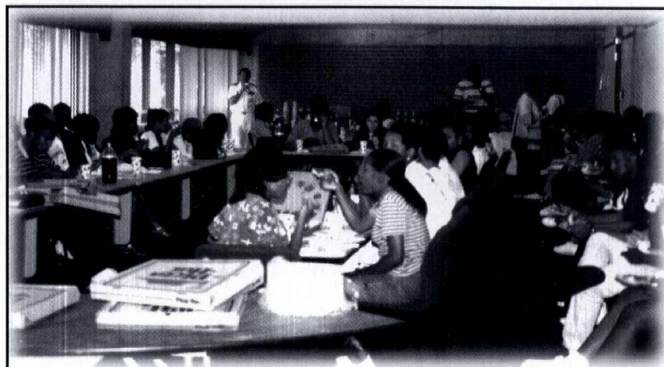
# THANK YOU NIKE

The Mid-South Alliance would like to thank Mr. Willie Gregory of Nike, Inc. for the going the extra mile to provide T-shirts for all of our MAMP Prefreshman Summer Students.



# THANK YOU NRC (Navy Recruiting Command), Memphis

Special thanks go out to LT Sam Harris and Frank Holmes III for sponsoring MAMP Luncheons and to all other Navy officials who informed "students" about undergraduate Navy scholarship programs for science, mathematics, engineering, and technology majors.





**ATTENTION!!!**

## All MAMP Community College Students!

• The Packard Foundation is offering \$2,500/year in scholarships to complete your SMET bachelor's degree at LeMoyné-Owen College. Please contact: Dr. M.I. Shafi 901-942-733 for more information.

• Plan on going to graduate school after college? The Office of Naval Research can assist you financially! Hampton University administers a Graduate Fellowship Program for graduates of historically black colleges and universities (HBCU's). The eligible disciplines are electrical engineering, mathematics, physics, chemistry, computer science, and many more. For more information call: 757-728-6804, Web address: <http://www.cs.hamptonu.edu/science/onr>

## LETTERS TO THE EDITOR

If you have something on your mind and want to express it, this is where we would like to hear your comments, criticisms, views, etc. Write us and let us know how you feel!

ORISTYNE WALKER, PH.D  
LEMOYNE-OWEN COLLEGE  
807 WALKER AVENUE  
MEMPHIS, TN 38126

[oristyne\\_walker@qm.lemoyne-owen.edu](mailto:oristyne_walker@qm.lemoyne-owen.edu)

# Surfing the Net

We're on-line!! We have our own homepage on the World Wide Web! The MAMP homepage was developed by Mr. Larry Taque, UT Memphis and his summer intern, Mr. John Bussell. The homepage was recently revised and updated by Anthony Burton, a junior computer science major at LeMoyné-Owen College.

The MAMP homepage address is:  
<http://www.mecca.org/MAMP/mamp.html>

MAMP is also being hosted by the MECCA Server:  
<http://www.mecca.org>

For more information about MAMP on the web contact Dr. Oristyne E. Walker at:  
[oristyne\\_walker@qm.lemoyne-owen.edu](mailto:oristyne_walker@qm.lemoyne-owen.edu)

### OTHER HELPFUL WWW ADDRESSES:

Chicano Latino Net  
<http://latino.sscnet.ucla.edu/>

National Society of Black Engineers (NSBE)  
<http://drum.ncsc.org/-carter/NSBE.html>

National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc.  
<http://www.nd.edu/~skaruppa/gem.html>

NSF Science and Technology Centers  
<http://www.graphics.cornell.edu/allSTCHome.html>

National Science Foundation Home Page  
<http://www.nsf.gov/>

Federal Information Exchange  
<http://web.fie.com/>

A Guide to Graduate Schools  
<http://www.peterson.com/>

National Science Foundation  
Alliance for Minority Participation  
*Dr. A. James Hicks, Program Director*

*Dr. George R. Johnson,*  
President, LeMoyné-Owen College

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Mid-South Alliance for Minority  
Participation Newsletter  
*Dr. Oristyne E. Walker*  
If you would like to be added to our  
mailing list, please call:  
901-942-7333

