

Arkansas Louis Stokes Alliance for Minority Participation ARK - LSAMP Newsletter



Volume I, Issue 1

Spring 2010

From the Principal Investigator
Congratulations to each ARK-LSAMP campus and to Dr. Anissa Buckner for the great work done in Year I implementation. You have established a solid organization of eight collaborating campuses, all following a pre-determined format of enrichment activities to help increase the recruitment, retention and graduation of more underrepresented minorities in STEM areas.

Through your collaborative efforts, fifty-five (55) ARK-LSAMP students received an enriched STEM educational experience including curriculum, networking with their counterparts from seven of the campuses, presenting posters at the Spring Research Conference held at the University of Arkansas at Little Rock, focusing on the purpose of the ARK-LSAMP at the Fall 2008 Saturday Camp, and gaining more knowledge of research careers, and internships during the 3-week Summer Institute

at the University of Arkansas at Pine Bluff.

You are applauded for your diligence in recruiting Cohort II which came together as a team during the June 14 – July 24 Pre-First Year Institute at the University of Arkansas at Pine Bluff. This Cohort evaluated the coursework in Pre-calculus and Biology as helpful. The students also evaluated their teambuilding exercises at the 4-H Center on June 19, 2009 as enjoyable and helpful. Based on their feedback, we will give special attention to computer science and principles of biology during this academic year.

The Arkansas State University (ASU) ARK-LSAMP campus coordinator, Dr. Ellis Benjamin, Dean Andrew Sustich (Coordinating Council Member), and the campus are actively planning for the 2010 Pre-First Year Institute which will be hosted by Arkansas State University. At our year-end evaluation meeting with Dr. Akbar Aghajanian-Saba, the alliances agreed to refine and submit the curriculum for

the Summer Institute during the Fall semester.

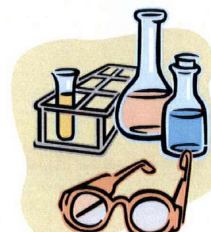
We were so pleased to have Dr. Dan Bakke, President, Pulaski Technical College, a member of the Executive Council, and two members of the Advisory Board, Dr. Rolfe Bryant, and Dr. Beverly Lyn-Cook join us for an update by Dr. Saba during the year-end evaluation conference. We are now focusing on academic year experiences for ARK-LSAMP students on each alliance campus, helping Cohort II to apply for Summer Internships, preparing for great lectures and continuing to build the ARK-LSAMP organizations and presence on the local campuses. As the year progresses, all campus coordinators are reminded to host a meeting of their ARK-LSAMP campus advisory board and to share minutes with Dr. Anissa Buckner.

2008-2009 was an exciting and productive year for the Arkansas Louis Stokes Alliance for Minority Participation. From our September 8, 2009 Year-end evaluation meeting, it was

obvious that there is a consensus in our commitment to make 2009-2010 ever more productive.



Dr. Mary E. Benjamin



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From the ARK-LSAMP Project Director

I would like to thank everybody for their hard work during our first year. As we progress through our second year of ARK-LSAMP implementation, I would like to remind everyone that we should always recruit with that next Cohort in mind and keep our number of applicants up as well as our number of recruits.

We are in the process of preparing for our 2nd Annual ARK-LSAMP Spring Research Conference to be held at Philander Smith College in Little Rock on April 23 - 24, 2010. Students

from Cohort I and II will present their research data. We are also looking forward to noteworthy scientists attending the conference and interacting with all of our students.

Our Cohort III, Pre-First Year Institute will be held at Arkansas State University in Jonesboro, AR during June and July of 2010. We are actively working on curricula for our new cohorts.

We look forward to an even better summer institute next summer.

Thanks to all that have been involved in helping move our program forward.



Dr. Anissa E. Buckner

Ark-LSAMP Organization and Purpose

The Arkansas Louis Stokes Alliance for Minority Participation is composed of eight colleges and universities, all sharing a commitment to help increase the pool of science, technology, engineering and mathematics (STEM) graduates in the workforce of Arkansas and the nation. All partner institutions are located in Arkansas.

The participating institutions are: Arkansas State University (ASU); Philander Smith College (PSC); Pulaski Technical College (PTC); Southeast Arkansas College (SEARK); University of Arkansas, Fayetteville (UAF); University of Arkansas at Little Rock (UALR); University of Arkansas at Monticello (UAM); and University of Arkansas at Pine Bluff (UAPB), the lead institution.

The expected outcome of this new and much needed Alliance is to help Arkansas join other states in the region in the national initiative to strengthen America's competitiveness in science, technology, engineering and mathematics. This will be achieved through a well-coordinated set of educational, research and training enrichment activities on each campus resulting from collaborative engagement in planning for curricula enhancement, internships, guest lecturers, attendance and presentation at professional meetings, and other STEM related activities.

Get to Know YOUR Campus Coordinator

Campus Coordinators are essential to making your College and ARK-LSAMP experience a success. A list of all the campus coordinators follows:

University of Arkansas at
Pine Bluff

Dr. Anissa Buckner
bucknera@uapb.edu
(870) 575-7113

Arkansas State University

Dr. Ellis Benjamin
ellisbenjamin@astate.edu
(870) 972-3268

Philander Smith College

Dr. Frank James
fjames@philander.edu
(501) 370-5216

Pulaski Technical College

Dr. Ben Rains
brains@pulaskitech.edu
(501)812-2268

Southeast Arkansas College

Dr. Kaleybra Morehead
kmorehead@seark.edu
(870) 543-5963

University of Arkansas, Fayetteville

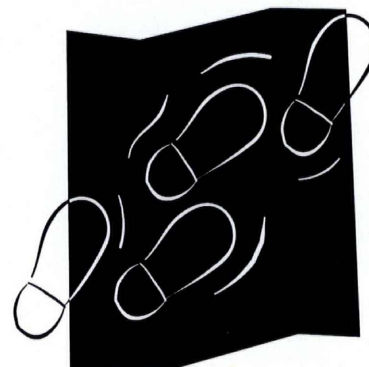
Mr. Thomas Carter, III
tic@uark.edu
(479) 575-5346

University of Arkansas at
Little Rock

Dr. Janet Lanza / Dr. Jim Winter
jxlanza@ualr.edu / jdwinter@ualr.edu
(501) 596-3500

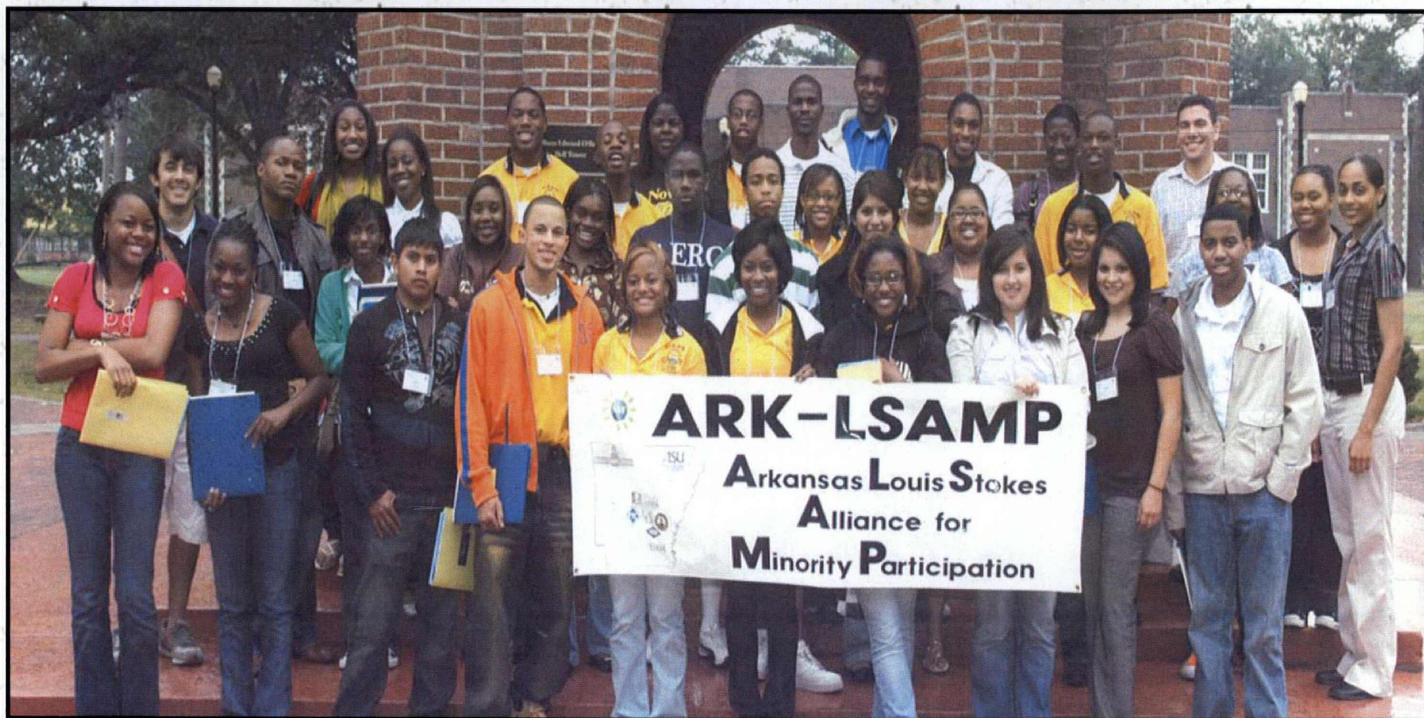
University of Arkansas at
Monticello

Dr. Marvin Fawley
fawleym@uamont.edu
(870) 460-1165



*Campus Coordinators will Lead
You in the Right Direction!!!!*

Saturday Academy



Forty (40) students and fourteen (14) coordinators attended the ARK-LSAMP Saturday Camp. Two (2) of the UAPB STEM Academy Advisory Board Members served as keynote speakers for the luncheon: Dr. Rolfe Bryant, Research Chemist, Dale Bumpers Rice Institute, and Dr. Beverly Lyn-Cook, Senior Research Scientist, National Center for Toxicological Research. These minority scientists gave updates on their career paths and shared current job expectations in their areas of expertise. Three (3) junior STEM HBCU-UP students and one recent graduate (who is enrolled in a Master of Science Degree program in Operations Management in the Bell School of Engineering at the University of Arkansas, Fayetteville and employed by Johnson & Johnson) shared their experiences, academically and professionally, as STEM Scholars. This component of the camp was included to present same generational role models on track from STEM graduate school and STEM careers. An icebreaker was also presented by Mrs. Joyce Bracy-Vaughan, UAPB Director for Student Counseling, Assessment and Development. This allowed the students from the Alliance campuses to interact more informally.

Spring Research Conference

On Friday, April 24, 2009, ARK-LSAMP conducted the first Alliance-wide Research Conference. The conference was held at the University of Arkansas at Little Rock (UALR). **Dr. Lawrence A. Davis, Jr.** Chancellor at the University of Arkansas at Pine Bluff presided over the conference.

Dr. A. James Hicks, LSAMP Project Director from the National Science



(far left) Dr. A. James Hicks

Foundation provided attendees with the purpose of the LSAMP.

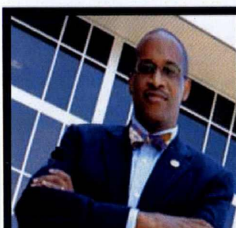
Dr. Angela Ragin from the Centers for Disease Control and Prevention in Atlanta, Georgia



Dr. A. Ragin

was the opening session speaker. Dr. Ragin is currently a Health Scientist in the Coordinating Centers for Infectious Diseases (CCID) at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia.

Dr. Walter Kimbrough president of Philander Smith College was the banquet speaker. Dr. Kimbrough has forged a national reputation as an expert on historically Black fraternities and sororities.



Dr. W. Kimbrough

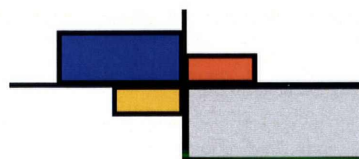
Expert Scientist – **Dr. Hydar Al-Shukri**, Director, Center for Earthquake Education and Technology Transfer, Department of Applied Science, University of Arkansas at Little Rock discussed “Earthquake Potential in Arkansas.”



Dr. H. Al-Shukri

Several students participated in the Spring Research Conference Poster Presentation. Mini abstracts from those presentations are presented in this publication.

The Spring Research Conference was an inspiring success! Thanks to the Spring Research Conference Committee for its remarkable efforts of organization, development and implementation of the program.



The Spring Research Conference Planning Committee for ARK-LSAMP included:

Ms. Laura Beck
UALR

Dr. Ellis Benjamin
ASU

Dr. Anissa Buckner
UAPB

Dr. Marvin Fawley
UAM

Dr. Janet Lanza
UALR

Dr. Kaleybra Morehead
SEARK

Mrs. Amanda Smith
UAPB

Mrs. Mandy Waggoner
UALR

Dr. Jim Winter
UALR

Spring Research Conference Poster Presentation Mini- Abstracts

Several ARK-LSAMP students participated in the Spring Research Conference Poster Presentations. Mini-abstracts of their presentations follow:

Emily Martin, Arkansas State University, Jonesboro, AR; *Computational Docking Studies of Thalidomide and its Derivative* This study sought to use the computational molecular docking of thalidomide derivatives with several proteins to determine its mechanism of action.

Kayla Watkins, Arkansas State University, Jonesboro, AR; *Photochemical Comparisons of Spiropyrans in Different Medias* This study determines the photochemical effects of the inclusion of Spiropyrans in the polymer Sylgard '84 when compared to aqueous and sol-gel encapsulated materials.

Joseph Grant, University of Arkansas-Monticello, Monticello, AR; *Utility of the Nuclear Ribosomal External Transcribed Spacer Region for the Identification of *Carex* (Cyperaceae) Species* In order to better characterize specimens and to provide additional molecular characters for identification, we are examining the nuclear ribosomal external transcribed spacer region (ETS) DNA sequence.

Jaime Garcia, University of Arkansas-Monticello, Monticello, AR; *Evidence for a New Hybrid Species of *Carex* (Cyperaceae)* Results will be presented along with strategies to further evaluate the hybrid origin of specimens which may be a new *Carex* species.

Cletis Jones, University of Arkansas-Little Rock, Little Rock, AR; *C++ Game Development* We developed a game with fluid transitions, non-dangling variables, cache efficiency, and interesting subject matter.

Ebony Love, Arkansas State University, Jonesboro, AR; *Chemical Probes based on Bacterial Catabolism of Cholesterol* This research sought to determine the catalytic processing of cholesterol using an array of different bacteria to classify their metabolites as possible probes for bacterial disease conditions.

Tony James, Arkansas State University, Jonesboro, AR; *Improved Growth Conditions for Soil Reclamation* This experimental work tested natural polymers such as pectin, alginic acid, guar gum, starch, and cellulose acetate as plant growth medium for improved water and nutrient retentions.

Sharde Davis, Philander Smith College, Little Rock, AR; *Bio-medical Application of Alpha Alumina* The purpose of this project was to categorize the film quality and find out which conditions were most favorable for biocompatible and bio-inert film to be produced.

Nikko Porter, University of Arkansas-Little Rock, Little Rock, AR; *Magnetic Levitation* We demonstrated this technology by building a circuit with resistors, transistors, op-amps, voltages, and optical feedback to a digital display to levitate a metal ball.

Ayodeji Odeniyi, University of Arkansas-Little Rock, Little Rock, AR; *Mini Baja Design and Testing* The purpose of this project is to design and assemble a car that meets the requirements to succeed in the Mini Baja competition.

Lascalles E. Lyn-Cook, Jr¹, Suzanne De La Monte²; ¹University of Arkansas-Little Rock, Little Rock, AR; and ²Brown University, Providence, RI; *Hepatic Ceramide Mediates Brain Insulin Resistance and Degeneration in Type 2 Diabetes Mellitus (T2DM) and Metabolic Syndrome* Liver insulin resistance in experimental model of obesity/T2DM is associated with steatosis and activation of pro-ceramide genes in the liver.

John Ndungu¹, Darin Nutter², ¹Philander Smith College, Little Rock, AR; and ²University of Arkansas, Fayetteville, AR; *Applying Nanosensor Technology to HVAC (Heating, Ventilating, and Air Conditioning) Systems* The purpose of this research is to combine HVAC systems with nanosensors that are able to detect minute particles of bioaerosols in order to warn people and give them a fighting chance of surviving an attack.

Ricard Requena, University of Arkansas, Fayetteville, AR; *Thermal Acoustic Laser* The project intends to collect heat from solar panels, and store it in easy-to-use concrete.

Sarenthia McClelland, University of Arkansas, Fayetteville, AR; *A Method for the Prevention of Thrombin-induced Degradation of Recombinant Proteins*, This thesis investigates a new strategy that stops the degradation of recombinant protein(s) (apoS100A13) caused by imprecise cleavage by thrombin, an endoprotease.

Benjamin Newton¹, H. Abu Safe², ¹H. Naseem², ¹University of Arkansas Pine Bluff, Pine Bluff, AR; and ²University of Arkansas Fayetteville², Fayetteville, AR; *Heat Assisted Electron Beam Writing of Polycrystalline Nanodots* Samples were investigated for a change in the morphology of the surface and for the presence of polycrystalline silicon using the ESEM, and TEM.

Jennifer Caldwell¹, Jesse Collins² ¹Vinothan N. Manoharan² ¹Kathryn Hollar², ¹University of Arkansas Pine Bluff, Pine Bluff, AR; and ²Harvard University, Cambridge, MA; *Dscam Binding and Microsphere Interactions* We use Dscam from the Drosophila Fly because it is known to be alternatively spliced. Light Scattering Methods and Cross-linking Reaction experiments were done to test the bond strength and correlation.

ARK-LSAMP Spring Research Conference Poster Session



John Ndungu, Philander Smith College, sharing his poster information with Dr. Rolfe Bryant, ARK-LSAMP External Advisory Board Member.



Cletis Jones, University of Arkansas at Little Rock, explaining his project to Dr. Karen Fawley, University of Arkansas at Monticello.



Tony James, Arkansas State University, interacting with Dr. Andrew Sustich, Arkansas State University.



Donnie Johnson, University of Arkansas at Pine Bluff, speaking with Dr. Janet Lanza, University of Arkansas at Little Rock.

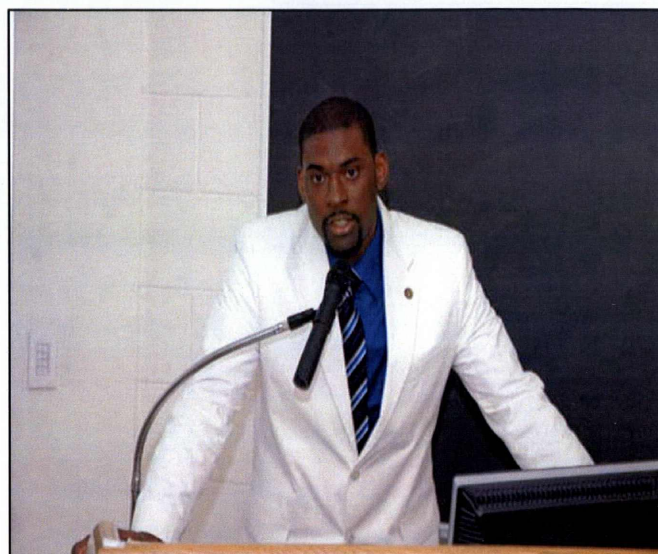
ARK-LSAMP Spring Research Conference

Student Oral Presentations



**Ryan Duncan, University of Arkansas,
Fayetteville**

*Binding Affinities of Wild type Cdc42Hs and Mutant
T35A Compared Through In-Vitro Binding Assays*



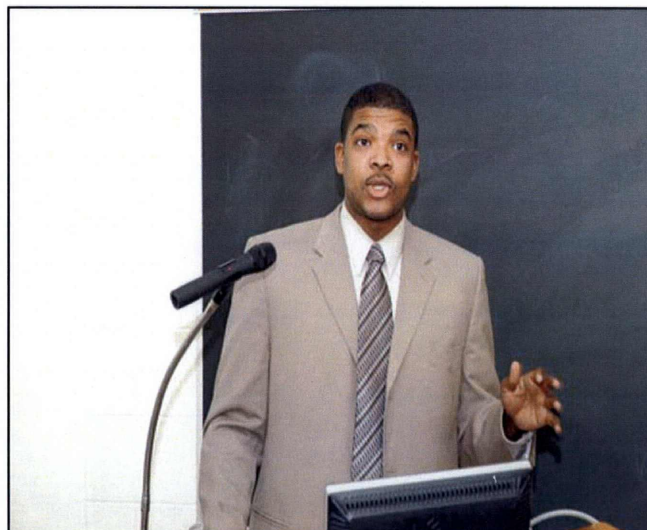
James Shelton, Arkansas State University

My Undergraduate Research Experiences



**Lascelles Lyn-Cook, University of Arkansas at
Little Rock**

*Hepatic Ceramide Mediates Brain Insulin Resistance
and Degeneration in Type 2 Diabetes Mellitus (T2DM)
and Metabolic Syndrome*

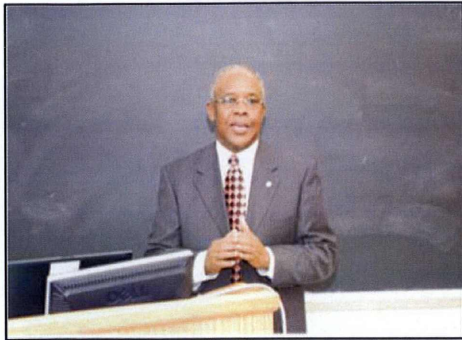


**Benjamin Newton, University of Arkansas at
Pine Bluff**

*Heat Assisted Electron Beam Writing of Polycrystalline
Nanodots*

ARK-LSAMP

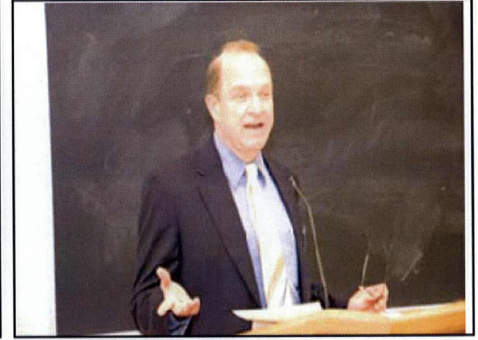
Faculty/Administrator Presentations



Dr. A. James Hicks, Project Director, Louis Stokes Alliances for Minority Participation, National Science Foundation



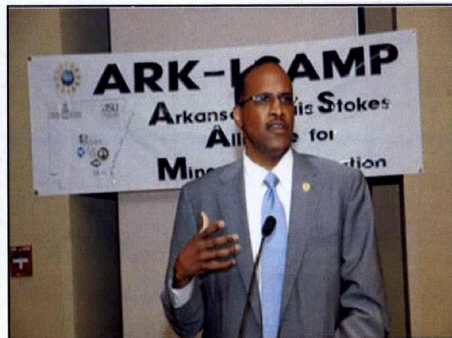
Dr. John Ahlen, President, Arkansas Science and Technology Authority



Dr. David O. Belcher, Provost, Vice Chancellor for Academic Affairs, University of Arkansas at Little Rock



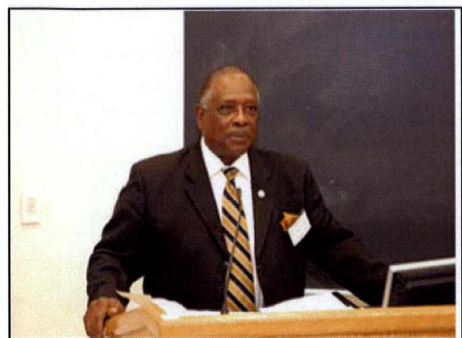
Dr. Angela Ragin, Health Scientist, Centers for Disease Control and Prevention, Atlanta, GA



Dr. Walter M. Kimbrough, President, Philander Smith College



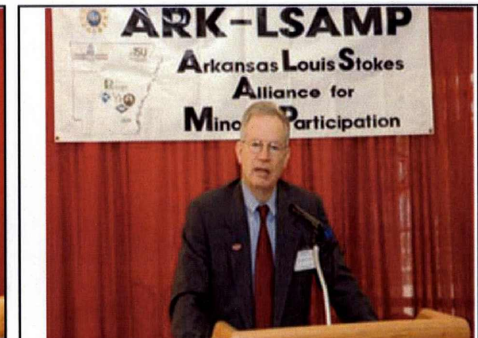
Dr. Hydar J. Al-Shukri, Director, Center for Earthquake Education and Technology Transfer, Professor and Chair, Department of Applied Science, University of Arkansas at Little Rock



Dr. Lawrence A. Davis, Jr., Chancellor, University of Arkansas at Pine Bluff



Dr. Mary E. Benjamin, Principal Investigator, Arkansas Louis Stokes Alliance for Minority Participation, University of Arkansas at Pine Bluff



Dr. Robert L. Potts, Chancellor, Arkansas State University

ARK-LSAMP Students at the Spring Research Conference



The following schools were represented.

**ARKANSAS STATE UNIVERSITY (ASU)
PHILANDER SMITH COLLEGE (PSC)
SOUTHEAST ARKANSAS COLLEGE (SEARK)
UNIVERSITY OF ARKANSAS, FAYETTEVILLE (UA)
UNIVERSITY OF ARKANSAS AT LITTLE ROCK (UALR)
UNIVERSITY OF ARKANSAS AT MONTICELLO (UAM)
UNIVERSITY OF ARKANSAS AT PINE BLUFF (UAPB)**

ARK-LSAMP 3-Week Summer Institute

ARK-LSAMP Summer Institute Cohort I – 2009

The Arkansas Louis Stokes Alliance for Minority Participation (ARK-LSAMP) Summer Institute Cohort I 2009 was held May 17 - June 5, 2009. Students were housed at the Delta Dormitory Complex located on the campus of the University of Arkansas at Pine Bluff. A team building exercise was held at the beginning of the institute. Orientation was held on Monday, May 18, 2009 for participants and STEM mentors in Henderson/Young Hall to let participants know what was expected of them, and what they should expect during the program. There were thirty-four (34) participants and six (6) mentors. An early morning aerobics class was held on Monday-Thursdays to keep everyone energized in classes.



3-Week Institute Daily Activities

- ◆ Building a Scholarly Research Portfolio
- ◆ Presenting Conference Style Presentations
- ◆ Career Counseling (persons in STEM fields reporting about their careers)
- ◆ Research Methodology (Statistics)
- ◆ Team Building
- ◆ Time Management
- ◆ Networking
- ◆ Scientific Writing/Literature Review on underrepresented minority scientist's research or research topic of interest.
- ◆ STEM Student Mentor presentations on his/her major and internship(s)
- ◆ Each student was required to do research on three (3) underrepresented minority (URM) scientists in his/her major and present an oral report on the scientists

McKinnely Bentley (SEARK)
Earl Pace, John Dove, Monique Boeal

Keisha Cawley (UAPB)
Dr. Samuel Lee Kountz, Jr., Dr. Rhonda Henry-Tillman, Jocelyn Elders

Jamaal Smith (UAPB)
Dr. Dara Devalte, Marcia F. Williams, Stephen Sydoriak

Rannikka Jones (UAPB)
Dr. Daniel Hale Williams, Flossie Wong-Staal, Mary Styles

Kendle Tillar (UAPB)
Percy Julian, Eleanor Babco, George Washington Carver

3-Week Instructors

Dr. Edmund Buckner

Subject Area: "Scientific Writing"

Dr. David Schweitzer

Subject Area: "Statistics"

Dr. Antonie Rice and Dr. Jessie Walker

Subject Area: "How to do a Confer-

Ms. Marian Evans

Subject Area: "Team Building"

Ms. Tisha Arnold

Subject Area: "Leadership"

Professional Advisement

Speakers

Dr. Sarah Phillips - National Center for Toxicological Research (NCTR)

Mr. Kyle Sanford - Central Maloney, Manufacturing

Ms. Trina Fletcher - Johnson & Johnson, Inc.

Dr. Jessie Walker - University of Arkansas at Pine Bluff, Computer Science

Dr. Antonie Rice - University of Arkansas at Pine Bluff, Chemistry

Dr. Anthony Adeuya - National Center for Toxicological Research (NCTR)

Mr. Ronald Laurent - National Center for Toxicological Research (NCTR)

Mrs. Roxanne Adeuya - Purdue University

Mrs. Dovie Burl - University of Arkansas at Pine Bluff, Student Involvement and Leadership

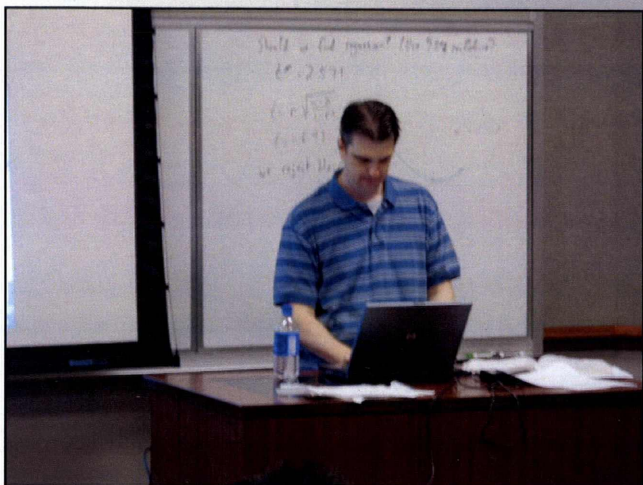
Mr. Xavier Stribling - 2009 STEM Graduate, University of Arkansas at Pine Bluff, Student Involvement and Leadership

Mr. Ralph Owens - University of Arkansas at Pine Bluff, Student Involvement and Leadership
Topic: "Safety on Campus"

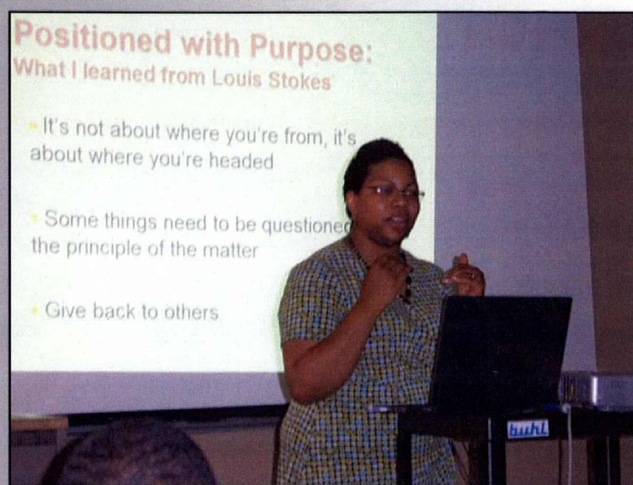
Mr. Michael Washington and Mrs. Shirley Cherry - University of Arkansas at Pine Bluff, Career Services
Topic: "How To Do A 5-Second Introduction of Yourself"

Mr. Courtney Williams - University of Arkansas at Pine Bluff, Student Involvement and Leadership,
Topic: "Image is Everything"

ARK-LSAMP 3-Week Summer Institute



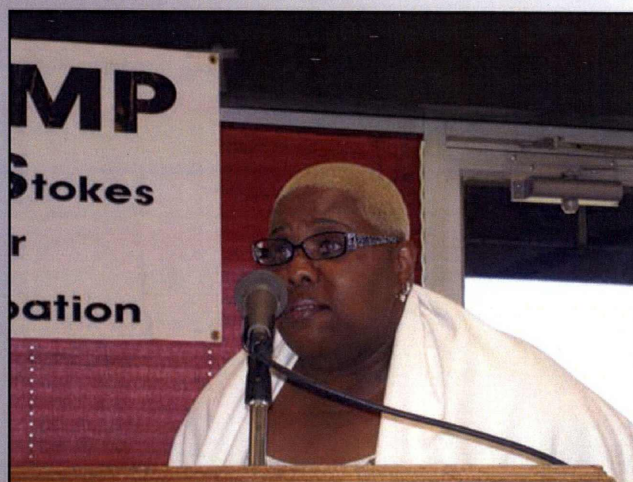
Dr. David Schweitzer (UAPB) teaching Statistics to the students.



Ms. Tisha Arnold (UAPB) conducting a leadership seminar.



Mr. Xavier Stribling-2009 STEM graduate in Industrial Technology at UAPB.



Dr. V. Cortez Henderson at ARK-LSAMP 3-Week Summer Institute closing program.

The Arkansas Louis Stokes Alliance for Minority Participation (ARK-LSAMP) 3-Week Institute closing program was held June 5, 2009 at Harbor Oaks Restaurant and Golf Club in Pine Bluff. Representatives of each alliance campus presented their campus Cohort's reflection on the ARK-LSAMP summer experience. Presenters were: Sarah Peoples, Arkansas State University; Nehemiah Stephens, University of Arkansas, Fayetteville; Markeita Gentry, University of Arkansas at Little Rock; Jamaal Phillips, University of Arkansas at Pine Bluff; and Tony James, Arkansas State University. The speaker for the occasion was Dr. Cortez Henderson, Vice President for Academic Affairs, Ouachita Technical College in Malvern, Arkansas. Each student and mentor was presented a certificate for participation in the 3-Week Summer Institute.

ARK-LSAMP Pre-First Year Institute 2009

The Arkansas Louis Stokes Alliance for Minority Participation (ARK-LSAMP) Pre-First Year Institute was held June 14 - July 24, 2009. Fifty-eight (58) students and five (5) mentors were housed at the Delta Dormitory Complex located on the campus of the University of Arkansas at Pine Bluff. Daily activities consisted of: Technical writing; Biology and Chemistry Lecture, Biology and Chemistry Lab, Computer Skills, Mathematics, College Survival, Professional Development, tutorial and study time. Students also developed study and team building skills.



Dr. Alesia Ferguson (UAMS)-Assistant Professor in the College of Public Health, talking about her career as an Environmental Engineer.



Team building challenge with Nakendra Martin (SEARK).



Cameran Faucette (UAPB) and Camille Reeves (PSC) at the orientation.



Team building challenge at the 4H-Excel Center in Ferrdale, AR.

ARK-LSAMP Pre-First Year Institute 2009

Activities

Students participated in 4-H Excel Challenges (Team Building) in Ferndale, Arkansas; Central High School Museum in Little Rock, Arkansas; and University of Arkansas for Medical Sciences, Center for NeuroScience and Translational Research (Dr. Edgar Garcia Rill) in Little Rock, AR. Brennon Luster, Junior Biology Major at the University of Arkansas at Pine Bluff, also interned in that department. Mr. Bill Bauknight and Dr. Kristen Sterba were very instrumental in setting up the tour schedule at the University of Arkansas for Medical Sciences.

The Arkansas Louis Stokes Alliance for Minority Participation (ARK-LSAMP) and Historically Black Colleges and Universities-Undergraduate Program (HBCU-UP) STEM Scholars Summer Academy 6-Week Closing Program was held July 24, 2009 at Harbor Oaks Restaurant and Golf Club in Pine Bluff.

The ARK-LSAMP Summer Experience was presented by the following students: Dominic Bisogni, Arkansas State University; Camille Reeves, Philander Smith College; Brandon Boatner, Pulaski Technical College; Nakendra Martin, Southeast Arkansas College; Elizabeth Ashley, University of Arkansas; Kanasha Barnes, University of Arkansas at Little Rock; Alexandria Bridges, University of Arkansas at Monticello; and Danny Burl, University of Arkansas at Pine Bluff.

The HBCU-UP Summer Experience was presented by: Michelle Corbin, University of Arkansas at Pine Bluff. The speaker for the occasion was Dr. Lawrence A. Davis, Jr., Chancellor, University of Arkansas at Pine Bluff. Each student and mentor was presented a certificate for participation in the 6-Week Summer Institute.

Instructors

Dr. David Schweitzer
University of Arkansas at Pine Bluff
Subject Area: Calculus

Mr. Christopher Jones
University of Arkansas at Pine Bluff
Subject Area: Biology Lab

Mr. Samuel Chaney
University of Arkansas at Pine Bluff
Subject Area: Pre-Calculus

Mrs. Frankie James
Central High School Instructor, Little Rock Arkansas, Adjunct Instructor, University of Arkansas at Pine Bluff
Subject Area: Biology; Biology Lab

Mrs. Donna Barnes
University of Arkansas at Pine Bluff;
Subject Area: Technical Writing

Dr. Jessie Walker
University of Arkansas at Pine Bluff
Subject Area: Computer Skills

Ms. Shaheen Khan
University of Arkansas at Pine Bluff
Subject Area: Chemistry Lab

Ms. Johnmesha Sanders
University of Arkansas at Pine Bluff
Subject Area: Chemistry; Chemistry Lab

Professional Advisement Speakers

Mr. Brian Davis
(College Survival), Andrea Branch, and Amery Williams, students; University of Arkansas at Pine Bluff

Mr. Thomas Carter
University of Arkansas, Fayetteville

Dr. Alesia Ferguson
University of Arkansas for Medical Sciences

Mrs. Cheryl Hutchins
University of Arkansas at Pine Bluff

Dr. Janet Lanza/Mrs. Mandy Waggoner
University of Arkansas at Little Rock

Mr. Kyle Sanford
Central Maloney, Manufacturing

Dr. Frank James
Philander Smith College

Dr. Athena Starlard-Davenport
National Center for Toxicological Research (NCTR)

Ms. Florence Caine
University of Arkansas at Pine Bluff

Mrs. Shirley Cherry
University of Arkansas at Pine Bluff

Dr. Marvin Fawley
University of Arkansas at Monticello

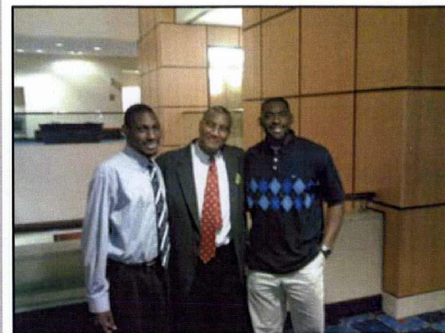
Dr. Antonie Rice
University of Arkansas at Pine Bluff

Arkansas State University

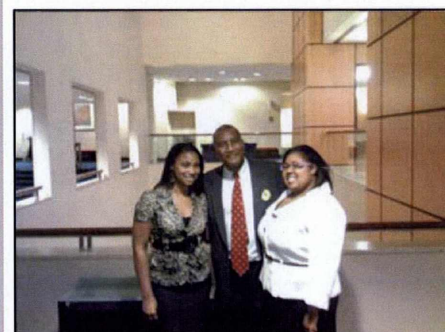
The Arkansas Louis Stokes Alliance for Minority Participation scholars at Arkansas State University (ASU) had a successful year with many new and exciting adventures throughout the country. Our students have had the opportunity to present eleven (11) posters and one (1) oral presentation at five (5) different conferences. They have assisted on two (2) papers and have been involved with thirty-four (34) presentations overall. These presentations range from regional presentations such as the Arkansas Academy of Sciences (AAS) to international conferences including the 238th National American Chemical Society (ACS) conference. The 238th National ACS conference allowed the students access to a wealth of opportunities to meet great scientists.

This included a personal meeting with the ACS president-elect Dr. Joseph Francisco. Dr. Francisco took time out of his busy schedule to help mentor our ARK-LSAMP students from Arkansas State University.

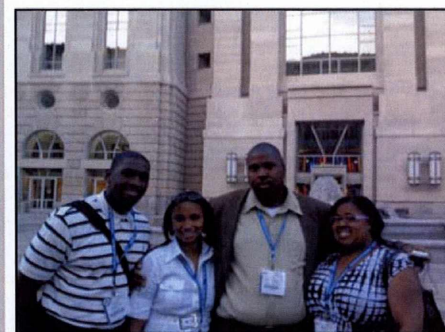
Ms. Ebony Love and Ms. Margarita Escovedo had summer internships over the past year. Ms. Escovedo did her research at the University of Arkansas for Medical Sciences. Ms. Ebony Love was the first undergraduate student from Arkansas State ever to do research in the Systems Biology Department at Harvard University under the supervision of Dr. Tim Mitchison. Ebony's work focused on the drug interaction on cancer cell lines. This summer work was profiled on the September 2009 issue of In Touch with Biomedical Science Careers Program (BSCP). This has given Ms. Love a new appreciation for science and has inspired her to pursue an MD/PhD Degree.



STUDENTS MEETING DR. JOSEPH FRANCISCO, PRESIDENT-ELECT ACS



STUDENTS MEETING DR. JOSEPH FRANCISCO



(3RD FROM LEFT) DR. ELLIS BENJAMIN WITH STUDENTS AT THE NATIONAL ACS MEETING

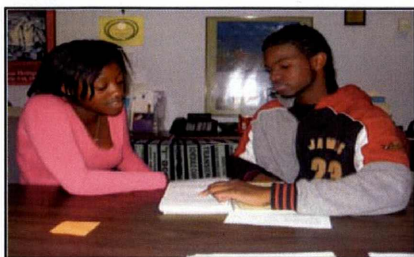


TONY JAMES AT THE NATIONAL ACS MEETING

Philander Smith College

Campus Involvement

During the Spring of 2009, the following students were ARK-LSAMP participants here at Philander Smith College (PSC): Emanuel Alphonse, Vincent Higgins, Byron Johnson, Shelissa Peterson, Jasmine Pink, Jordan Pryor, Annalicia Ragan, Joy Robertson, Joshua Thomas, Sabrina Watson and Aisha Williams.



(l to r) Shelissa Peterson and Emanuel Alphonse

Our participants attended the Spring Research Conference in April at the University of Arkansas at Little Rock and thoroughly enjoyed this event. They were very intrigued about the possibility of participating in the Bridge to Doctorate program in the near future. In addition to the Spring Research Conference some of our participants participated in the 3-week Summer Institute in May at the University of Arkansas at Pine Bluff.

In Fall 2009, three (3) of the First-Year Cohort continued; Emanuel Alphonse, Annalicia Ragan, and Misha Dowd. Recruited for Cohort II were: Freddie Brown, April Cotton, Misha Dowd, Renisha Liggins, Shadawna

Perkins, Brooke Prescott, Breanna Tarkington, Orlandon Watson, Cervonn Whitmore, and LaKaija Wood.



Breanna
Tarkington



Cervonn
Whitmore

Fall 2008 and Spring 2009 were learning seasons for the PSC ARK-LSAMP. We learned that our participants should be more actively involved in the grant and various ways that we can engage them in activities. Consequently, Fall 2009 has gone really well. We have assigned our participants the task of constructing academic resumes, academic success and action plans, and academic portfolios. They have really welcomed these activities and have learned so much in the last few months.

In addition to the assignments, we held bi-weekly meetings with our participants to discuss issues that they may have in their courses, announce services to improve their academics, and to assist them on resumes, plans and portfolios. We have also encouraged them to attend tutoring at least once a week in a STEM course that they are taking. On November 21, 2009, we held a STEM Day on campus

in which we had Michael Preston from the University of Arkansas for Medical Sciences come and speak about the various opportunities available at the College of Public Health and his journey as a STEM graduate. Also in November, we met with Mr. Al Ashley on internships and REU opportunities for our participants. We are actively getting our participants prepared to apply for various internships.

Faculty members on campus have been very supportive in our efforts of monitoring our participants' grades, attendance and participation within the classroom. This has been very helpful in ensuring that our participants are concentrating on the importance of doing well as a STEM major.



Dr. Frank A. James
Campus Coordinator

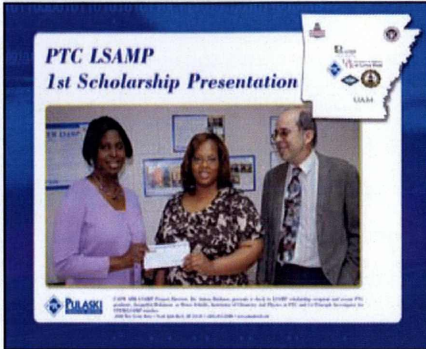


Chantia Hickman
Data Collector and
Assistant

In conclusion, our participants are looking forward to Spring 2010. We have planned a trip to the University of Arkansas, Fayetteville, the Spring Research Conference here at PSC, and a STEM Guest Lecture Series to take place during the course of the semester.

Pulaski Technical College

Pulaski Technical College (PTC) has had a very busy year! Five (5) students attended the Summer Institute at the University of



Arkansas at Pine Bluff and have been studying hard this semester. The campus ARK-LSAMP community and the Network for Student Success have been going non-stop. The on-campus STEM Club has been informing our students about the many exciting opportunities that await them after transferring to a four-year university.

The Fall semester kicked off with our "Welcome Back" lunch on campus. Our students and families gathered together to talk about this past summer and look forward to the future. Students have also participated in laboratory activities that will provide valuable experience to lay the groundwork for future endeavors in Lab Sciences.



(l to r) Brandon Boatner, Charles Jones and Kevin Holloway

Faculty members have enjoyed working with our STEM Scholars and predict an extremely bright future for them. The highlight of our Fall semester's activities was a trip to the Engineering Highlights Day at the University of Arkansas, Fayetteville.

Our LSAMP scholars were able to visit with Mr. Thomas Carter and choose various tours of the facilities and laboratories at the University of Arkansas. Dr. Singh, the Chair of the Department of Physics, provided a personal tour of the Physics Department. The tour included a quick look at the Clean Room, Nanotechnology Labs, and Scanning Tunneling Microscope Laboratories. The trip was very informative and motivated our students to further explore possibilities and opportunities available at the bachelor and doctoral levels.

For the Spring semester, we are planning more trips that include a visit to Arkansas State University in Jonesboro and a follow-up trip to the University of Arkansas. In central Arkansas, we plan to visit the University of Arkansas at Little Rock and explore opportunities available locally. This year's Spring Research Conference should be very exciting! We believe our students will benefit from the experience.

In the future, PTC plans on visiting local high schools to present their guidance counselors, teachers and students the opportunities available through membership in LSAMP Cohort III. This will expand upon last Spring's visits that included juniors preparing for their senior year and now planning their collegiate careers.

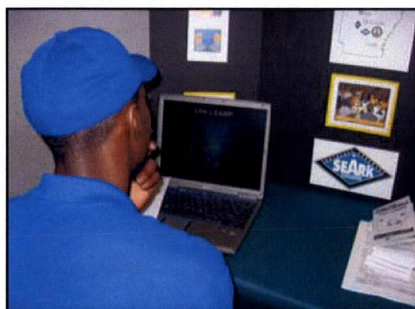
Students are showing increased interest in the next Summer Institute. STEM scholars have been very instrumental in promoting the possibilities available in fields such as Engineering, Nanotechnology and Information Technology.

A major contributor to the success of our ARK-LSAMP activities at PTC has been the dedication and hard work of the Network for Student Success. In between classes and homework, the Student Success Center is home base for our students to drop in, visit with the coaches, help one another through projects, and plan for the future.

A big "Thank You" goes to Mr. Kareem Moody, Coach Dalton Lamelle, Coach Richard Moss and all the dedicated members of the Student Success Network for their exemplary efforts towards the success of this endeavor!

Southeast Arkansas College

The Arkansas Louis Stokes Alliance for Minority Participation (ARK-LSAMP) program at Southeast Arkansas College (SEARK) is helping students pursue their career goals. The program aims to increase the number of underrepresented minority students in Science, Technology, Engineering, and Mathematics (STEM) areas. Eight (8) students have participated since SEARK College established the program in fall 2008 - four (4) in Cohort I and four (4) in Cohort II. The College had four (4) students to attend the Summer Institute at the University of Arkansas at Pine Bluff.



Richard Williams, ARK-LSAMP student, presents SEARK College ARK-LSAMP PowerPoint presentation to students.

This program is aimed at increasing the quality and quantity of students successfully completing Science, Technology, Engineering and Mathematics baccalaureate degree programs. The goal is also to increase the number of students interested in, academically qualified for, and matriculated into programs of graduate study.

In addition to SEARK College, the ARK-LSAMP program consists of seven (7) other Arkansas institutions: University of Arkansas-Pine Bluff (UAPB), University of Arkansas-Little Rock, University of Arkansas, Fayetteville, Philander Smith College, Pulaski Technical College, Arkansas State University, and University of Arkansas-Monticello. UAPB is the lead institution.

The following are some of the ARK-LSAMP program activities held: Five (5) local high schools were invited to attend Fabulous Friday, a half-day campus event at SEARK College designed to encourage student enrollment. The aim was to encourage students to major in a STEM program and apply for the ARK-LSAMP program.

Additional efforts were made to recruit students from local high schools for the SEARK College ARK-LSAMP program. Students and employees participated in Office of Recruitment activities including, high school visits and tailgating parties.

The Spring Research Conference at the University of Arkansas at Little Rock allowed ARK-LSAMP students to attend workshops and exhibitions with their peers from other Arkansas institutions.

SEARK College also has established a STEM Club to generate interest amongst students in the areas of: Science, Technology, Engineering, and Mathematics. In addition, the club's mission is to create avenues for research, career advisement and education, as well as, promote academic and professional networking.



(l to r) Giovanni Ocasio, Richard Williams, Valerie Kearney, Andrea Ellis. ARK-LSAMP and STEM Club members sell pizza at SEARK College's Fall Festival.

As American Red Cross Bell Ringers, students were able to participate in a community service activity and meet other SEARK College students and employee volunteers. During another community service activity, students provided can goods and Thanksgiving food for clients at the CASA women's shelter.

The Arkansas Department of Workforce Services Community Day was an opportunity for the service area and college communities to recognize the ARK-LSAMP students and to discuss the program. Students maintained a booth and assisted with serving and registering for the event.

University of Arkansas at Fayetteville

The Arkansas Louis Stokes Alliance for Minority Participation program started at the University of Arkansas, Fayetteville during the Fall 2008 semester with eleven (11) students.

Andrea Banks

North Little Rock, AR

Melanie Bolden

Siloam Springs, AR

Byron Galloway

Tulsa, OK

Adriana Lewis

Little Rock, AR

Sarenthia McClelland

Eldorado, AR

Charles Middleton

Arlington, TX

Ricard Requena

Little Rock, AR

Nehemiah Stephens

Forrest City, AR

Rakiya Tasiu

Garland, TX

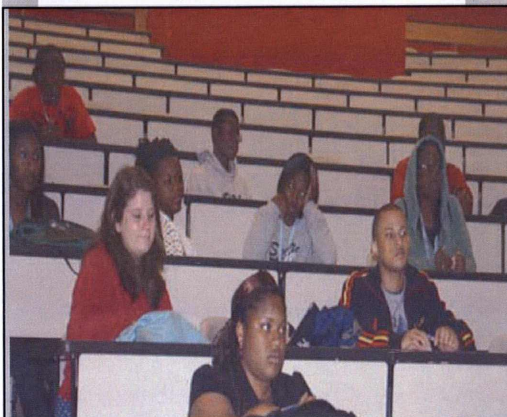
Nyzel Williams

Pine Bluff, AR

LaCrea Wilson

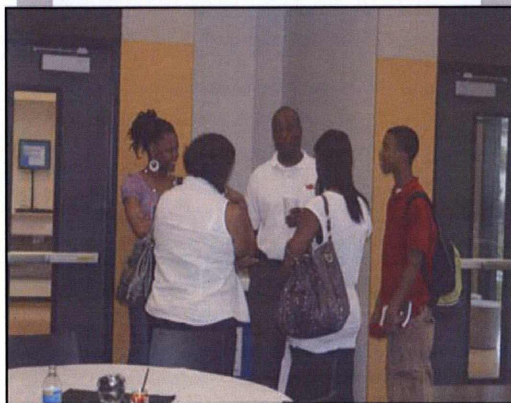
Fort Smith, AR

The Ark-LSAMP students participated in activities during the Fall and Spring semester geared towards research and graduate school opportunities.

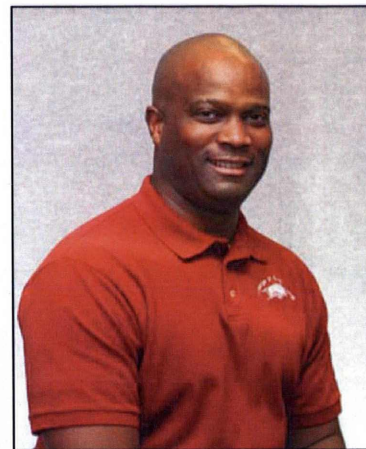


Students participating in Graduate School Workshop.

The year ended with the Spring Research Conference held at the University of Arkansas at Little Rock on April 24-25, 2009. Ricard Requena and Sarenthia McClelland presented posters on their research during the Spring Conference.



(ctr) Thomas Carter, Assistant Dean, Academic and Student Affairs, College of Engineering, with ARK-LSAMP students.



Thomas Carter, III (TC)
Assistant Dean
Academic and Student Affairs
College of Engineering
479.575.3051
tic@uark.edu

Jenn Miller
Administrative Assistant
College of Engineering

Willie Montgomery
Graduate Assistant
Industrial Engineering



University of Arkansas at Little Rock

This fall at the University of Arkansas at Little Rock (UALR), Arkansas LSAMP recruitment is off to a great start! We were able to provide twelve (12) incoming freshmen with the Arkansas LSAMP scholarship. Our four (4) LSAMP scholars who returned from last year are majoring in Biology, Mathematics, or Systems Engineering.



UALR faculty and administration at Spring Research Conference. (l to r) Dr. David Belcher, Dr. Pat Pellicane, Dr. Janet Lanza and Dr. Jim Winter

During each semester our scholars must attend at least three events. Two of these events must be academic, perhaps a lecture or a workshop. The third event can be a program social event. The Colleges of Science and Mathematics and Engineering and Information Technology host a weekly colloquium series. We send announcements of each seminar to all LSAMP participants. These colloquia are ideal for the LSAMP scholars because they have varied topics and our students have varied interests. Examples of colloquia that students attended were "Employing model plants of tomato and rice to study the molecular mechanisms of plant-microbe interactions" and "Not only because of theory: 1919 eclipse expedition to test general relativity."

Other on-campus lectures some scholars attended were "What do women contribute to science?" and "Changes in scholarly communication."

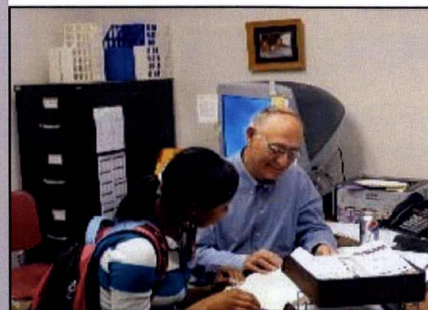
Our social activities contribute to a sense of community. At the beginning of the semester, we hosted a picnic at Murray Park by the Arkansas River. Scholars and their families got to meet each other, LSAMP staff, and several interested faculty and administrators. It was a nice sunny day and we enjoyed hamburgers, hot dogs, and watermelon. Mr. Vernard Henley, Director of Outreach Education and Diversity for the Donaghey College of Engineering and Information Technology, even played a game of volleyball with the students!

Our most recent social event was "Pizza Friday." In the program office and lounge, LSAMP scholars met Dr. Michael Gealt, Dean of the College of Science and Mathematics, and Dr. Tom Lynch, Associate Dean and Pre-Medical Advisor. While enjoying pizza, we discussed current classroom topics along with both good and bad midterm experiences. Corey Graham, a freshman LSAMP scholar, said with a mouthful of pizza, "we need to have more days like this!"

During school hours, the scholars can use the study lounge adjacent to the LSAMP office. There are tables for studying, computers, a small refrigerator, a microwave, and comfortable seating.

Currently we are developing a website to advertise the LSAMP Program from the UALR website. We feel that this will be an extremely useful recruitment tool. Also, it will be a great place to showcase our students, upperclassmen with their research projects, and announce any upcoming events and awards.

We are encouraging our participants to find research experiences and internships to expand their knowledge and skills. For example, James Houston, a junior at UALR majoring in systems engineering, worked this past summer on utilizing excess heat from jet turbine engines and redirecting it to help prepare commercial aircrafts before take off. His mentor is Dr. Keith Hudson, Director of the Graduate Institute of Technology and Professor of Applied Science and Chemistry. His summer experience is helping him write a NASA grant.



Dr. Jim Winter working with ARK-LSAMP student Markeita Gentry.

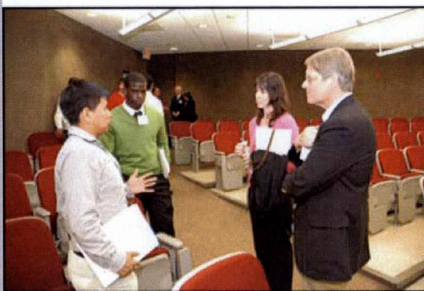
University of Arkansas at Monticello

The University of Arkansas at Monticello (UAM) was involved in many activities over the past year which included the 'Saturday Camp' held in October at UAPB, a special meeting with Dr. Joycelyn Elders, former Surgeon General of the United States, the ARK-LSAMP Spring Conference at UALR, summer camps at UAPB and the INBRE Fall Research Conference in Fayetteville, Arkansas. It has been a busy and exciting time for our students!

Our first cohort of students, Naportia Barnett, Britany Bell, Jaime Garcia and Joseph Grant worked hard on their classes and strived for excellence. Unfortunately, Naportia had to withdraw from UAM for personal reasons and Brittany opted to change her major to Nursing. However, both Joseph and Jaime thrived in the program and capped off their year by presenting research posters at the first annual ARK-LSAMP Spring Conference held at the University of Arkansas at Little Rock in April, 2009.

The preparations and presentations were quite an experience for Jaime (major-Mathematics) and Joseph (major-Chemistry). However, they were rewarded with the great feeling that comes from a job well done!

Many of the faculty and students from other ARK-LSAMP institutions stopped and talked with Jaime and Joseph. We greatly appreciate your involve-



(l to r) Jaime, Joseph and Drs. Karen and Marvin Fawley

ment! With the summer of 2009, we added three (3) new Freshmen to the program. Alexandra Bridges from Plummerville, AR, is a Mathematics major. Elatisha Bush comes from Stuttgart, AR, and is majoring in Biology. Elia Garcia from Monticello, AR, is also a Biology major.



(l to r) Jaime, Elia, Elatisha and Alexandria

All of the students enjoyed the experience of the summer camp held at UAPB. Dr. Marvin Fawley, UAM Campus Coordinator, also enjoyed speaking to all of the new ARK-LSAMP students at the summer camp.

The Fall semester brings many challenges for the new students and also for Jaime Garcia, who is continuing with the ARK-LSAMP program. This year, students will be embarking on a special topics class on research, culminating in the preparation and presentation of posters on their research at the spring ARK-LSAMP conference. Stop by and see their work!

The UAM ARK-LSAMP program has a new web site!

www.uamont.edu/organizations/ark-lsamp

University of Arkansas at Pine Bluff

The University of Arkansas at Pine Bluff (UAPB) has been involved in many activities over the past year. The first large meeting of ARK-LSAMP was the Saturday Camp, in October 2008, which was the first official meeting of ARK-LSAMP Cohort I. Weekly meetings are held with our ARK-LSAMP students. There are a total of thirty (30) students in our UAPB ARK-LSAMP program which is a part of our STEM Scholars Academy.

UAPB hosted a guest lecture series in April 2009 with Dr. Robert Belle, Director of Southern Regional Education Board, SREB-AGEP Doctoral Scholars Program from Atlanta, GA. He energized the students with his interactive lecture, gave them pointers on successful preparation for graduate school, and challenged them to pursue graduate school education.



Dr. Robert Belle

UAPB hosted two (2) Summer Institutes for ARK-LSAMP. Speakers from STEM fields talked about their educational/career journeys, and a structured curriculum was provided for the institute.

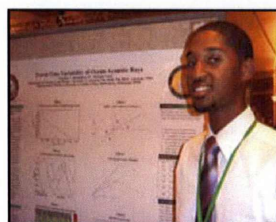
In Fall 2009, Dr. Gordon Emslie, Dean of the Graduate School at Oklahoma State University (OSU), Stillwater, OK presented in the STEM Lecture Series. Dr. Emslie invited the UAPB Stem majors to Graduate School Day at OSU in Feb. 2010.



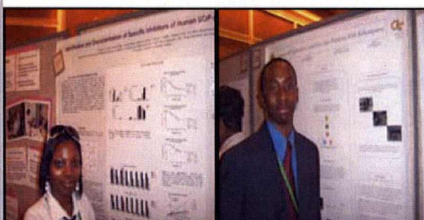
Dr. Gordon Emslie

NSF Joint Annual Meeting (JAM) Conference 2009

The UAPB STEM Scholars Academy invited three (3) students to Washington, D.C. to present their summer research experiences. At JAM Drs. Benjamin, Buckner and Colen attended the HBCU-UP and LSAMP sessions during the conference.



Stephen Broughton, Physics



Charvon Cade, Chemistry

Aaron Jones, Computer Science








(l to r) Dr. Benjamin and Dr. Colen



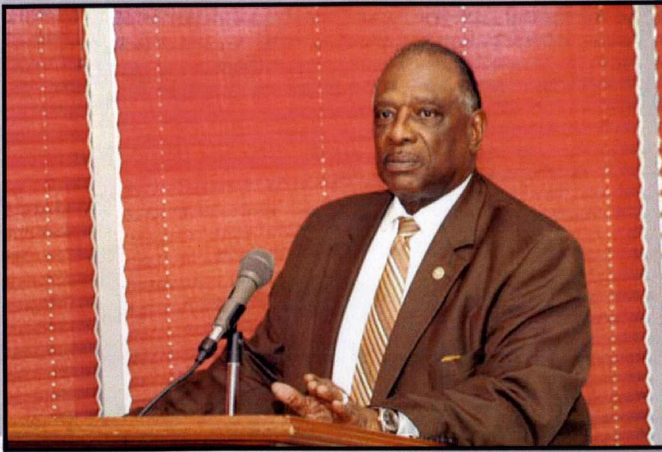
(l to r) Charvon Cade and Dr. Buckner

The UAPB Stem Scholars listed below participated in summer internships. Three of the internships were international experiences.

	Adrian Beard UAMS (Physics)
	Jennifer Caldwell Switzerland (Physics)
	Jamaal Phillips YMCA (Industrial Technology)
	Ashley Rich University of Southern Mississippi (Biology)
	Phillisia Sims UAPB (Chemistry)
	Laswanique Gray University of Southern Mississippi (Biology)
	Pearl Clark France (Computer Science)
	Tracy House Monsanto Corp., St. Louis, MO (Industrial)

All students are encouraged to join these students and participate in external STEM research experiences.

Closing Program for the 6-Week Institute



Chancellor Lawrence A. Davis, Jr., Chair Executive Board



Dr. Mary E. Benjamin, Principal Investigator



Principal Investigator and Coordinating Council Members



MENTORS

2009-2010 ARK-LSAMP PRE-FIRST YEAR STUDENTS- COHORT II



Arkansas State University Students



Philander Smith College Students



Pulaski Technical College Students



Southeast Arkansas College Students



University of Arkansas, Fayetteville Students



University of Arkansas at Little Rock Students



University of Arkansas at Monticello Students



University of Arkansas at Pine Bluff Students

Special Thanks

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- ◆ **Chancellor Robert Potts**
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University of Arkansas, Fayetteville
- ◆ **Chancellor Joel Anderson**
University of Arkansas at Little Rock
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University of Arkansas at Monticello

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- ◆ Dr. Marvin Fawley-UAM
- ◆ Dr. Michael Gealt-UALR
- ◆ Dr. Collis Geren-UA
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- ◆ Dr. Ben Rains-PTC
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THANK YOU TO THE NATIONAL SCIENCE FOUNDATION-LOUIS STOKES ALLIANCES FOR MINORITY PARTICIPATION AND THE ARKANSAS SCIENCE AND TECHNOLOGY AUTHORITY FOR SUPPORT.

For additional information on the NSF funded ARK-LSAMP, please visit www.ark-lsamp.org.