Greetings from the PI—Mark Payton, Ph.D.

It is a pleasure and an honor to begin my service as the OK-LSAMP PI, and I feel equally privileged to be given the opportunity to provide a greeting for this publication. Inside, you’ll find details as to what many of our fine scholars have recently accomplished. It is an impressive list, and this newsletter serves as a testament not only to the success of the LSAMP program, but also to the commitment of our great institutions and the hard work of our program coordinators. This represents a great team effort!

We were fortunate to have the leadership of Dr. Gordon Emslie as the PI for a year. Dr. Emslie set a tone that we will try to continue. It is my goal to establish sound budgeting practices and maximize the benefits realized by the program participants. This will require cooperation from the institutions and commitment from our campus leaders. Together we can maximize this program and further the cause of minority representation in the STEM fields.

This fall, I plan to make visits to all campuses in the consortium. I hope to meet with university presidents, coordinators and participants. I also hope to meet many of you at our conference on the OSU campus on September 25. I look forward to working with all of you, and I hope we can continue the momentum that has been established.
Amazing People

Cammi Valdez, OK-LSAMP alumna, has been selected to attend the 2010 Nobel Laureate conference in Germany. Cammi is one of 77 United States students and the only Harvard student selected for this honor. Additionally, Cammi is one of seven United States students selected to also attend the Euroscience Open Forum, July 2-7, 2010, in Torino, Italy. Cammi received her BS in chemistry and mathematics from Southwestern Oklahoma State University and is currently working on her Ph.D. at Harvard University. In the Fall 2010 issue of the Link, we will have information about Cammi’s experiences over the summer. Stay tuned...

Lauren Miller received her BS in geology from Oklahoma State University in December 2009. In the spring semester, Lauren traveled to Antarctica to conduct research. This fall, she will begin her graduate studies at the University of California-Santa Barbara where she will be a Bridge to the Doctorate Fellow.

The 15th Annual Research Day at the Capitol was on March 29, 2010. Elaine Harder, CU agriculture, placed first in the regional category and second overall for her presentation on “Endocrine Disruption of Pregnancy.” In addition, three other OK-LSAMP scholars were chosen as representatives from their respective campuses. Eric Butson, NSU natural sciences, presented “Rechargeable Batteries.” Lydia Meador, OSU botany/microbiology/biochemistry, presented “Drought Adaptations.” Shabree Nichols, LU biology, presented “Corneal Transplantation Rejection.” This yearly event is sponsored by the Oklahoma Experimental Program to Stimulate Competitive Research (EPScoR) and celebrates “exceptional undergraduate student research conducted on Oklahoma’s college campuses.”

OK-LSAMP Scholars/Alumni received Graduate Research Fellowship Program (GRFP) awards from the National Science Foundation in 2010. (Pictured left to right)

Tomica Blocker received her BS in biology from Langston University in May 2008. She is currently a Bridge to the Doctorate Fellow at Oklahoma State University working on her MS in zoology. Brandon “Bubba” Brooks received his BS in microbiology from Oklahoma State University in December 2009. In the fall, he will begin graduate studies at the University of California, Berkeley. Erica Brown received her BS in chemical engineering from the University of Oklahoma in May 2010. She will attend Duke University to study biomedical engineering. Leethaniel Brumfield, III, received his BS in biology and chemistry from Langston University in May 2009. He is currently pursuing graduate studies at the University of North Carolina. Congratulations Scholars!
Amazing People

Three OK-LSAMP Scholars received 2010 national scholarships! **Lydia Meador**, OSU botany, microbiology, and biochemistry junior, received the Goldwater Scholarship. **Alesia Hallmark**, OSU zoology and botany junior, and **Lauren White**, OSU environmental science junior, received the Udall Scholarship.

**Lauren White**, OSU environmental science junior, is becoming a world traveler. During the spring semester, she traveled to Honduras for a Study Abroad experience. Lauren will be traveling to the Philippines this summer for a semester abroad. After her experience in the Philippines, she will travel directly to Kenya to participate in a rural education outreach program. With her previous trip in Summer 2009 to Dominica for an international Research Experience for Undergraduates (REU), this brings Lauren's international explorations to four! In the next newsletter, we will be sure to provide news and pictures from her summer and fall 2010 experiences.

The University of Oklahoma added several fellows to their Bridge to the Doctorate program. (Pictured left to right) **Chris Aguayo** received his BS in aerospace engineering from the University of Oklahoma. His career goal is to become a test pilot and focus on optimization and efficiency aircrafts. **Kelan Berry** will receive his BS in industrial engineering from the University of Oklahoma in December 2010. He will be exploring and narrowing his engineering options for Ph.D. focus. **Mario Franklin** received his BS in industrial engineering from the University of Oklahoma in December 2009. His career goals are to pursue a Ph.D. in industrial engineering with an emphasis in engineering education. **Juan Herrera** received his BS in computer engineering from the University of Oklahoma. His career goals are to develop novel computer architectures that use less power while increasing reliability and performance. **Meghan Liles** received her BS in microbiology from Oklahoma State University in 2010. Her career goal is to perform research investigating mechanisms that are operative in the pathogenesis of autoimmune diseases. **David Supeck** received his BS in biology and chemistry from Southwestern Oklahoma State University in May 2008. His career goal is to continue research in chemistry/biochemistry that will positively affect the community and the nation. **Ryan Watley** received his BS in chemistry from the University of Arkansas, Pine Bluff. His career goal is to work with organic synthesis and to impact biological research.
Jennifer McLoud-Mann, OKAMP Alumna, received her BS in Mathematics from East Central University in 1997. She received her MS and Ph.D. from the University of Arkansas. Since 2002, Jennifer has been at the University of Texas, Tyler and is currently an Associate Professor of Mathematics. She is an advisor of an active math club and has mentored many undergraduate research projects—some of them LSAMP scholars and REU participants. In 2005/06, Jennifer received the White Fellowship for Teaching Excellence (a campus-wide award) and was UT Tyler’s Minnie Stevens Piper nominee (a state-wide teaching award). In 2008, she was recognized by the Texas Section of the Mathematical Association of America with the Faculty Award for Outstanding Contributions to Students. In August 2009, Jennifer was the recipient of the Henry L. Alder Award for Distinguished Teaching from a Beginning University or College Mathematics Faculty Member. This national award is given to three people annually by the Mathematical Association of America. Jennifer has already made significant accomplishments and contributions to academia, and we envision many more to come.

OK-LSAMP is proud of our alumni and would like to share some of their successes. If you are an alum of OK-LSAMP, we would like to hear from you. Please provide us with an update on the degrees you have earned and the projects you have completed as well as your current projects and interests and any advice you may have for current and future scholars. Send them to: 409 Scott Hall, Stillwater, OK 74078; kay.porter@okstate.edu, 405-744-6710; fara@okstate.edu, 405-744-7820; okamp@okstate.edu, or fax 405-744-4202.
Partner campuses in the Oklahoma Louis Stokes Alliance for Minority Participation are featured in this and subsequent issues of The Link. Each Partner institution is vital to the success of the Alliance, and it is only fitting to highlight the special qualities and characteristics of each campus that contribute to that success.

The University of Central Oklahoma (UCO), founded in 1890, is located on a 210-acre campus in Edmond, a northern suburb of Oklahoma City. It is the oldest institution of higher learning in Oklahoma and was originally established as the Territorial Normal School with 23 students seeking teaching certificates. The Institution has been through several name changes over the years which reflect its growth and transformation: Central State Teachers College (1919), Central State College (1939), Central State University (1971), and lastly, University of Central Oklahoma, UCO (1990). Today, UCO is a four-year university with an enrollment exceeding 16,000 students.

UCO’s philosophy is to help students learn by providing transformative learning experiences. The goal of transformative learning is for all students to have experiences in the five core areas: leadership; research, creative and scholarly activities; service learning and civic engagement; global and cultural competencies; and health and wellness. Transformative learning educates students on what they need beyond their specific discipline, regardless of what career they choose. Dr. William J. Radke, Provost and Vice President for Academic Affairs at UCO has said that “transformative learning is the process or theme by which UCO will reach its mission statement.”

The link between research activities, one of the transformative learning areas, and student success is strong and well-known. Research enhances critical thinking skills and provides hands-on experience for students entering the job market or advanced degree programs. In tracking the success of research assistants on the UCO campus in the last 6 years, the results indicate that 95% of undergraduate students who were awarded a Research Assistantship have graduated from UCO or are currently enrolled at UCO. When involved in research, creative, and scholarly activities, students enjoy positive, life-changing relationships.

At UCO, we acknowledge that today’s student is much different than when UCO was founded over a hundred years ago. They have different backgrounds and needs. As educators, it is our responsibility to offer the best educational experience we can for our students. Through the UCO faculty mentors and OSU program staff, the LSAMP program is meeting a student need at UCO and helping us to accomplish our goals of transformative learning.
The mentor relationship that UCO LSAMP scholars have with selected professors is particularly valuable and key to the success in retention rates of students. **Dr. Wei Chen**, biomedical engineering professor and assistant dean of the UCO College of Mathematics and Science has been an LSAMP mentor at UCO for many years. Strongly influenced by the teachings of Confucius, Chen engages students in inquiry-based learning through experiments and simulations in his classes. His learning approach extends to his research on cancer treatment. He has been working with LSAMP scholar **Chris Bobo** using laser immunotherapy, a novel treatment method that incorporates fields including laser physics, engineering designs, biology, and chemistry.

The LSAMP Scholars on UCO’s campus have an array of diverse talents and approaches. The goal of LSAMP scholar and engineering student **Alex Macharia** is to verify the data obtained through computational analysis conducted by scientists at UCO and the University of Oklahoma who initiated the study on the correlation between hypertension and aneurysms in the renal artery.

**Shaquita Banks**, a UCO biology student is conducting research on the topic of myofibroblast differentiation. All scholars are required to submit an abstract to Oklahoma Research Day and often present their papers at many other regional and national conferences -- these papers are frequently published in scholarly journals. The research and presentation experience gained by the Scholars prepares them to succeed in graduate school, but also strengthens their applications, helping them to be accepted into the programs of their choice.

**Save the Date!**

**The OK-LSAMP 16th Annual Research Symposium** will be held on Saturday, **September 25, 2010**, at Oklahoma State University. Henry Neeman, OU professor, will give a talk on supercomputing. All OK-LSAMP Scholars are required to attend—those who have conducted research in the last year, are required to present. Other LSAMP, McNair, and Native Americans in Biological Sciences (NABS) Scholars are also invited to present.

The Women of Color STEM Conference will be held on October 28—November 1, 2010, at the Sheraton Dallas Hotel, Texas. This conference is a great opportunity for learning techniques for interviewing, financial management, resume tips, and more. Other activities include a career fair and multiple networking opportunities. The cost is only $175 for students and includes hotel, event registration, and most meals. Transportation assistance is also available for large groups. For more information, visit www.womenofcolor.net. Those in Oklahoma wishing to attend, please contact Kay Porter for travel coordination. kay.porter@okstate.edu, 405-744-6710.
Amazing Events

Lauren White, OSU environmental science junior, and Cara Cowan Watts, OSU biosystems engineering BD Fellow, served as panel speakers for the 2010 Women in Science Conference. Sponsored by Oklahoma EPSCoR and other organizations, this annual conference seeks to educate and encourage junior high and high school girls to pursue science degrees and careers. Activities at the conference included the interactive discussion panels on which Lauren and Cara served, a keynote address, a scavenger hunt, a college planning session, a college and career fair, a teacher resource center, and a hands-on activities room. In addition to Lauren's and Cara's presentations, Monique Gaines, OU industrial engineering senior; Lydia Meador, OSU botany, microbiology, biochemistry junior; Tina Newman, SEOSU biology senior; Shawna Ong, OU electrical engineering senior (and now BD Fellow); Laura Scott, OSU zoology junior; Erica Smith, LU biology junior; Fara Williams, OK-LSAMP Grant Coordinator; and Mackenzie Wilfong, OSU Director of Affirmative Action, volunteered their assistance. Kay Porter, OK-LSAMP Program Manager, serves on the Women in Science Planning Committee. For more information on the conference, visit www.http://www.okepscor.org/Events/WomenInScience/WIS%202010/WinS%202010.htm.

Three OSU OK-LSAMP Scholars traveled to Italy for an engineering study abroad class. Dalton Kelley, mechanical engineering senior; Charles “CJ” Williams, computer engineering junior; and Shawn Witt, mechanical engineering sophomore, traveled to Rome, Italy, Sunday, May 9, 2010. The scholars traveled around Italy visiting Rome, Florence, Bologna, and Venice before returning home on Sunday, May 23, 2010. To showcase the experience, CJ created a Facebook page, “Going to the Boot: Italy!!!!,” on which he posted comments, pictures, and videos he filmed and edited. These videos serve as information and encouragement for others to participate in Study Abroad experiences. http://www.facebook.com/home.php?#!/group.php?gid=385493943400&v=wall

In addition, Kempner “Trey” Cole (pictured below), OSU industrial engineering senior, traveled to Brazil for an engineering study abroad experience. Among his many activities in Brazil, Trey visited Iguassu Falls (pictured below).
Each year, OK-LSAMP partners with Oklahoma EPSCoR to send a group of Scholars to the National Conference for Undergraduate Research (NCUR). The 24th NCUR Conference was held in Missoula, Montana, at the University of Montana. Seven OK-LSAMP Scholars were among the approximately 2,600 students whose abstracts were selected for presentation. Courtney Garcia, SWOSU chemistry junior, made an oral presentation on “Development in Potential Anti-HIV & Antimetastatic Drug: C3-Symmetric Tris-linked Bridged Tetraazamacrocycles as Potential CXCR4 Antagonists.” Alesia Hallmark, OSU botany and zoology junior, presented a poster on “Morphometric Comparisons and Fluctuating Asymmetry in Several Populations of Mexican Free-Tailed Bats (tadarida brasiliensis).” Ryan Jordan, OSU geology senior, presented a poster on “Kinematics of Kalaye Escarpment, Northern Zambia: Providing International Research Experience for Students.” Dalton Kelley, OSU aerospace and mechanical engineering senior, presented a poster on “Measuring and Modeling Idle Energy Loss in Water Boilers.” Lydia Meador, OSU botany, microbiology, and biochemistry senior, presented a poster on “Within- and Between-Generation Effects of Drought Stress for Leaf Hair Production and Flowering Time in Arabidopsis Thaliana.” Andrew Mock, OSU architecture engineering junior, presented a poster on “Preliminary Sizing of Mechanical & Electrical Rooms for Buildings.” Lauren White, OSU environmental science junior, made an oral presentation on “Tail Autonomy and Dominance in Uta Stansburiana, The Side-Blotched Lizard.” In addition to OK-LSAMP Scholars, Morgan Kinsey, OSU nutritional sciences Freshman Research Scholar, joined the group and presented a poster on “The Effects of Green Tea Supplementation on Subjects with Metabolic Syndrome.” Tim Hubin, OK-LSAMP SWOSU Campus Coordinator, accompanied the Scholars to Montana. We look forward to next year’s conference in Ithaca, New York!

Abstracts may be submitted October to December. Be sure to bookmark www.ithaca.edu/ncur2011/.
Amazing Events

OK-LSAMP held the first **Pursuing Higher Degrees (PHD) Camp** at the University of Central Oklahoma on March 15-16, 2010. Forty-two scholars gave up part of their spring break to attend a two-day, intensive workshop on how to apply for and be accepted to graduate school. Sessions included topics such as the application process, writing a personal statement, taking the Graduate Record Exam (GRE), asking for letters of recommendation, a writing clinic, and how to search for the right graduate program. BD Fellows served as speed mentors by spending 20 minutes (at a time) giving advice and personal experiences on various aspects of graduate school. Additionally, OK-LSAMP is thankful to Diana Lizarrage at the University of California – Berkeley who provided the ideas for speed mentoring as well as creating a graduate school toolbox for each scholar and ending the event with Graduate School Jeopardy. It was clear that the first PHD Camp was an absolute success, and we look forward to future PHD Camps!
Amazing Opportunities

BE SURE TO LOCATE AND APPLY FOR GRADUATE SCHOOL AND SCHOLARSHIP OPPORTUNITIES.

Research experiences are an integral part of the OK-LSAMP program. It is important for each scholar to seek, apply for, and participate in full summer internships. There are a variety of opportunities available. It is never too early to search on line to find an internship opportunity that matches your discipline and interests. Some great internship programs include:

- Research Experiences for Undergraduates (REU) funded by the National Science Foundation. These opportunities exist all across the nation with several international opportunities. www.nsf.gov/crssprgm/reu/reu_search.cfm.
- IDeA Networks for Biomedical Research Excellence (INBRE) programs.
- Summer Undergraduate Research Experience (SURE) programs.
- Summer Minority Advanced Research Training (SMART) programs.

Presentations are an important step to developing the skills necessary for sharing research ideas, processes, and results. In order for OK-LSAMP Scholars to be prepared for and competitive in their respective fields, presentation experience is essential. Conferences are also a way to network and meet people with whom future collaborations may develop. Below are upcoming opportunities for undergraduate students to attend conferences and present research projects. Remember to check the deadlines for submitting abstracts and completing travel scholarship applications. Also remember that each OK-LSAMP Scholar is required to attend and present, if possible, at the OK-LSAMP Annual Research Symposium.

- University of Texas LSAMP Symposium, El Paso, TX, September 16-18, 2010. research.utep.edu/Default.aspx?alias=research.utep.edu/lsamp
- OK-LSAMP 16th Annual Research Symposium, Oklahoma State University, Stillwater, OK, September 25, 2010. www.ok-lsamp.okstate.edu
- Oklahoma Academy of Science Annual Technical Meeting, Northeastern State University, Broken Arrow, OK, November 5, 2010. oas.uco.edu
- Oklahoma Research Day, Cameron University, Lawton, OK, November 12, 2010.

Other Opportunities
Women of Color STEM Conference, Dallas, TX, October 28-30, 2010. www.womenofcolor.net. Those in Oklahoma who may be interested in attending, should contact Kay Porter for travel coordination (kay.porter@okstate.edu, 405-744-6710).
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The Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) is a consortium of Oklahoma colleges and universities working together to develop programs aimed at increasing the number of students from under-represented populations who receive degrees in Science, Technology, Engineering, and Mathematics (STEM) disciplines.

Current OK-LSAMP goals focus on undergraduate research experiences, graduate school preparation, and international experiences.

Spring 2010

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If you have questions, comments, or suggestions for the Link, please call 405-744-7820 or email fara@okstate.edu.

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