

2013

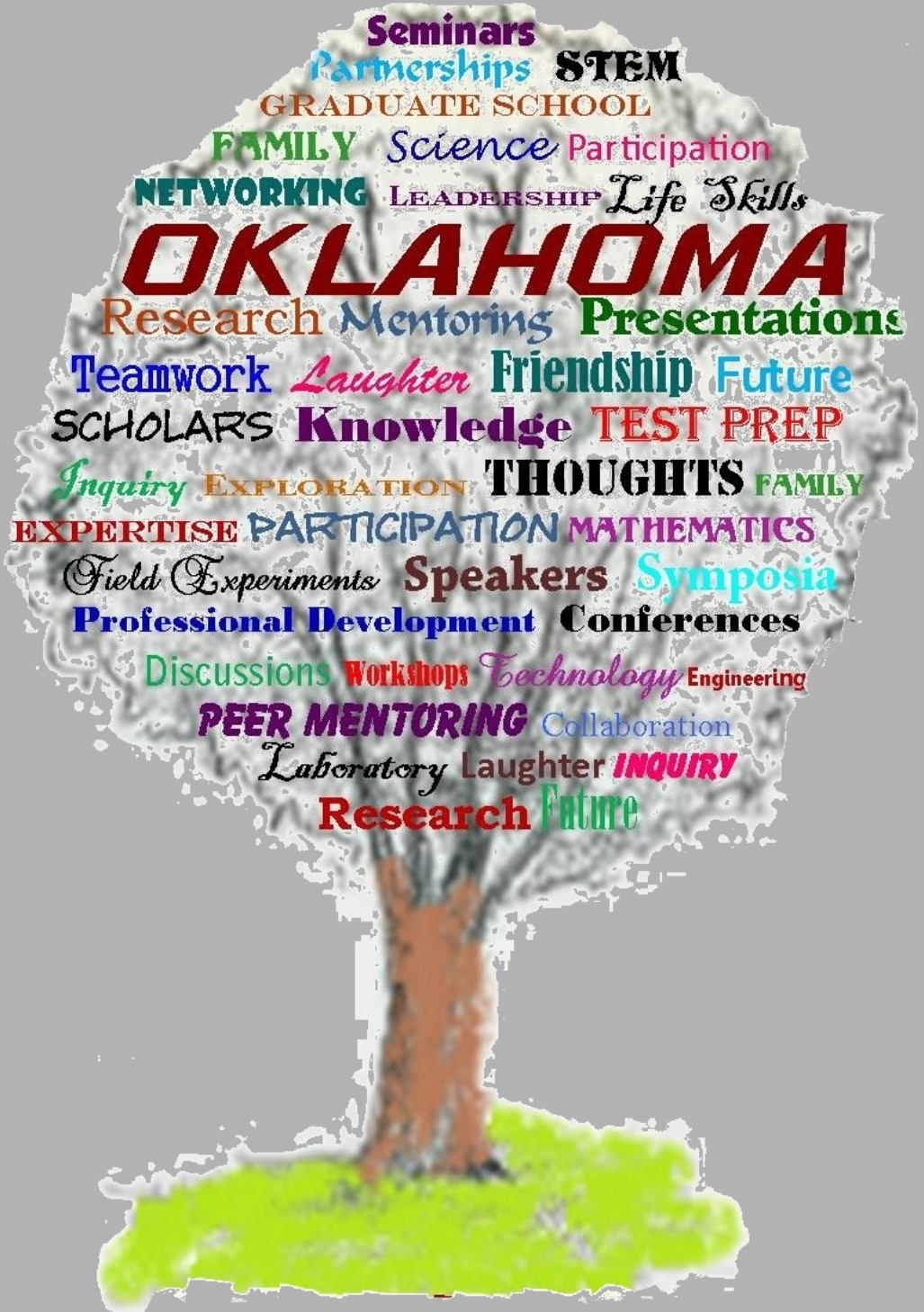


GUIDING & SPONSORING MINORITY STUDENTS IN STEM SINCE 1995

OK-LSAMP



# The Link



# Message from the PI / Director



*In September, 2013, Oklahoma State University Interim Provost Pamela Fry, recommended Dr. Jason F. Kirksey, Associate Vice President for Institutional Diversity, to become the Principle Investigator (PI) for the Oklahoma Louis Stokes Alliance for Minority Participation and Director of the Bridge to the Doctorate programs.*

It is an exciting and rewarding time for the OK-LSAMP program. As PI, I look forward to working with the campus coordinators and program staff as we continue to move the program forward in its commitment to strengthen the Scholars' preparation and increase the number of minority students who successfully complete BS degrees in STEM disciplines.

As OK-LSAMP finishes its 20th year in Oklahoma, I look forward to continuing the success of the program. A proposal has been submitted to the National Science Foundation for Phase V of the program. Scholars have been accepted into graduate programs across the nation, received funding from the Graduate Research Fellowship Program (GRFP), and participated in numerous presentations and internships. Dr. Carl Rutledge, Campus Coordinator at East Central University, was awarded with the David and Molly Boren Outstanding Mentor Award. Three Scholars received national recognition at the Women of Color Conference in Dallas, Texas, and two Scholars have been awarded 2014 REU opportunities in France. Needless to say, OK-LSAMP is doing a great job in promoting the program world-wide.

I look forward to working with the Campus Coordinators and the Scholars as we go forward in promoting and valuing diversity in higher education.

Sincerely,

## Bridge to the Doctorate

### **Four additional LSAMP scholars have been selected to participate in Cohort 7.**

- Jorge Lightfoot– Microbiology OSU
- Allison Potts– Forensic Sciences OSU
- Melicia Matthews– Engineering OSU
- Brice Fiddler– Civil Engineer OSU

The Graduate Research Fellowship Program (GREP) has been awarded to Josh McLoud, Botany BD Fellow, & Sunny Evans, Entomology BD Fellow.

**CONGRATULATIONS!!!!**

## DR. CARL RUTLEDGE TO RECEIVE 2014 BOREN MENTOR AWARD



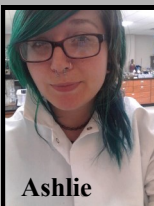
Dr. Carl Rutledge, East Central University Professor and OK-LSAMP Campus Coordinator, received the 2013 David and Molly Boren Mentor Award on January 15, 2014, at the State Capitol in Oklahoma City. Erik and Jonathon Gonzales were also recognized as mentees during the awards ceremony. The award is presented in conjunction with National Mentoring Month and is sponsored by the Oklahoma Foundation for Excellence and its David and Molly Boren Initiative. According to former students and colleagues, Dr. Rutledge spends countless hours in his office, advising biology, chemistry, cartography, sociology and other majors. He has guided them where to present research papers or helped them find schools with graduate programs, or ordered chemicals or 'critters' for their research projects in biology. Many of Dr. Rutledge's students have gone to graduate school becoming doctors, dentists, and professors.

Jonathan Gonzales, former ECU Physics graduate and a current Ph.D. candidate at OSU, praises Dr. Rutledge as an instructor and mentor. *"In my aspirations to becoming a teacher, I have looked up to Carl as a model for success . . . in all of his courses, he is extremely encouraging, exciting, motivated and helpful. You can immediately see that he is passionate about the subjects by the amount of energy he puts into each lecture. He always has a bounce in his step which makes it easy to share the same enthusiasm. He is well organized and approaches even the most complex subjects with care while always keeping the audience in mind. Dr. Rutledge has the ability to strike a balance between being hands-on and hands-off as a mentor."*

The Alliance is extremely proud of Dr. Carl Rutledge for his 20 years of dedicated commitment to the OK-LSAMP program and to the students he has mentored. Dr. Rutledge is truly deserving of this award.



## International Research Experiences



**Ashlie**

**Ashlie Walker**, SWOSU, and **Keely Redhage**, OSU, have been selected as two of 12 students to participate in the 2014 US/France/Belgium iREU Site in Translational Chemistry. The program, coordinated by Dr. Randy Duran, Director of the Louisiana State University Office of Undergraduate Research, stated, *"this may be the only LSAMP program in the US to send two such outstanding Native American women abroad for research projects of this type. It certainly is a first for my career (20 years and hundreds of US undergraduates)."* The iREU will provide both Scholars with opportunities to work with world-known researchers, chemists and materials scientists who will be involved in translating basic research discoveries in chemical biomarkers, targeting, and electroporation in support of emerging areas such as neuroprostheses.



**Keely**

Ashlie, a senior Professional Chemistry major, will spend 10 weeks in Grenoble, France, at a major research laboratory of the Commission for Atomic Energy and Alternative Energies (CEA). Keely, a senior Microbiology major, will spend at least 10 weeks in Lille Cedex, France, at the world famous Institute Pasteur de Lille and may extend her research into a six month program.



**Amanda Mathias**, OSU senior Animal Science major, has been accepted for graduate study at Louisiana State University (LSU). Prior to beginning course work, she will participate in an iREU in Recife, Brazil, at the Universidade Federal Rural de Pernambuco with LSU faculty.





## Southeastern Oklahoma State University

Southeastern Oklahoma State University was established in 1909 as a normal school to educate teachers for Oklahoma's public schools. Since that time, the University has added disciplines to become a comprehensive regional university. The University offers undergraduate and graduate degree programs through the School of Arts and Sciences, John Massey School of Business, School of Education and Behavioral Sciences, and School of Graduate and University Studies. Diverse program offerings include teacher education, aviation, and occupational safety and health, to name just a few. Southeastern has an enrollment of 4,000 students at eight locations in Oklahoma and Texas. In addition to the main campus at Durant, programs are offered at the Southeastern-McCurtain County branch campus, University Center of Southern Oklahoma in Ardmore, Eastern

Oklahoma State College-McAlester campus, Tinker Air Force Base, Rose State College, Oklahoma City Community College, and Grayson College in Denison, Texas.

The University has a long and successful history of providing higher education opportunities for Native American students. Southeastern's service area covers significant parts of the Choctaw and Chickasaw Nations and the University partners with the tribes to provide specialized services for all Native American students. Southeastern is among the nation's leaders in producing Native American graduates. Approximately 70 percent of Southeastern students receive some type of financial aid assistance.



In recent years, the University has benefited from a tremendous upgrade in its physical facilities with the construction of the Glen D. Johnson Student Union, Shearer Residence Hall, Bloomer Sullivan Arena, a new theatre building, a new tennis court complex, and a renovated football stadium. A new general classroom building opened in 2010.





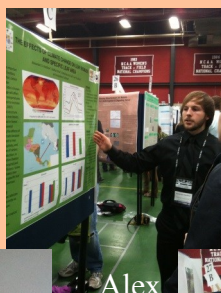


OK-LSAMP and the state of Oklahoma was well represented at the 2013 National Conference on Undergraduate Research (NCUR). There were 26 Oklahoma abstracts selected from over 3500 submissions. Of these, 22 poster and oral presentations were made. Seven of those presentations were made by OK-LSAMP scholars (presentation titles below).

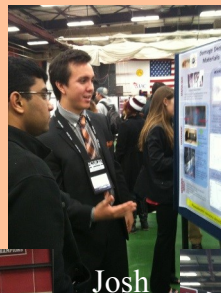
In addition to giving and watching research presentations, Scholars attended plenary speaker events and participated in excursion opportunities offered through the conference. Scholars took a cruise on the Mississippi River and attended the University of Wisconsin-La Crosse International Banquet where the chancellor of the university was among the performers playing rock-n-roll on an electric guitar.



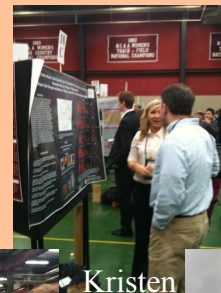
Caleb



Alex



Josh



Kristen



Forrest Rogers,  
OSU Freshman  
Research Scholar



Ashley



Abbey



Amanda



Saturday Walk



Wednesday Arrival



Amanda (and others) helped  
Jennifer Smith at the OSU  
Graduate College Table



International Banquet



Saturday Dinner

Caleb Hubbard - SWOSU Scholar	Examining the Effects of Lanthionine Ketimine (LK) in Axonal Elongation in Vivo	Oral
Ashley Rodriguez - SWOSU Scholar	Molecular Components Controlling Synapses in Nematodes	Oral
Alex Hardison - OSU Scholar	Effects of Climate Change on Biomass Allocation to Leaves and Specific Leaf Area Along an Elevation Gradient	Poster
Abbey Ramirez - OSU Scholar	Habitat Selection of Nesting Mississippi Kites in Oklahoma Cross Timbers	Poster
Joshua Hardisty - OU Scholar	Damage Detection in Carbon Fiber Composites Using Principal Component Analysis	Poster
Amanda Mathias - OSU Scholar	Alleviation of Pain Associated with Disbudding	Poster
Kristen Enyart - OSU Scholar	A House is not a Home: Host Specificity of Freshwater Snails to North American and African Horsehair Worms (Phylum: Nematomorpha)	Poster



# Oklahoma Research Day



Oklahoma Research Day has a new permanent logo and a new permanent website, [www.oklahomaresearchday.com](http://www.oklahomaresearchday.com).

Due to Oklahoma Research Day being moved from the fall to the spring, the event was not held in 2012. However, the March 8, 2013, conference was a huge success. There were over 1,100 registered students, faculty, and guests and over 600 posters. The OK-LSAMP program was well represented with 27 scholars from across the alliance whose research abstracts were accepted for presentation.

Oklahoma Research Day is funded by the Oklahoma Experimental Program to Stimulate Competitive Research (EPSCoR). The next Oklahoma Research Day will be held on the UCO campus on March 7, 2014. We look forward to another large presence of OK-LSAMP scholars.

2013 presenters included:  
 Blair Baldrige – OSU  
 Megan Bowlin – LU  
 Wilmon Brown III – OSU  
 Chris Butler – UCO  
 Shanel Byron – LU  
 Sharonda Carson – UCO  
 Tanya Chapman – ECU  
 Ana Chicas-Mosier – OSU



Joshua Crittenden – ECU  
 Lindsey Davis – LU  
 Tiffany Glover – LU  
 Alexander Hardison – OSU  
 Princess Hayes – LU  
 Caleb Hubbard – SWOSU  
 Geoffrey Kibble – OSU  
 Martell McKinney – LU  
 Mary Ann Phillips – SWOSU  
 Terry Phillips – LU  
 JeAnna Redd – UCO  
 Ashley Rodriguez – SWOSU  
 Jodici Ross – LU  
 Rajah Sing – LU  
 Chelsea Smith – UCO  
 Chelsea Spencer – UCO  
 Yoslin Vallejos – UCO  
 Jessica Webb – UCO  
 BriAunna Webster – UCO



## OSU Research Week and other Presentation Events

Wilmon Brown III, Psychology senior, received first place for his presentation during OSU Research Week.

Kody Jones, Mechanical Engineering senior, received second place for his presentation during OSU Research Week.

Other OSU Research Week presenters included Brice Fiddler, Civil Engineering senior; Danica Johnson, Nutritional Sciences senior; Amanda Mathias, Animal Science senior; Alex Hardison, Botany senior; Amber Douglas, Biological Sciences senior; and Abbey Ramirez, Natural Resource Ecology and Management senior.

Kayla Davis, Biochemistry and Molecular Biology senior, and Amanda Mathias, Animal Science senior, presented at the OSU Wentz Research Symposium.

Ashley Collier, Zoology junior, was awarded Best Presentation Overall for her research during the Zoology Department Symposium.



Wilmon

Ashley

Kayla

Alex

Amanda

Danica

Amanda

Kody

Brice

# Cherokee Nation Science and Engineering Fair

Each year, OK-LSAMP Scholars and members of the OSU Chapter of the American Indian Science and Engineering Society (AISES) serve as judges and event leaders for the Cherokee Nation Science and Engineering Fair (CNSEF). Nine OSU Scholars and two LU Scholars travelled together to Northeastern State University (NSU) to assist with the 2013 fair. January 25, 2014, marked the Seventh Annual Cherokee Nation Science Fair and again provided opportunities for OK-LSAMP Scholars to participate. As judges, Scholars evaluate and focus on what the students have done, how well a student followed the scientific method, and how well the student communicates. AISES members plan a “hands on” exhibit in addition to being judges during the event. The project for 2013 was designed to teach students how to build a structure that would not turn over when hit with a ping pong ball. If you are interested in volunteering for the event and helping promote STEM programs to Native American students, contact Daniel Faddis at the Cherokee Nation.



*OK-LSAMP Scholars and OSU AISES Members serve as judges for the Cherokee Nation Science and Engineering Fair*



# SACNAS SSNAP



2012



2013

Scholars in Science: Native American Path (SSNAP) is a student support program designed for undergraduate American Indian students pursuing degrees in science, technology, and engineering and mathematical (STEM) fields. The program aims to increase the number of American Indian students in STEM careers. This year-round program provides opportunities for American Indian students to participate in training sessions focused on academic success and professional development. Thirty motivated American Indian students from multidisciplinary STEM backgrounds are then supported to attend the annual Society for the Advancement of Chicanos and Native Americans in Science National Conference (SACNAS). SACNAS’ goal is that SSNAP scholars will develop the skills needed to succeed in STEM careers and become leaders in their communities.



## Kayla Love, Langston University

Prior to Kayla being accepted into the BD program at the University of Oklahoma, she was a Scholar at Langston University. She completed her B.S. degree in Biological Sciences in May, 2013. During her senior year, she placed first in the nation at the *Emerging Researchers National Conference* in Washington, D.C. for her research project on the “Analysis of the Formation and Detection of Perchlorate Brines on Mars.” Additionally, she presented her research at the Lunar and Planetary Science Conference in Houston, Texas.



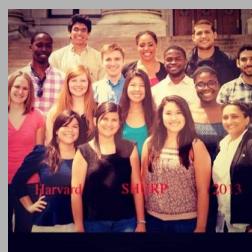
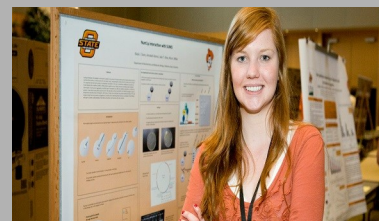
## Zoe Austin, OSU



Zoe Austin, OSU Zoology major, participated in the 2012 National Student Exchange Research Experience (NSERE) program through California State University at Monterey Bay (CSUMB). During her time in California, Zoe conducted research through the Biological Basis of Human and Animal Behavior. Her project focused on learning in *Anolis* lizards. Based on her continued research on *Anole* lizards, Zoe was awarded the Wentz Research Scholarship for 2013-2014. Zoe used her time in California to not only conduct research but to become a Certified Diver, an opportunity she could not have found easily in Oklahoma. Zoe presented her research at the Sigma Xi Conference in North Carolina and at the 19<sup>th</sup> Annual Research Symposium. She anticipates submitting an article for publication in 2014.

## Kayla Davis, Harvard University

Kayla is a senior at OSU majoring in Biochemistry. During the summer of 2013, she was accepted into an internship program at Harvard University. In her own words: *“This was an incredible summer research experience which gave me the opportunity to learn new research techniques, interact with students and faculty at Harvard, and make new lifelong friends in the biochemistry field. I worked with Dr. Wade Harper in the Summer Honors Undergraduate Research Program (SHURP) at the Harvard Medical School. The Harper Lab is interested in how ubiquitin and ubiquitin proteins regulate cellular processes.”*





## David Supeck, OSU BD Fellow

David Supeck, Ph.D. candidate at the OSU Center for Health Sciences and BD Fellow, is a very busy student. He spent the summer at the National Institute of Health (NIH) in Washington, D.C. This opportunity allowed David to network with numerous researchers and to conduct research in state-of-the-art laboratories along with nationally acclaimed researchers. David stated: "The experience was a productive and educational one that has benefited me and my professional development." In addition, David participated as a SSNAP scholar for the second year and presented his research project at the 2013 SACNAS conference in San Antonio, Texas. Following the SACNAS conference, David decided it was time to give back to SACNAS. He is one of the founding members of the OSU SACNAS Chapter, and was on the national ballot for the Student Board of Directors. David was a Scholar at Southwestern Oklahoma State University.



## Connor Ferguson, Former OSU Scholar

Connor Ferguson, former OSU Scholar (B.S. Plant and Soil Sciences, 2011), recently provided the following update:

*"In August, 2013, I completed the Master of Science degree in Agronomy at the University of Nebraska-Lincoln. I was fortunate enough to be asked to come to New Zealand to complete my Ph.D. in Agriculture and Production Sciences with an emphasis on pesticide spray drift reduction at Lincoln University near Christchurch, New Zealand. This is a national program that collaborates with several universities throughout New Zealand and my mentor, Andrew Hewitt, is internationally regarded as one of the top researchers in the field of spray drift reduction. Working with him is quite an honor, and I believe I have found the field I would like to spend my career trying to better understand. I am beside myself at this opportunity that, like OK-LSAMP, found me when I least expected it -- God can be SOOO Great!"*



## NAPIRE in Costa Rica



For the fourth year, OK-LSAMP scholars were selected to participate in the Native American and Pacific Islander Research Experience (NAPIRE) program in Costa Rica. The program, sponsored by the National Science Foundation and the Organization for Tropical Studies through Duke University, brings 10 talented undergraduate researchers to spend the summer conducting research in the rain forest with mentors from various institutions.



Dr. Greg Wilson, OK-LSAMP Coordinator and Assistant Vice President for Research and Grants at UCO, served as Campus Mentor for both girls. The NAPIRE sponsors the Campus Mentor with the opportunity to travel to Costa Rica in April to meet with the summer mentors, visit the research stations, and become familiar with the program.



Ashley Lonetree, OSU Biological Sciences senior, and Sharonda Carson, UCO Biology senior, were selected to participate along with Katherine Stewart, NSU Senior, who returned as a mentor for the program. Students previously sponsored were: Cassandra Camp, OSU; Paul Martinez, NSU, Alex Hardison, OSU, and Katherine Stewart, NSU.



## Highlights

- Darron Lamkin, OSU BD Fellow, was recently recognized with the 2013 Valuable Volunteer Award for his outstanding dedication and commitment to students and quality education in Oklahoma City Public Schools and for his work with the Northeast Academy for Health Sciences & Engineering.
- Dr. Lila Peel, Assistant Professor of Chemistry at Langston University and former BD Fellow, recently gave birth to a beautiful baby girl. Nyla Kay Quinn arrived in October, weighing 6 lbs 14 oz. Congratulations, Dr. Peel!





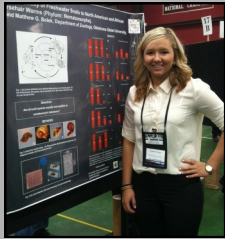
## Josh Warren, OSU

Joshua Warren, OSU Zoology senior, was recently co-author for an article printed in the *Journal of Experimental Biology*. The article: "Future-Positive and Feature-Negative Learning in Honey Bees" was the result of a research project with Dr. Charles Abramson and several other researchers funded through the National Science Foundation and the Beekeeping Research Center of Uludag University, Turkey.



Joshua Warren participated in an researching bees in Turkey.

## Kristen Enyart



Kristen Enyart, OSU Biological Sciences Senior, was accepted into Pharmacy School at the University of Oklahoma.

## Jason Semien goes to Italy



Over Spring Break 2013, Jason Semien, OSU Electrical Engineering senior, traveled to Italy for a Study Abroad short course.

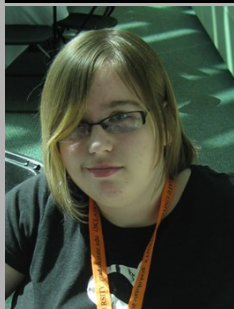
In addition, Jason was presented with a national scholarship from ExxonMobil at the Golden Torch Awards concluding the National Society of Black Engineers (NSBE) Conference.

## Allison Potts & Amanda Mathias

Allison Potts and Amanda Mathias, OSU Scholars and Animal Science seniors, presented at the American Dairy Science Association - American Society of Animal Science (ADSA-ASAS) Joint Annual Meeting. In July, they traveled to Indianapolis, Indiana, to present as well as network and meet potential mentors and future collaborators. Allison presented "Expression of WNT Signaling Transcripts at Specific Stages of Follicle Development in Bovine Granulosa Cells." Amanda presented "Alleviation of Pain Associated with Disbudding."



## Mary Ann Phillips, SWOSU



Mary Ann Phillips, SWOSU Computer Science major, completed a summer internship at Clemson University in the computer science department. She was recently accepted into the Tapia Conference Code-A-Thon and selected to participate in the National Super Computing Conference, in Denver, Colorado, through a scholarship from SIGHP/ACM-w. She has also been selected as a game reviewer/columnist for Altered Confusion, LLC and a beta-tester for Piasa Games.

## Paul Snow Research, UCO



*“The Total Hip Implant (THI) research has been a step by step process that keeps building upon itself. It started with an idea. Then, tests were performed to validate and confirm that the idea had merit. Well it did, it surpassed expectations and prompted a well thought-out plan to, in the end, be able to apply this idea to real hip implants. The idea is Nano-fibers. The way this research is designed comes down to grip. The implants in use today are mostly metal that is tight fitted into the bone of a recipient. Over time, this tight fit can come loose under cyclic loading*

*(walking, running, ect.). To prevent this, our idea takes and makes Nano-fibers by electrospinning and wraps them around the implants. An example for comparison would be a heavy weight with a smooth rod as a handle compared to the same weight with a rod wrapped with a slightly stretched spring that is solidly attached to the rod. This spring acts as a grip by greatly increasing the surface area that your hand can take advantage of and, in the end, grip longer.*

*I am currently working on the PID (proportional integral derivative) control system. This is a complex system that allows for precision control of the revolutions per second needed for fiber application. The next step is to create a 3D, scaled, metallic hip by means of the CNC with a rotation axis. The last obstacle is producing the nano-fiber in applying them in a uniformed manner. This will be done by a concept that involves charged rings. With everything coming together, I am very excited to be involved in this undergrad research and cannot wait to see what the final product will become.”*

## Sharonda Carson Research, UCO

*I am currently conducting research on the different generic variation among skunk populations located in the North, South, and California areas of the United States. The research project was started by Dr. Haynie with the purpose to determine whether the populations within these areas represent more than one subspecies of skunks. Instead of working directly with skunks, we have a collection of DNA samples from different areas. The northern region includes AZ, WY, MO, IA, ND, and NE. The southern region includes TX, KS, and OK. The research consists of doing PCR which is the process that analyzes and compares the DNA samples. The research project has been in progress since 2007.*

*Since the summer of 2012, Dr. Haynie and I have been working to complete the research project. Since I have become more comfortable with working in the lab on my own, I have been coming in*



*more often in the hopes of getting more work done. So far, I have tested sixty to eighty samples from the three regions. Unfortunately, the results have turned out to be negative. I am currently doing more testing to see whether the remaining samples may result in there being more than one subspecies.*



# Yoslin Vellejos Research, UCO

The research I have conducted during the fall semester with Dr. Lord includes a continuation of the bee research in which I became involved during the summer and preparation for the research I will be involved in during the spring semester. During summer, we analyzed the



experiments. Ancillary to that, I acquired my certification in "Protecting Human Research Participants" from the NIH. The reason I acquired this certification was so I can begin the research on neonate abductions during the spring semester. The purpose of

that research is to discover what leads people to abduct neonates. Also, I have begun reading books over how to function the scanning electron microscope (SEM) because I will be piloting my individual research project during the spring which involves the use of the SEM. My individual research will involve examining the sensory organs on the heads of bees as well as observing different samples from flies in order to assist another graduate student with her research.

would move around the scented container in order to analyze whether the honeybees were just following the container or the scent. On further inspection, we discovered that there might be bees coming to our containers that didn't belong to our hives, so we proceeded to tag each of the four hives with paint. After tagging the bees, we began to record the number of bees without a color and the number of bees of each individual color that ate from the containers we used for the

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SAVE the DATE



Admit One



**KEYNOTE SPEAKER:**

Dr. S. Brett Walker  
Former OK-LSAMP Scholar  
BS Mechanical Engineering, OSU in 2008  
PhD, University of Illinois  
CEO and Co-founder of Circuit Scribe  
\*You can find out more about Brett and Circuit Scribe at <http://www.electronics.com/>.

Admit One



OK-LSAMP 20th Annual



Research Symposium

## Brice Fiddler goes to Guatemala

For the Engineers Without Borders study abroad trip to Guatemala, a group of 15 set out to build more efficient wood burning stoves for communities in need. The reason for building these stoves were to make a more efficient and healthier way of cooking and create an easier way to fuel them. The group also wanted to learn about the culture. Brice says, *"The trip was my first experience out of the country to explore a new culture. During the trip, I was able to work hard for a great cause, learn a lot about a wide variety of subjects, and*



*have fun as well. Overall, the trip was a wonderful, worthwhile, and enlightening experience that also allowed me to test my knowledge and to help others."*



## Jennifer Green, Cameron University



This summer, Jennifer was accepted to the CLIMP-UP for Summer Research Program at the University of Buffalo. She was part of the Institute of Strategic Enhancement of Educational Diversity (iSEED) program. The program lasted from June 1-Aug 4. She worked with Dr. Sathy Balu-lyer and his lab team in the Department of Pharmaceutical Sciences. He and his team were working to find a better way for Hemophilia A patients to accept a replacement therapy using recombinant Factor VIII. Jennifer's particular project was entitled "The

Effects of Vitamin A on Dendritic Cell Migration Toward CCL-21." During the program, they had weekly Friday morning breakfast meetings in which they listened to special speakers present their current line of research. Jennifer worked in the lab on weekdays from 9am-5pm with weekends off unless the experiment called for special care at odd hours. Participants were taken to Niagara Falls, which was absolutely amazing, as well as to a Buffalo Bison baseball game which was really fun. They ended the summer with a picnic at one of the sponsors' lovely country home. The last two days of the internship, they presented the research including BioMedical Research Day at the Clinical Translational Research Center in downtown Buffalo.



## Jose Diaz



Jose Diaz, former Scholar from Southeastern Oklahoma State University, recently provided the following update on his experiences in veterinary school.

*I could not be more thankful for the assistance provided by Dr. Tim Patton. His assistance allowed me to get to where I am. Veterinary school is a big change from undergraduate school. I think I've reached the level to where I'm busy 24/7, and the pressure is definitely on all the time. The zoology background is definitely a plus here since at least some classes at this school, (such as, anatomy and physiology), have allowed me to reach into my past knowledge from mammalogy and herpetology. From the structures that I saw in the courses, to even already understanding the oxygen saturation in the blood flow in physiology among other important topics. I would definitely advise future pre-veterinary students to take these classes along with immunology. I am*

*currently taking immunology and some background in it would have definitely helped since it is one of the classes that most students fail in vet school. It has been an amazing experience so far, even though I'm in the Caribbean, close to Puerto Rico. The island is completely different, but I am certainly glad to be here.*

## Cord Carter, SEOSU

Cord Carter presented at the American Chemical Society (ACS) National Meeting in New Orleans, Louisiana. Cord also serves as the vice-president of the Southeastern Oklahoma State University ACS chapter.

In addition to his presentation, Cord had the privilege of accepting the "Green Chemistry Chapter Recognition Award" and an Honorable Mention award for the SEOSU ACS chapter.



## Shelby Frazier, SEOSU

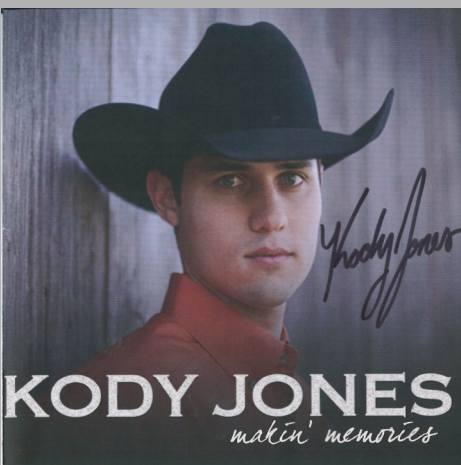


Shelby Fraser, SEOSU Zoology senior, was selected as a Fellow in the OSU Bridge to the Doctorate Program and the Natural Resources Ecology and Management graduate program. Additionally, she was chosen as the Southeastern Oklahoma State University Outstanding Student Athlete of the year for 2014. Shelby is a cross country runner.

# Women of Color



In October, Scholars from LU, SWOSU, ECU, and OSU attended the 2013 National Women of Color Conference in Dallas, Texas. Scholars attended workshops, participated in round-table discussions with Fortune 500 CEO Officers, and attended a career fair. Gabrielle Williams won an iPad Mini for her participation in one of the workshops. Three Scholars were recognized with Student Leadership Awards - Linzi Thompson, ECU, Research; Evann Comeaux, LU, Leadership; and Shelby Fraser, SEOSU, Leadership. Kay Porter, program manager, served on a speaker panel.



## Kody Jones

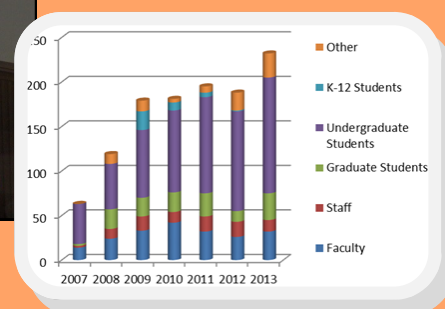
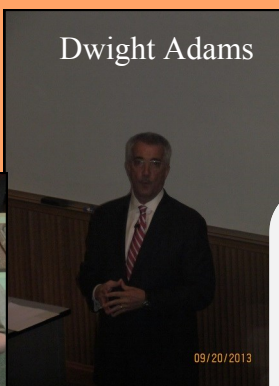
OK-LSAMP scholar releases first album.

Check out Kody Jones' work at

<https://www.facebook.com/kodyjonesmusic>



# Symposium 2013



The 19th Annual Research Symposium was held on Saturday, September 21, 2013, at Oklahoma State University. We were excited to have Dr. Dwight E. Adams, Director of the University of Central Oklahoma Forensic Sciences Institute, serve as the keynote speaker. Dr. Adams spent 23 years in the Federal Bureau of Investigation (FBI) and his presentation was inspiring and informative. Diana Lizarraga, Director of Cal NERDS at the University of California-Berkeley, spoke about today's generation of young scientists. Logan Watts, Training Coordinator at the University of Oklahoma's Research Center, provided a seminar on research ethics. OK-LSAMP and invited scholars made 21 oral presentations and 58 poster presentations. 232 faculty, staff, students, and guests attended this event - thank you to all attendees!



The winners were (*pictured l-r*): 1st Place Poster - Allison Potts, OSU animal science senior; 2nd Place Poster - Keely Redhage, OSU microbiology senior; 3rd Place Poster - Amanda Mathias, OSU animal science senior; 1st Place Oral - Milecia Matthews, OSU mechanical and aerospace engineering senior; 2nd Place Oral - Kody Jones, OSU mechanical engineering senior; and 3rd Place Oral - Chandra Gadsden, Cheyney University of Pennsylvania biology senior.

## Dr. Charles Abramson, OSU Mentor



Dr. Charles I. Abramson's methods for developing STEM skills in students have seen widespread success in many areas.

Helping students develop skills they can apply in STEM disciplines has been the focus of Dr. Charles I. Abramson's work for more than 30 years. His results, developed at the Laboratory of Comparative Psychology and Behavioral Biology at Oklahoma State University, are easy and inexpensive to implement. He has seen these methods succeed in a wide variety of programs, from science camps and fairs to independent study projects and high school and college classrooms. He has used some of the methods in conjunction with programs developed by Dr. John Chaney, project director of the American Indians into Psychology Program hosted at Oklahoma State University. Dr. Abramson's methods have been published in journals, books and online. After many experiments and studies, he concluded that he can get around the misconceptions that students have by developing demonstrations

based on what most students consider easy - psychology. For a number of years, he has been performing "Psychology as Science" shows in front of audiences across Oklahoma. His laboratory has published many inquiry based exercises that are inexpensive, flexible, and appropriate for demonstrating principles of psychology, biology, and the scientific method.

## Cherokee College Prep Institute (CCPI)

Approximately 20 universities and college representatives served as councilors and mentors to Native American high school students of the CCPI. Institutions represented included: Oklahoma State University, Northeastern State University, The University of Central Oklahoma, Yale, Dartmouth, Duke, Stanford, University of Pennsylvania, North Carolina State University, University of Illinois, University of Central Arkansas, Bacone College, and the University of Arkansas. Students attending the institute received information on how to apply for scholarships, college admission procedures and many other topics encouraging them to continue their education at a college or university.







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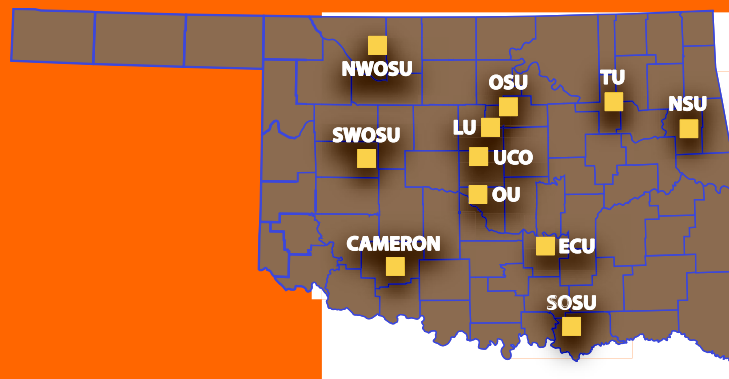
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*Funded by the National Science Foundation (NSF), the Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) is a consortium of Oklahoma colleges and universities working together to develop programs aimed at increasing the number of students from under-represented populations who receive degrees in Science, Technology, Engineering, and Mathematics (STEM) disciplines. Current goals of the program focus on undergraduate research experiences, international experiences, and graduate school preparation. Activities include faculty mentoring, conference and presentation travel, and meetings focused on professional development and networking.*

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## Search for Summer Internships and Prepare for the GRE

### Summer Opportunities

- Research Experiences for Undergraduates (REU) [http://nssf.gov/crssprgm.reu\\_search.cfm](http://nssf.gov/crssprgm.reu_search.cfm)
  - Pathways to Science <http://www.pathwaystoscience.org/Disipline.asp>
- Also search for:**
- IDeA networks for Biomedical Research Experience (INBRE)
  - Summer Undergraduate Research Experience (SURE)
  - Summer Minority Advanced Research Training Programs (SMART)

### GRADUATE RECORD EXAMINATION (GRE) PREPARATION

<http://www.ed2go.com/osuokc/>  
Choose the "Teaching and Education" tab then "Test Prep" from the menu.

The "Graduate School Information" tab of the OK-LSAMP website has a graduate school timeline, tips for writing graduate school essays, and a document containing online GRE prep sites.

### OTHER RESOURCES

Personal Potential Index (PPI)  
<http://www.ets.org/ppi/>

There are resources such as a poster gallery, graduate school preparation check sheet, and past issues of *the Link* and annual reports on the OK-LSAMP website.

Help us celebrate 20 years of success at the 20th Annual Research Symposium  
September 27, 2014



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