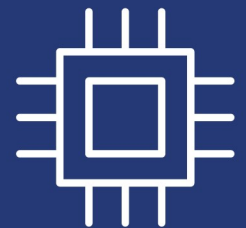
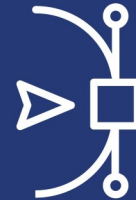




INSIDE...

Program news,
exemplary
scholars and
more!



2019-2020

THE ANNUAL OK-LSAMP NEWSLETTER

The Link

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www.ok-lsamp.okstate.edu

Award Numbers

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OU BD HRD-1702495

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About OK-LSAMP

Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) is funded by the National Science Foundation and it is a partnership of Oklahoma Colleges and Universities working together to develop programs aimed at increasing the number of students from underrepresented populations who receive degrees in STEM disciplines.

Current goals of the program are to focus on:

- ◇ Undergraduate research experiences
- ◇ International experiences
- ◇ Graduate school preparation

Activities include:

- ◇ Faculty mentoring
- ◇ Conference and presentation travel
- ◇ Meetings focused on professional development and networking
- ◇ Performance based stipends for students





MESSAGE FROM THE PI

Dr. Jason F. Kirksey

Greetings from the OK-LSAMP Program!

In 1994, the Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) program began significantly impacting underrepresented minority students (URMs) earning degrees in Science, Technology, Engineering, and Mathematics (STEM) across the state. Our 12-University Alliance prepares OK-LSAMP Scholars to consistently exemplify the necessary skills to be successful in globally competitive graduate programs, and in the workforce. Currently in its sixth phase of National Science Foundation funding, the OK-LSAMP Program equips our students, faculty mentors, and staff to effectively and successfully represent the exceptional nature of the program across Oklahoma, the nation, and around the world. An increasing, and transformative number of Scholars continue successfully matriculating to, and through, some of the nation's most prestigious graduate programs. The profoundly remarkable achievements of OK-LSAMP Scholars evokes a sense of pride that inspires all of us to work harder at expanding the reach of this program. Our goal is to develop and offer creative and innovative experiences for OK-LSAMP Scholars to emerge as transformational scientists, engineers, technology professionals, and researchers who will thoughtfully and boldly lead the world into unknown frontiers of scientific inquiry and knowledge.

Over the past year, numerous OK-LSAMP Scholars presented their research at nationally prominent scientific conferences such as American Indian Science and Engineering Society (AISES), Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), Annual Biomedical Research Conference for Minority Students (ABRCMS) and Emerging Researchers National (ERN). Despite the unfortunate circumstances in Spring 2020, during the past year, the cutting-edge research, diligence, hard work, and resolve of OK-LSAMP Scholars and their faculty mentors resulted in our program be represented in all four corners of the world. Just another reason for the OK-LSAMP family to be proud and remain resolute in our focus and commitment. The drive and determination of OK-LSAMP Scholars is evident in their work and noteworthy accomplishments. It is, however, imperative that we also express our heartfelt gratitude for the steadfast leadership and guidance of our campus program managers, and especially the faculty mentors who ensured the Scholars remained supported and continued to have access to equipment and resources that inspired excellence. Please accept our sincere appreciation and thanks for your incredible mentorship and tireless support to, and for, our OK-LSAMP Scholars.

In this issue of The Link Newsletter it is our pleasure to showcase the noteworthy accomplishments and numerous success stories of OK-LSAMP Scholars and their faculty mentors during the past year. As OK-LSAMP principal investigator, I am proud, but humbled, to be affiliated with such a meaningful and successful academic program. The upcoming opportunities to meet and interact with all the campus program managers, faculty mentors, staff, and particularly our Scholars and Bridge to the Doctorate Fellows is exciting, and inspires me to do even more to continue promoting excellence and inclusion in STEM throughout our state and nation. Hopefully we are all proud of the OK-LSAMP Program accomplishments, but not satisfied. I look forward to our continued work, and eagerly await the future OK-LSAMP achievements!

Sincerely,

A handwritten signature in black ink that reads "Jason F. Kirksey". The signature is written in a cursive, flowing style.

Jason Kirksey, Ph.D.

Vice President for Institutional Diversity and Chief Diversity Officer

Principal Investigator for the Oklahoma Louis Stokes Alliance for Minority Participation

SCHOLAR REQUIREMENTS

Eligibility Requirements

1. Minimum GPA 3.00
2. US citizen or permanent resident
3. Able to participate in and contribute to program activities
4. Full time student in an approved STEM field (see approved majors next page)
5. Demonstrated intent in pursuing investigative studies and a graduate degree in STEM
6. Demonstrated desire to promote the efforts of LSAMP and NSF in underrepresented communities

Requirements for Continued Support

1. Maintain GPA of 3.00 or higher
2. Regular class attendance Retain full-time status (Immediate notification of any drop/add changes required)
3. Remain in eligible STEM major (Immediate notification of major change is required)
4. Continued active participation in the required program activities.
5. Any scholar whose participation rate is below 75% may be dismissed from the program the following semester.

Required Activities for All Participants

Scholars Meetings - Once a month unless specified otherwise

Mentoring Component - Under the guidance of faculty mentors, all scholars are expected to participate in 5-10 hours of research-related experiences per week. Enrollment in 3 hours of departmental Special Problems permitted.

Graduate School Preparation - Scholars will be involved in vigorous preparation for graduate studies. Specific activities will be based on academic classification. By the end of the semester BEFORE you graduate, you are required to submit a minimum of five applications for admission to graduate school.

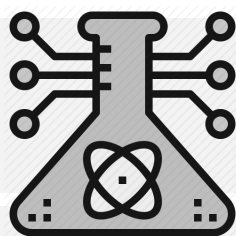
Summer Research Internships - All scholars will be involved in a two-month summer internship and must present their research at the annual research symposium held at OSU.

Occasional leadership, peer-mentoring, or other program activities - This will not interfere with your academics.

Acknowledgement of support by OK-LSAMP and NSF - (Cooperative Agreement HRD-1408748) in appropriate publications and public events is required. Display of the OK-LSAMP and NSF logos on posters and on last slide of PowerPoint Presentations is required. Logos will be provided by the OK-



Approved Majors



Agricultural Sciences

- Animal Sciences
- Food Science and Technology
- Plant and Soil Sciences

Natural Resources and Conservation

- Natural Resources
- Wildlife and Wildlands Science and Management

Architecture

- Architecture
- Environmental Design
- Architectural Sciences and Technology

Computer and Information Sciences

- Computer and Information Sciences
- Computer Programming
- Computer Software and Media Applications

Mathematics

- Mathematics
- Applied Mathematics
- Statistics

Physical Sciences

- Physical Sciences
- Astronomy and Astrophysics
- Atmospheric Sciences and Meteorology
- Chemistry
- Geological and Earth Sciences/ Geosciences
- Physics
- Materials Science

Business and Management

- Management Sciences and Quantitative Methods

Engineering and Engineering Technologies

- Aerospace and Aeronautical Engineering
- Agricultural Engineering
- Architectural Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical, Electronics and Communication Engineering
- Materials Engineering
- Mechanical Engineering
- Nuclear Engineering
- Petroleum Engineering
- Construction Engineering
- Geological/Geophysical Engineering
- Mechatronics, Robotics, and Automation
- Biochemical Engineering
- Biological/Biosystems Engineering
- Construction Engineering Technologies
- Nanotechnology

Biological Sciences

- Biology
- Biochemistry and Molecular Biology
- Botany/Plant Biology
- Cell/Cellular Biology and Anatomical Sciences
- Microbiological Sciences and Immunology
- Zoology/Animal Biology
- Genetics
- Physiology, Pathology and Related Sciences
- Bioinformatics and Computational Biology
- Biotechnology
- Neurobiology and Neurosciences
- Biological and Biomedical Sciences

**Above is a condensed list of approved majors. If your major is not listed, visit with the program staff.*

SCHOLAR PRESENTATIONS

OK-LSAMP 25th Annual Research Symposium

The Oklahoma Louis Stokes Alliance for Minority Participation 25th Annual Research Symposium took place at Oklahoma State University in Stillwater on October 5, 2019. The Keynote address was given by Dr. Cammi Valdez, Southwestern Oklahoma State University OK-LSAMP alum. Dr. Cammi Valdez is a vascular biologist, college administrator, faculty member, and champion of making STEM accessible. During her talk she shared her road to graduating from Harvard with a PhD.

OK-LSAMP scholars had an opportunity to present poster and oral presentations. Congratulations to all of our researchers who took part in last year's symposium. At the symposium 42 scholars presented from 10 alliance campuses. The presentations were judged by 27 doctoral staff and 140 attended the event to view posters and network with other OK-LSAMP researchers.

The following OK-LSAMP scholars were recognized for their impressive research projects and presentation skills:

Life Sciences Poster

1st Place Christy Eslinger, Oklahoma State University

2nd Place Sierra Posey, Oklahoma State University

3rd Place Jacee McCoy, Oklahoma State University

Non-Life Sciences Poster

1st Place Joseph Wagner, University of Central Oklahoma

2nd Place Jose Juan Macias Jr, University of Oklahoma

3rd Place Daniel Salinas Hernandez, Oklahoma State

Oral Presentations

1st Place Casandra Salinas, Oklahoma State University

2nd Place Erin Richardson, Langston University

3rd Place Rainee Deroin, Oklahoma State University



Dr. Cammi Valdez





Life Science Poster winners Christy Eslinger and Sierra Posey



Non-Life Science Poster winners Joseph Wagner and Jose Juan Macias Jr.



Oral Presentations award recipients Casandra Salinas, Rainee Derion, and Erin Richardson.



Third place poster award recipient Jacee McCoy.

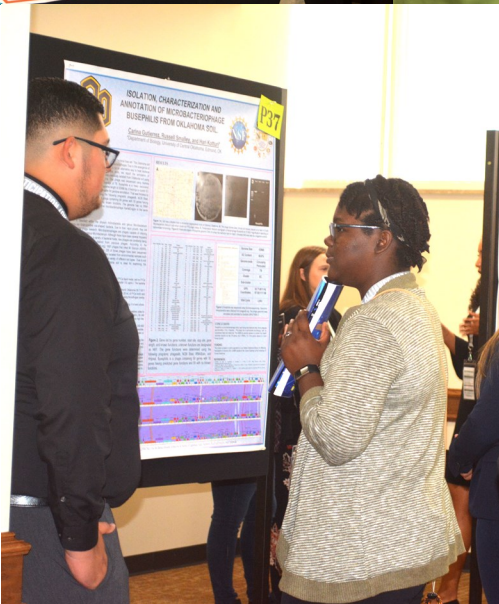
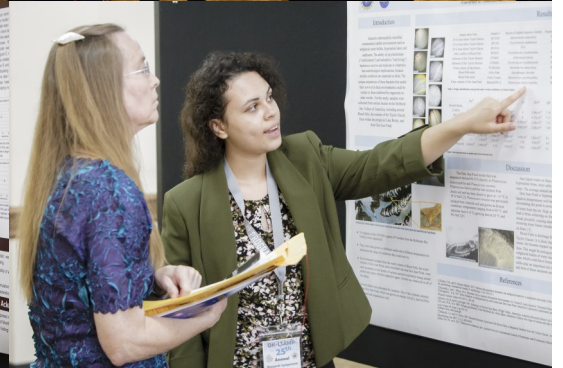
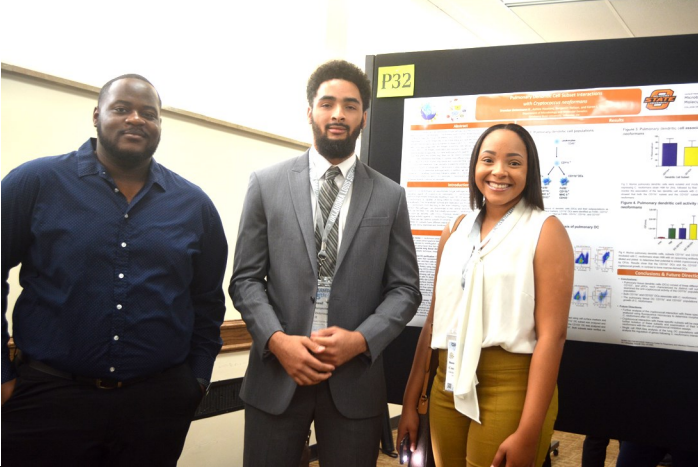


Brenda Morales OK-LSAMP Director, Theresa Hinkle CU OK-LSAMP Scholar, Dr. Nalley CU OK-LSAMP mentor, Dr. Mitchell professor emeritus and first OK-LSAMP PI, Dr. Kirksey OK-LSAMP PI.

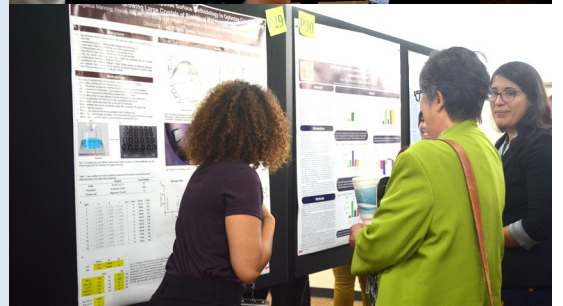


International research experience panel.





Attendees at the professional development and poster presentation Sessions.



2019 SACNAS: The National Diversity in STEM Conference

OK-LSAMP Scholars had the opportunity to attend the 2019 SACNAS (Society for the Advancement of Chicanos/Hispanics and Native Americans in Science) Conference. A total of 10 OK-LSAMP students presented research projects and networked (four scholars from Oklahoma State and six from the University of Oklahoma).

From article:

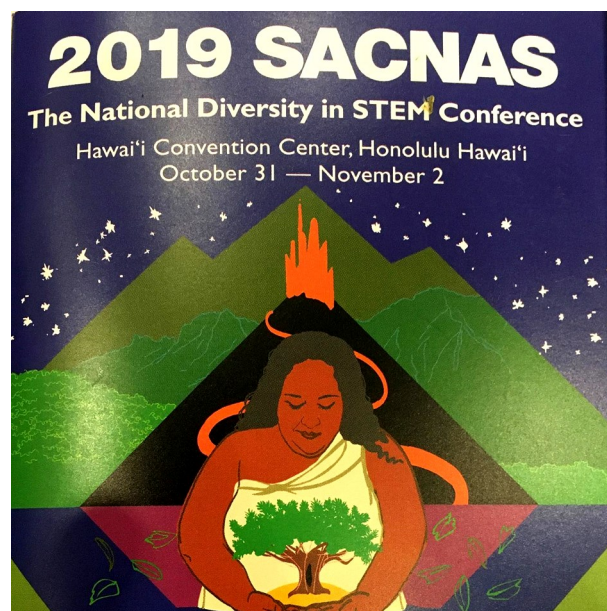
The 2019 conference welcomed a record 5,100+ attendees to Honolulu, Hawai'i — America's most ethnically diverse state, a wellspring of STEM research and opportunity, and a living legacy to indigenous knowledge. The opening keynote was delivered by H.E. Hilda C. Heine, EdD, President of the Republic of the Marshall Islands, the first head of state to address the SACNAS community and a leader in the international movement for climate action. In her talk, she detailed the deep interconnection her people have with their land, how it is the basis for their culture, identity, and traditional scientific knowledge, and how the Marshall Islands are literally sinking under rising seas due to climate change. "Our challenge, as indigenous researchers in science," pressed President Heine, "is to continue interrogating the limits of existing methodologies because we need to create new ones that will be inclusive of our traditional frameworks and ethos."

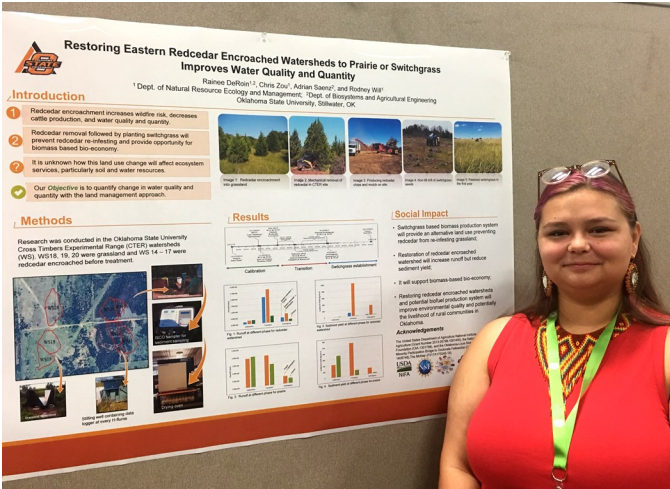
Following this theme, conference programming was carefully crafted to encourage attendees to bring their whole selves to STEM, and push toward solutions for problems affecting communities of color, including climate change. Workshops like "Effects of Climate Change on Pacific Islands, their Indigenous Peoples, and Resources", "Indigenous Scientists: Navigating from the Past into the Future", were among 125 total breakout sessions, which included featured tracks for Indigenous Science, Climate Change, Science Communication, and Inclusion in STEM. Over 800 students presented their research, with 82 receiving awards, and 340 professionals volunteering to serve as mentor-judges.

[...]

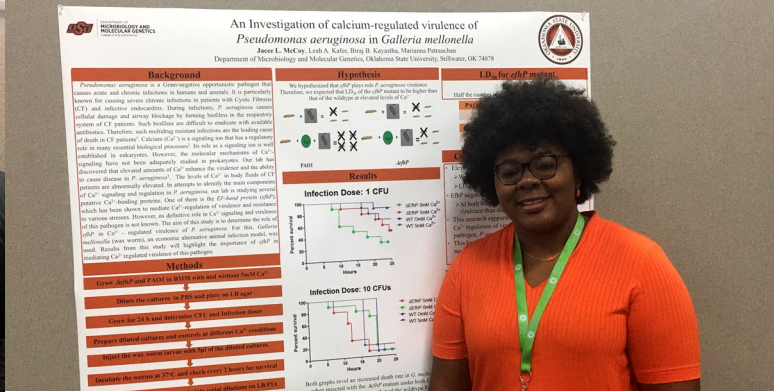
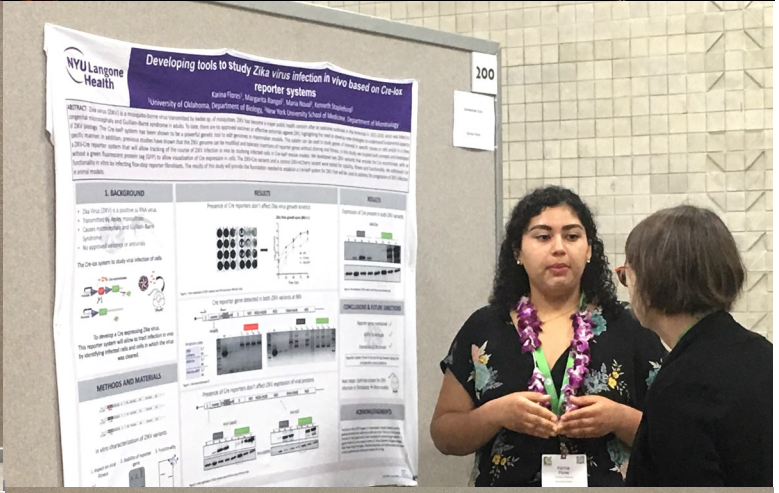
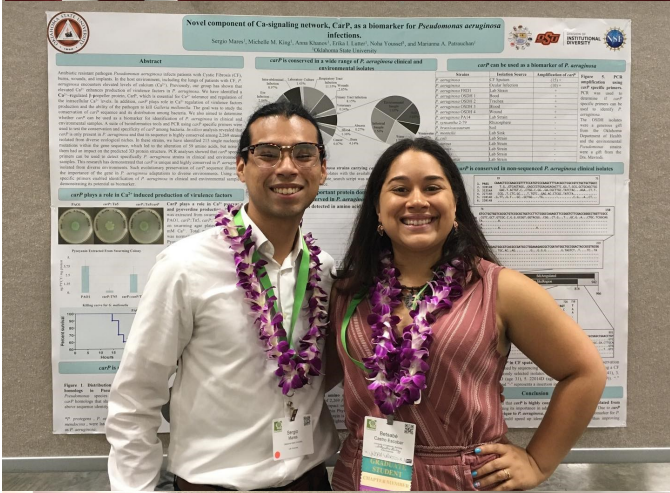
In the spirit of helping attendees grow their networks and access opportunity, the sold out Graduate School and Career Expo Hall provided unparalleled access for attendees to connect with over 430 booths representing top STEM institutions, agencies, and companies including Amazon and Google.

<https://www.sacnas.org/what-we-do/conference/2019-sacnas/>





Rainee DeRoin from Oklahoma State University was recognized for her outstanding poster presentation in the Life Sciences, Environmental Sciences division.





Attendees participated in poster presentations, learned from graduate programs booths, and attended great workshops. Additionally, they had the opportunity to explore Hawaii.

2019 OK-WISE Conference

The Oklahoma Women Impacting STEM and Entrepreneurship (OK-WISE) Conference, hosted by the OK Catalyst Programs, took place August 23rd at the Hyatt Regency in Downtown Tulsa and featured 30+ speakers and 400+ attendees. The OK-WISE Conference is an interdisciplinary event that showcases women leaders in STEM & entrepreneurship in Oklahoma. Attendees had the opportunity to connect to the people and resources they need to grow professionally in a variety of STEM and Entrepreneurship fields. Scholars Rainee DeRoin and Casandra Salinas, both from Oklahoma State University, presented their research projects.



Casandra Salinas received the Outstanding Undergraduate Poster Presentation Award.



LSMRCE 2019 Annual Conference

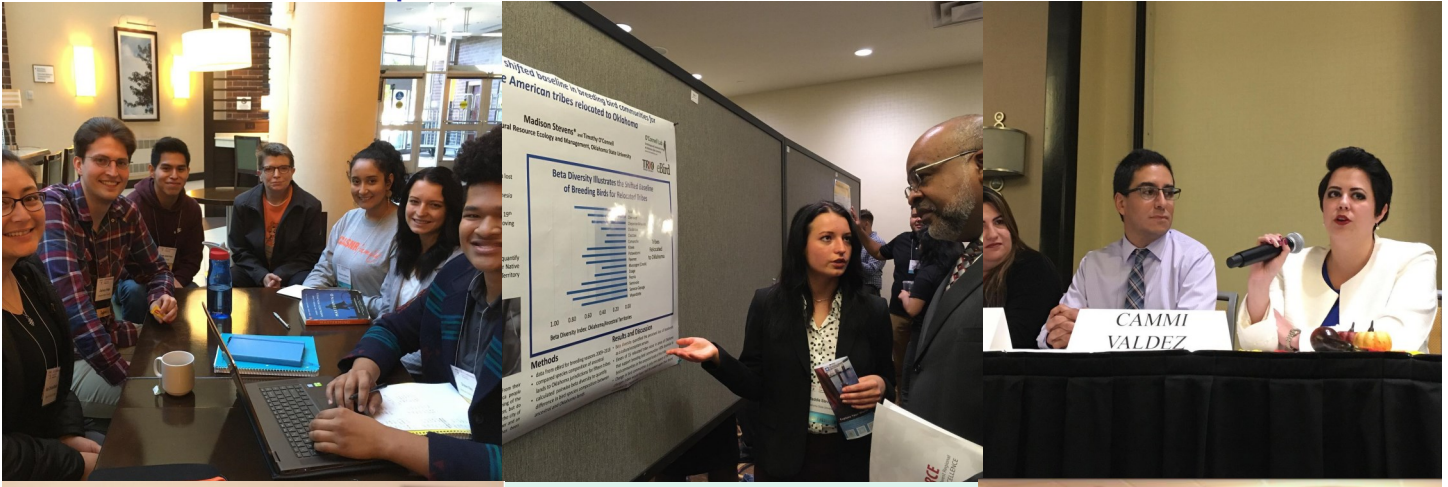


The Louis Stokes Midwest Regional Center of Excellence conference Building a Diverse STEM Talent Pool: Classrooms to Careers was held in Indianapolis, Indiana, October 25-27, 2019, at the Sheraton Indianapolis Hotel at Keystone Crossing. This event was co-hosted with the Indiana STEM Alliance and offered students, faculty mentors, educational researchers, and program administrators a platform to exchange knowledge and to cultivate a community of practitioners and scholars in the area of broadening the participation of underrepresented minorities in science, technology, engineering, and math (STEM). Brenda Morales, Director of the OK-LSAMP program, accompanied four OK-LSAMP scholars (Christy Eslinger, Casandra Salinas, Madison Stevens and Shawn Ray) and three BD fellows (Ashlee Hawkins, Zachary Ridge, and Ana Chicas-Mosier).

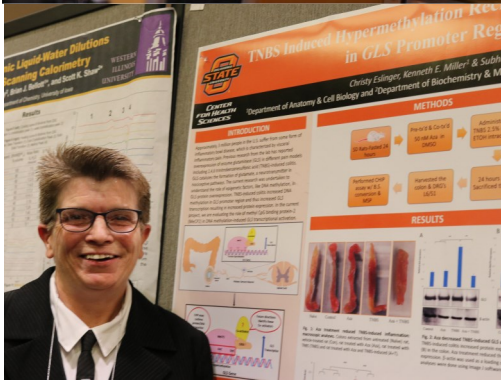
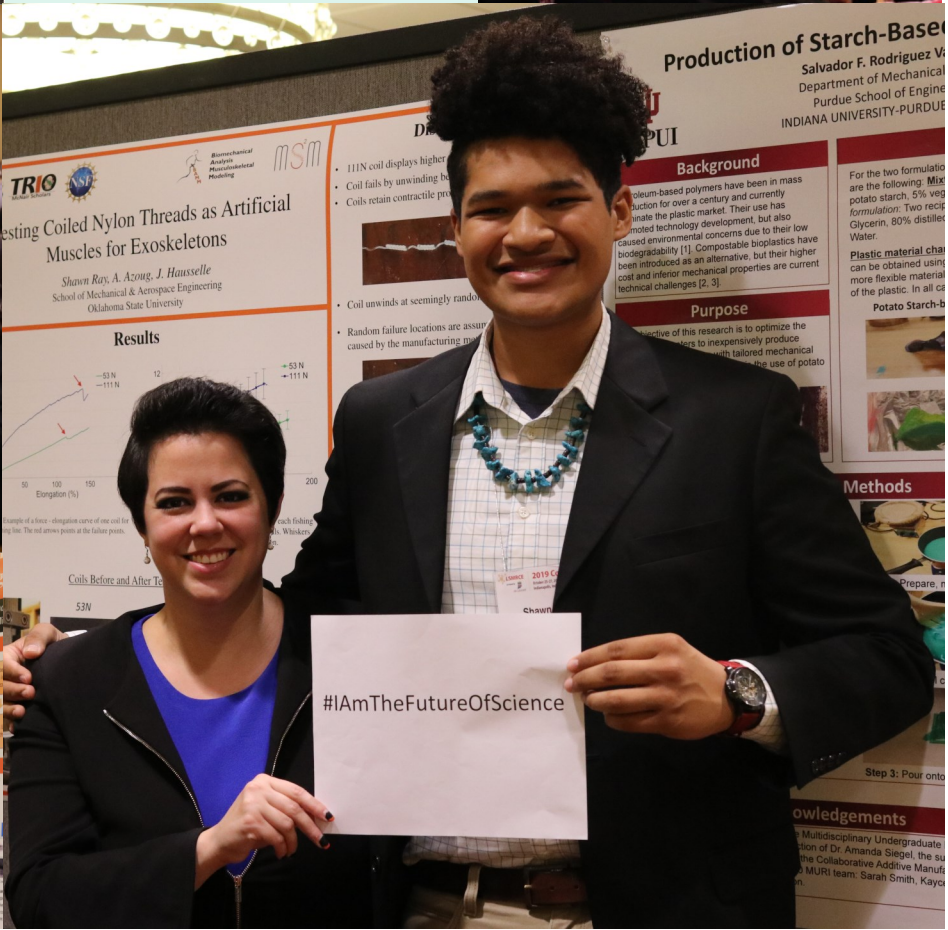


Christy Eslinger and Casandra Salinas' abstracts were ranked in the top 25 best poster abstracts submitted. Additionally, Christy received the 1st Place Undergraduate Poster Award.





Sharing knowledge and developing connections.

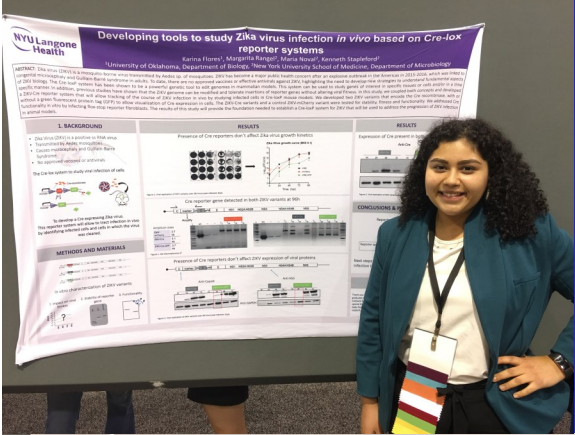
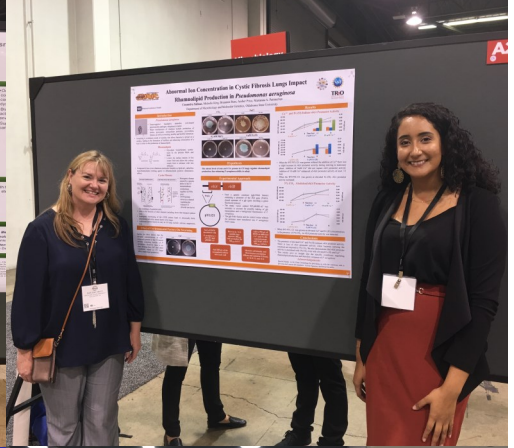
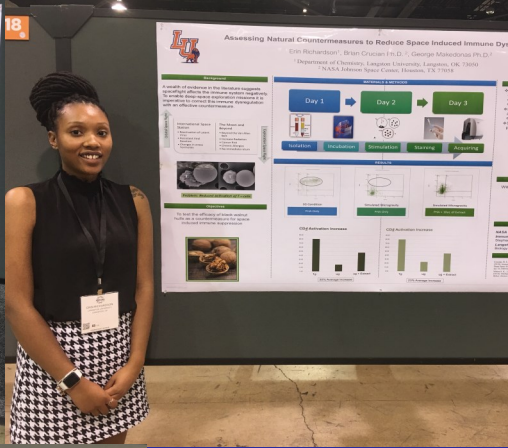
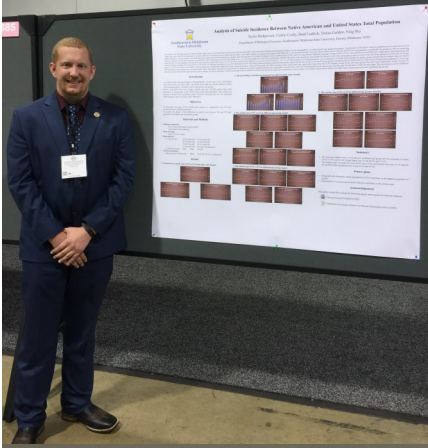
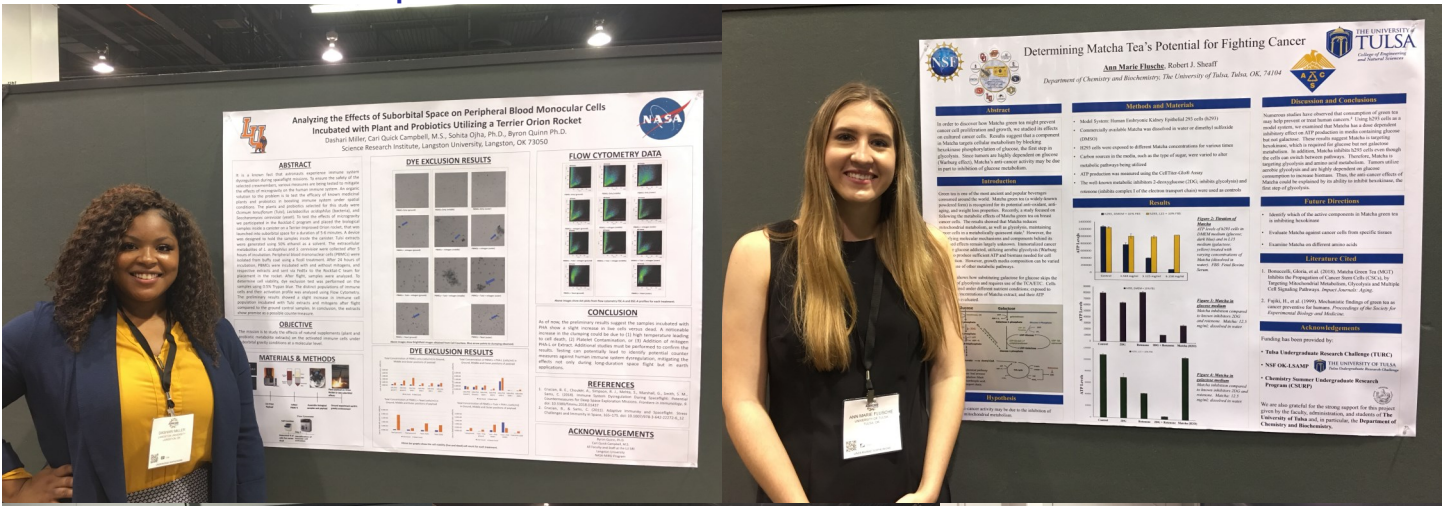


ABRCMS 2019

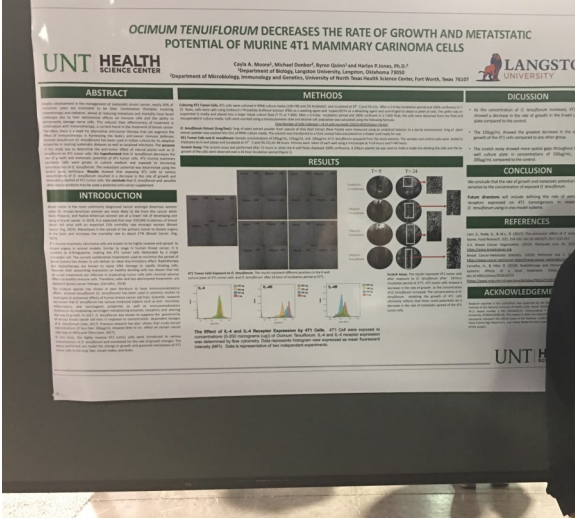
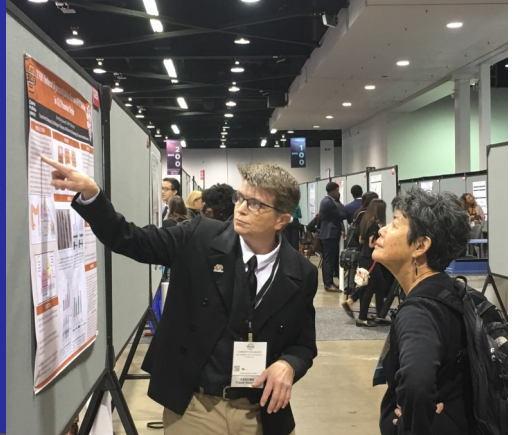


The Annual Biomedical Research Conference for Minority Students (ABRCMS) took place November 13-16, 2019 in Anaheim, CA. ABRCMS is one of the largest communities of underrepresented minorities in science, technology, engineering and mathematics. More than 2,500 students attend ABCMS to present their research, enhance professional development skills, explore graduate schools, and network. OK-LSAMP Scholars from Southeastern Oklahoma State University, the University of Oklahoma, Langston University, the University of Tulsa and Oklahoma State University had the opportunity to present their research projects.





OK-LSAMP Scholars at the ABRCMS Poster Presentation Session



2019 Oklahoma Academy of Science Technical Meeting

The 108th Technical Meeting of the Oklahoma Academy of Science was hosted by the University of Central Oklahoma (UCO) in Edmond, OK November 08, 2019. The meeting was attended by approximately 350 science faculty and university students representing 21 colleges and universities from across the state, making it the largest meeting ever of this organization. During the course of this conference 80 oral presentations and 97 poster presentations were given.

Brenden Determann presented his research project “Pulmonary dendritic cell subset interactions with *Cryptococcus neoformans*”.



Entomology 2019

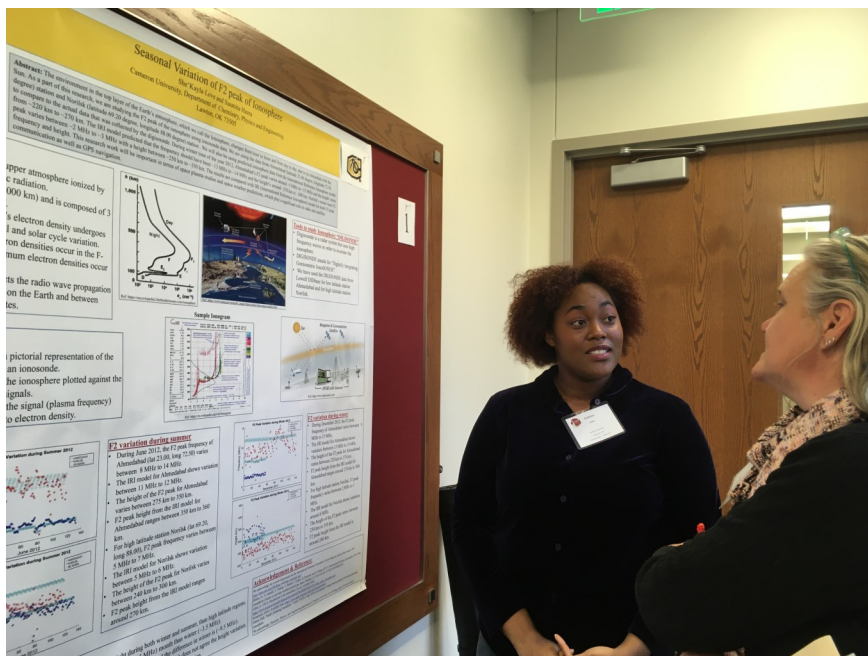
OK-LSAMP scholar Brandon Henriquez from Oklahoma State University presented at the Entomology 2019 Conference November 17-20, 2019 in St. Louis, MO. "Entomology 2019 was an exciting four days filled with 236 scientific sessions featuring 2,205 oral and 680 poster presentations with 3,653 attendees from 61 different countries. 2019 was a record setting event with 1,150 students attending!"



Brandon Henriquez received the second place in the Medical, Urban, & Veterinary Entomology (MUVE) Section for his poster presentation.



Conference for Undergraduate Women in Physics (CUWiP)

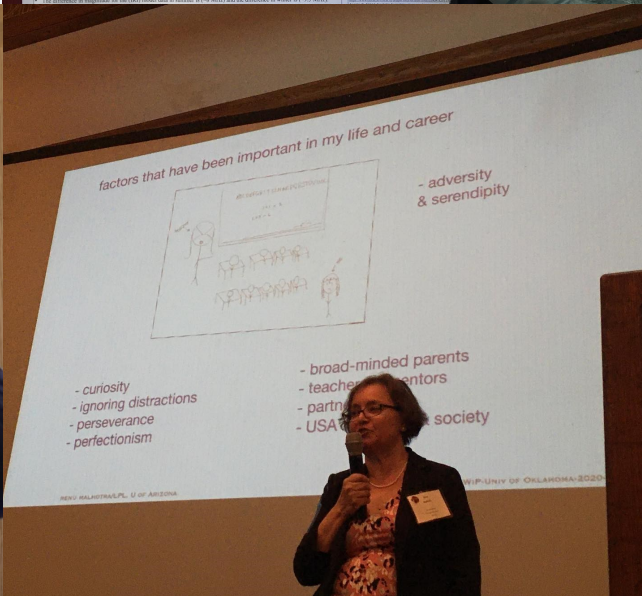
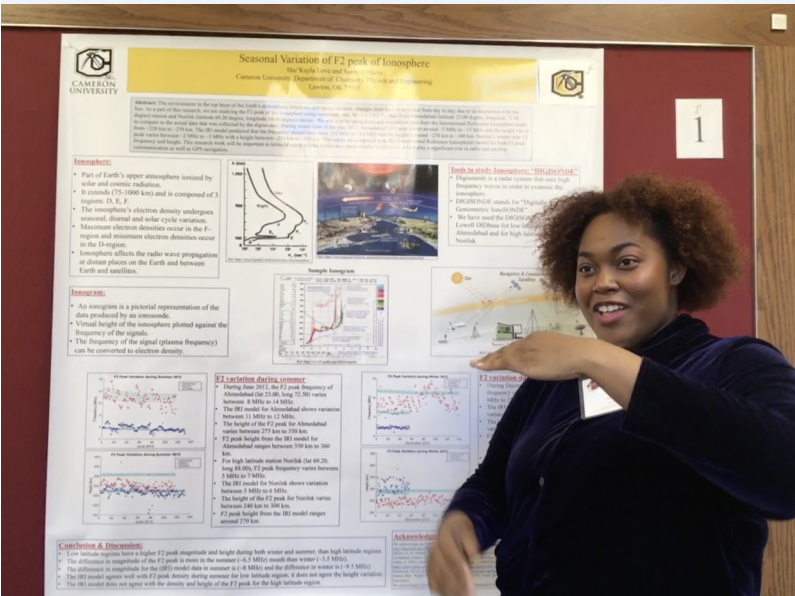
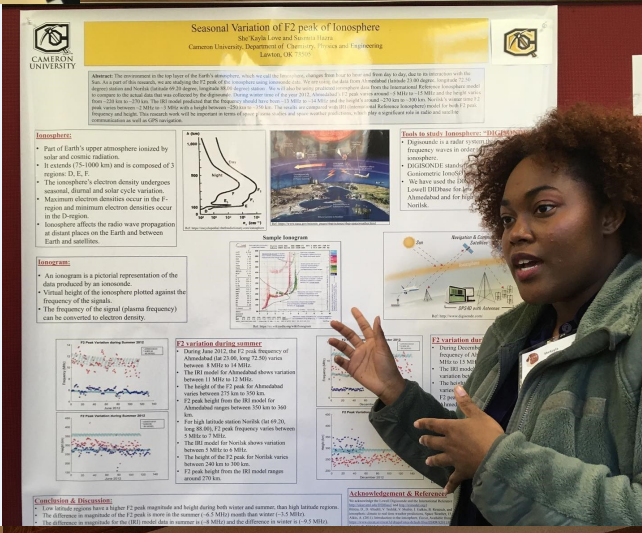


Conferences for Undergraduate Women in Physics

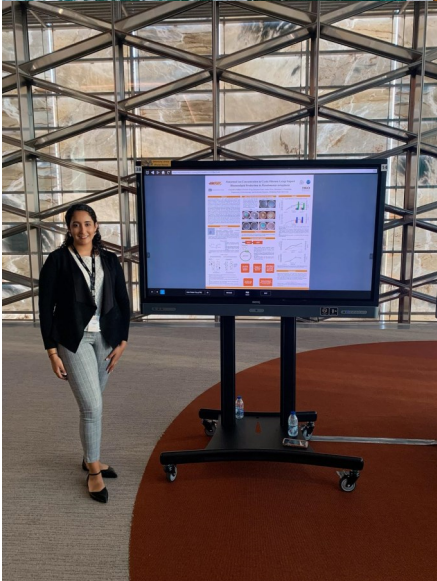
Regional Sites

- Black Hills State University
- Carnegie Mellon University
- Temple University
- Texas A&M University, College Station
- University of California, Irvine
- University of Chicago
- University of Maryland, College Park/NIST
- University of Minnesota
- University of Oklahoma
- University of South Florida
- University of Toronto (Canada)

OK-LSAMP scholar She 'Kayla Love, from Cameron University, presented her research at the University of Oklahoma January 17-19, 2020 at the Conference for Undergraduate Women in Physics (CUWiP).



9th International Undergraduate Poster Competition

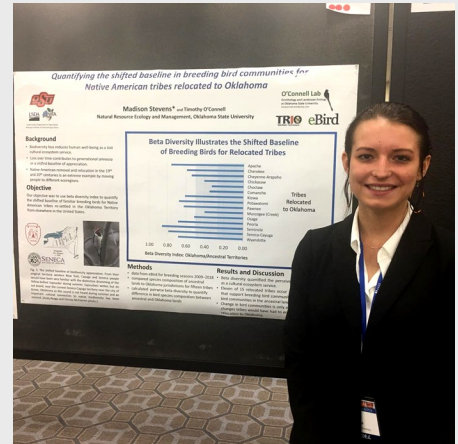
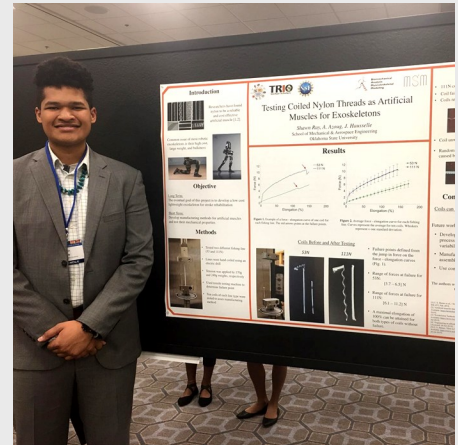


Casandra Salinas had the opportunity to represent Oklahoma State University at the Undergraduate Poster Competition during the Winter Enrichment Program 2020 Personalized Medicine at King Abdullah University of Science and Technology in Thuwal, Saudi Arabia from January 19-23, 2020. Casandra received 2nd place in the Biological and Environmental Sciences and Engineering Division. Additionally she had the opportunity to tour historic sites in Jeddah, snorkeled in the Red Sea, and visited state-of-the-art technologies and facilities.



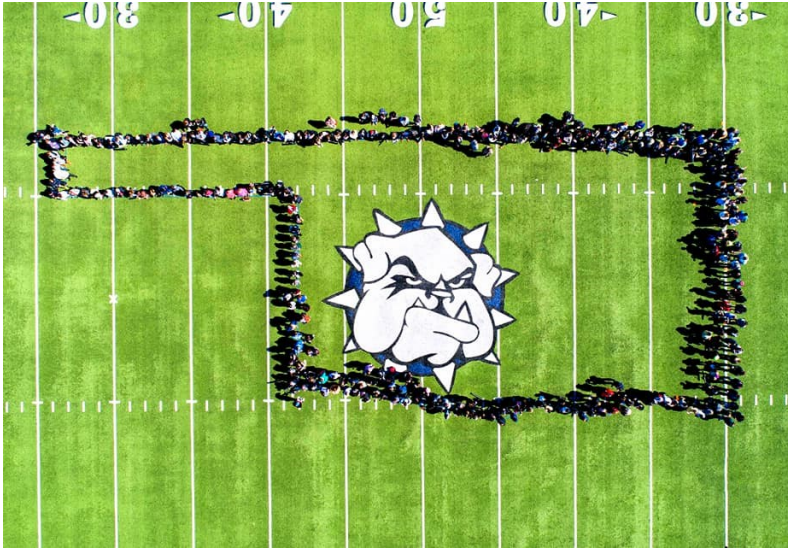
Emerging Researchers National Conference in STEM

The Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM) took place in Washington D.C. February 6-8, 2020. The objectives of the conference are to help undergraduate and graduate students to enhance their science communication skills and to better understand how to prepare for science careers in a global workforce. OK-LSAMP scholars Jacee McCoy, Maddie Stevens, and Shawn Ray presented their research posters.

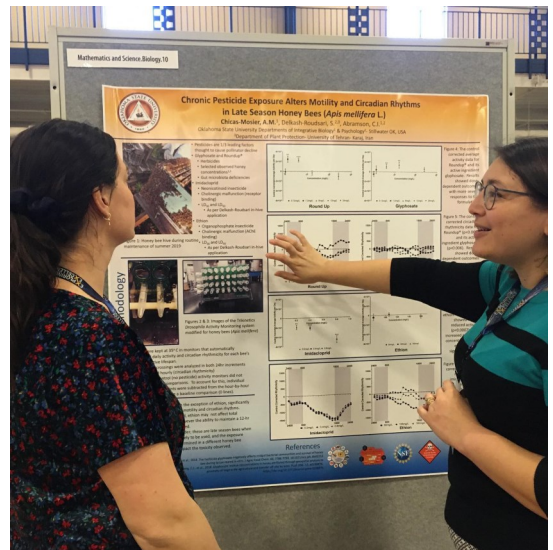


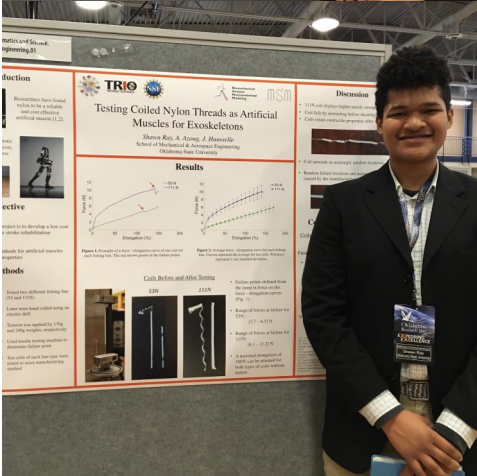
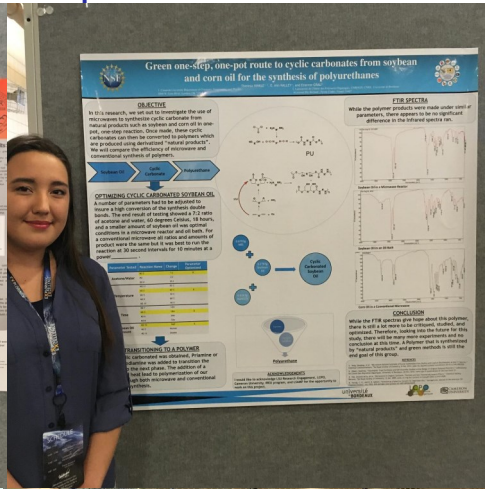
Jacee McCoy, from Oklahoma State, was awarded the second place in the Biological Sciences poster presentations division.

Oklahoma Research Day 2020

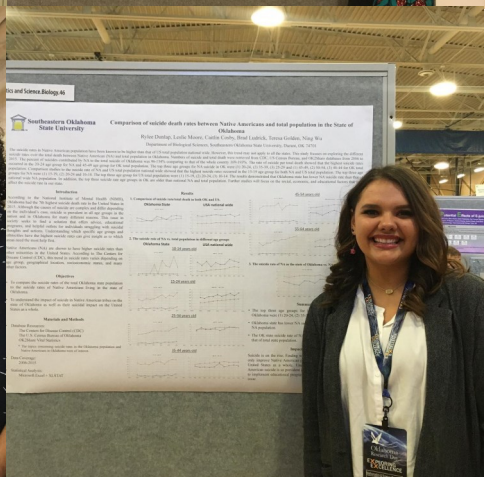
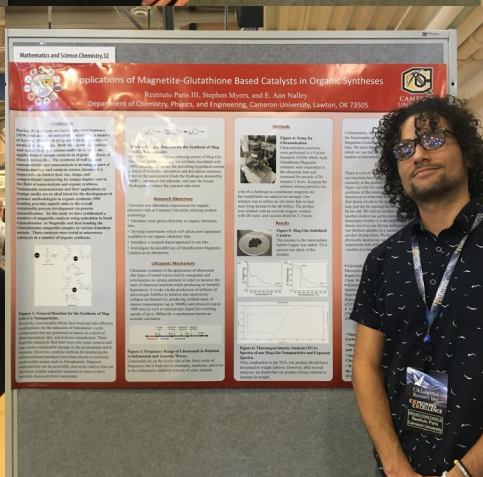
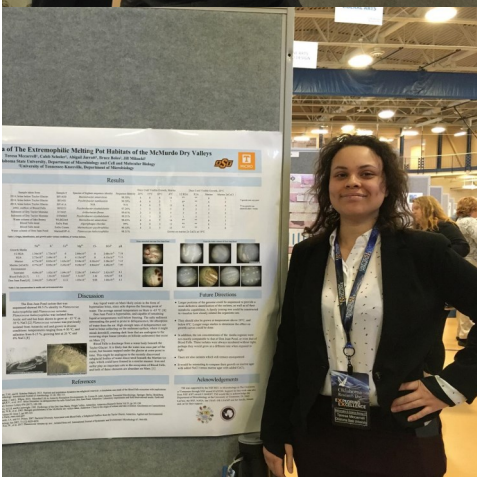
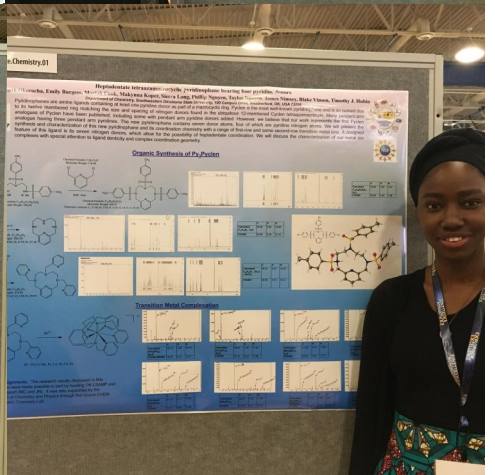
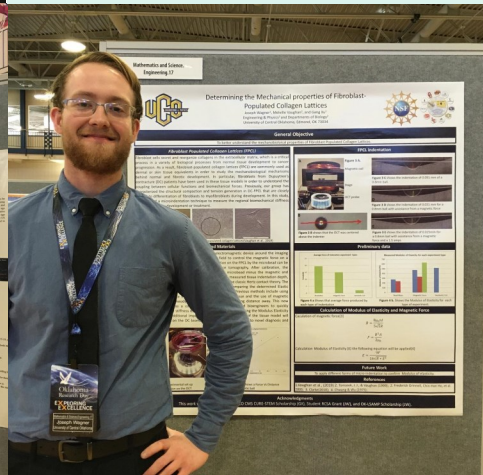
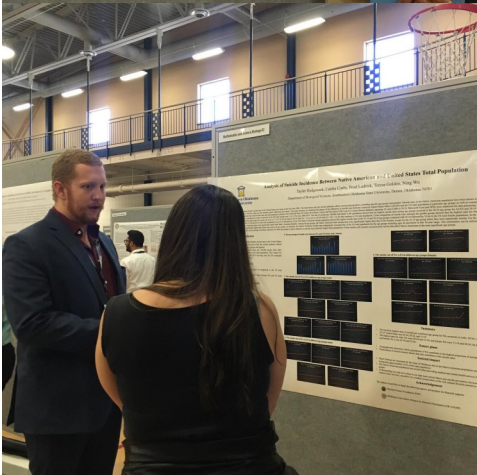
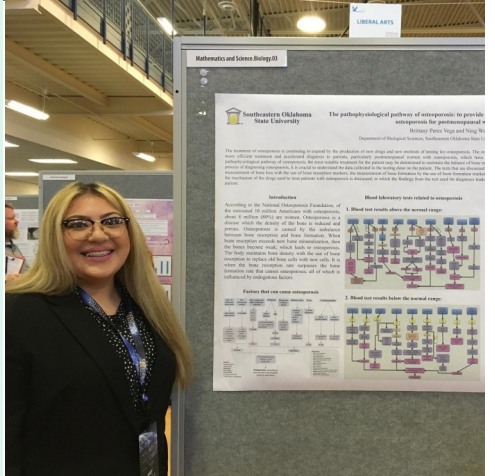


Oklahoma Research Day 2020 was hosted by Southwestern Oklahoma State University in Weatherford, OK March 06. The annual event celebrates student and faculty research, creative, and scholarly activities. 20 OK-LSAMP scholars from all over the state presented their research projects.

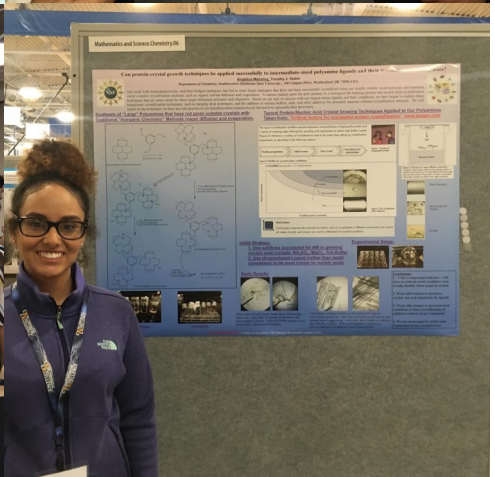
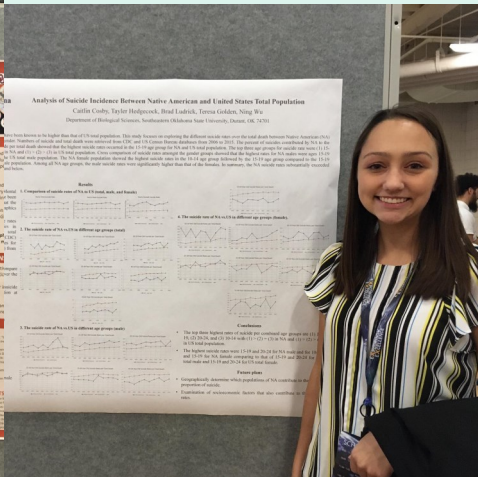
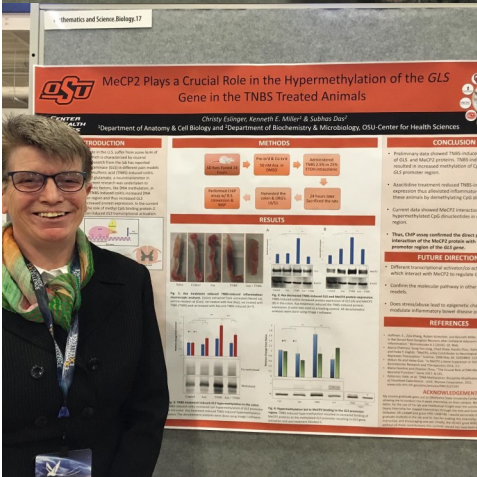
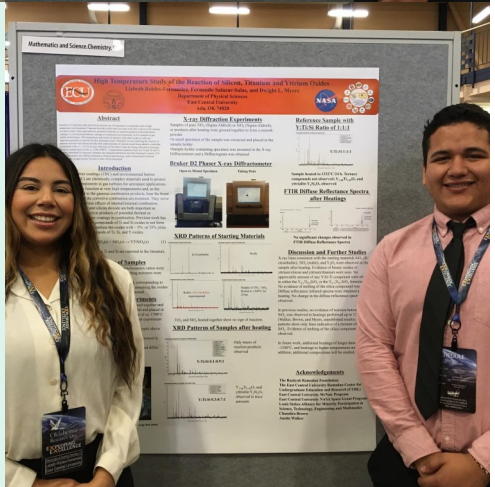
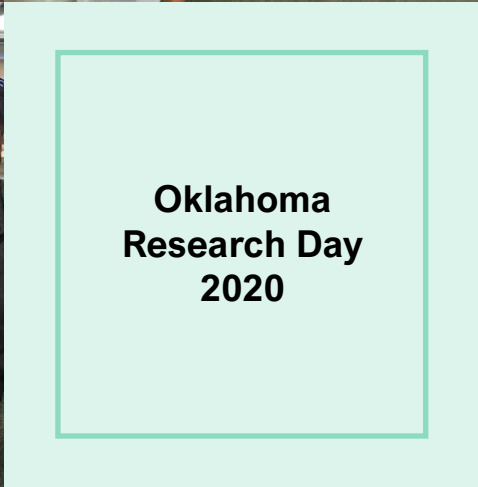
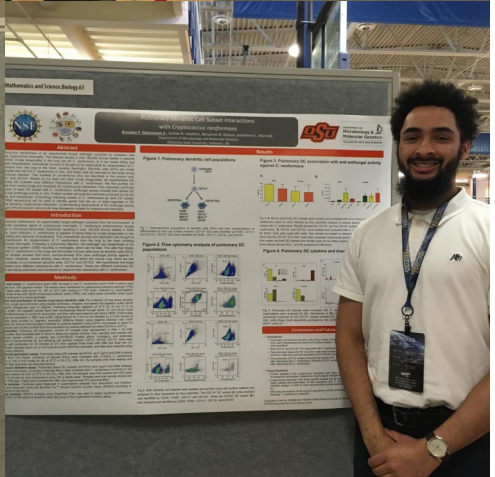
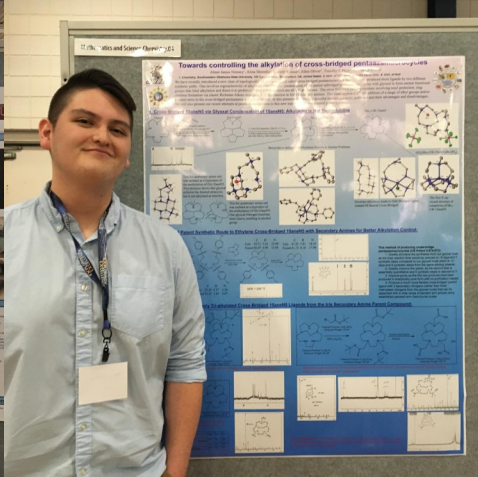
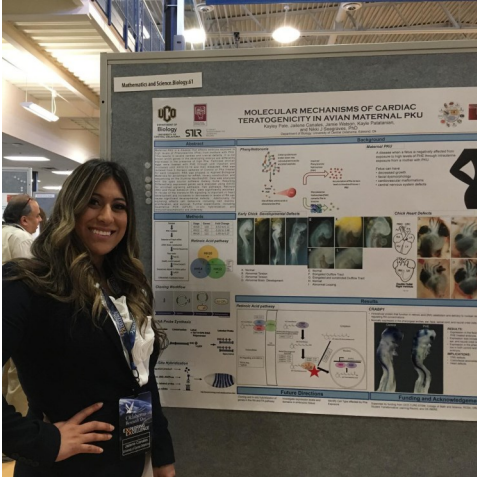




**OK-LSAMP
scholars rocked
their research!**



RESEARCH PRESENTATIONS



EVA 2020

The key aim of the Electronic Imaging & the Visual Arts conference is to provide a forum for the user, supplier and scientific research communities to meet and exchange experiences, ideas and plans in the wide area of Culture & Technology. Two OK-LSAMP scholars from the University of Tulsa, Cheyanne Wheat and Chandler Hummingbird, had the opportunity to participate during EVA 2020.

Chandler Hummingbird participated at EVA 2020 Florence July 20, 2020 in a session on Cultural Activities: Real and Virtual Galleries and Related Initiatives presenting *Integrating Interactive Technology with Museum Experiences*.

Cheyenne Wheat published a paper, *Virtual Fort Gibson: Footsteps through the frontier* (<http://dx.doi.org/10.14236/ewic/EVA2020>) via ScienceOpen by the BCS: The Chartered Institute for IT, in the series: Electronic Workshops in Computing (eWiC) Electronic Visualisation and the Arts, during EVA 2020 London July 2020.

Due to the pandemic both conferences were moved to a virtual format.

Electronic Imaging & the Visual Arts

EVA 2020 Florence

VIDEO – CONFERENCE

20 July 2020

PROGRAM



Palazzo del Pegaso

CONSIGLIO REGIONALE DELLA TOSCANA

Scholars Chandler Hummingbird and Cheyanne Wheat participate at International Conference

Virtual Fort Gibson: Footsteps through the frontier

Author(s): Cheyanne Wheat , Robert Pickering , J. C Diaz

Publication date (Print): July 2020

Conference name: [Proceedings of EVA London 2020 \(EVA 2020\)](#)

Conference theme: AI and the Arts: Artificial Imagination

Conference date: 6th July – 9th July 2020

Read this article at

ScienceOpen



SCHOLAR HIGHLIGHTS

Brandy Herrera

OU OK-LSAMP Scholar Brandy Herrera participated in summer research at Harvard. The most exciting thing about her internship was the learning experience. I'm working in R for the first time, and I'm so lucky to have an amazing research partner in Afrah Boateng, who's also new to R. Learning together has been great because we're mastering different skills at different times which makes collaboration vital to our success. We've had amazing support in our advisor Professor Emmerich Davies, as well as Meghan Blumstein, a graduate student at Harvard who's been volunteering her time to helping our group master R." R is a statistical package used for data analysis.



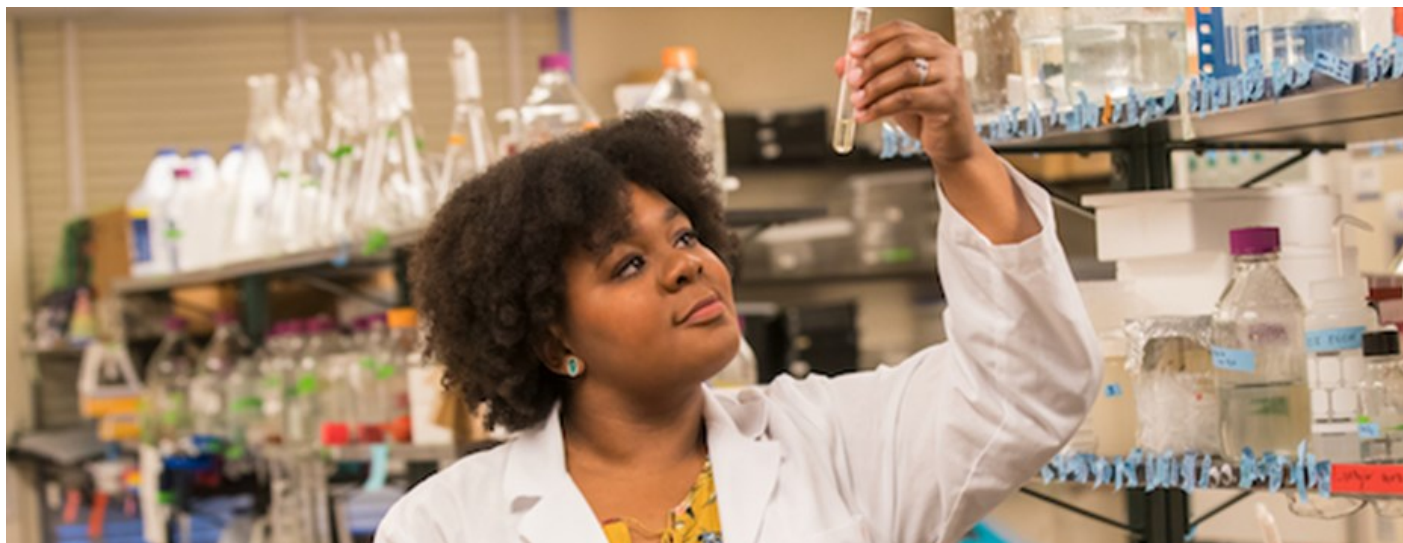
Casandra Salinas

"I was honored to represent Oklahoma State University at the 2020 Higher Education Day at the Capitol February 11, 2020. I gave remarks on how higher education has impacted my life. I shared my obstacles and achievements to state leaders, faculty, and students from all over Oklahoma."

Article: <https://www.okhighered.org/news-center/higher-ed-day-post-2020.shtml>



Jacee McCoy



Oklahoma State University OK-LSAMP scholar was featured in the article *Her Unexpected Discovery Was Leadership*.

Jacee McCoy had many possible paths to success, as a driven STEM student in Houston who wanted the best college education she could get. Jacee toured over 40 schools in the South and West, looking for the spark she could nurture into a flame.

Only Oklahoma State gave her the feeling of belonging and home as well as the opportunity to succeed in the sciences and become a leader as part of the Arts and Sciences Student Council. Her leadership skills propelled her into trusted mentoring positions and a spot as this year's Freshman Convocation speaker. She was honored as a Freshman Research Scholar studying biochemistry.

While Jacee intends to eventually attend medical school, she truly saw all of the paths and rich journey she could take at OSU — from playing in the band to exploring several different sciences and growing as a speaker and mentor. The world is within reach for Jacee at Oklahoma State.

Jacee's love for public speaking and newfound drive to be an advocate in the community were developed here. Her advocacy for STEM students, particularly minorities and women, is inspirational.

That's how we build Cowboys.

Article:

[Her Unexpected Discovery Was Leadership - A Cowboy without Question | Oklahoma State University \(okstate.edu\)](https://okstate.edu)



Dustin J. Davilla, Elisabeth M. A. Allbritton, Donald G. Jones, Michael-Joseph Gorbet, Michael B. Allen

Issue 54, 2020

[Previous Article](#)[Next Article](#)

From the journal:
Chemical Communications

An ethylene cross-bridged pentaazamacrocyclic and its Cu²⁺ complex: constrained ligand topology and excellent kinetic stability†



Anthony D. Shircliff,^a Benjamin P. Burke,^b Dustin J. Davilla,^a Gwendolyn E. Burgess,^a Faith A. Okorocho,^a Alina Shrestha,^a Elisabeth M. A. Allbritton,^a Phillip T. Nguyen,^a Rachael L. Lamar,^a Donald G. Jones,^a Michael-Joseph Gorbet,^a Michael B. Allen,^b John I. Eze,^a Andrea T. Fernandez,^a Daniel Ramirez,^a Stephen J. Archibald,^b Timothy J. Prior,^c Jeanette A. Krause,^d Allen G. Oliver^e and Timothy J. Hubin^b *†

⊕ Author affiliations

Abstract

Rigid and topologically constrained ethylene cross-bridged tetraazamacrocyclics have been increasingly utilised for thirty years as they form remarkably stable transition metal complexes for catalysis, biomedical imaging, and inorganic drug molecule applications. Extending these benefits to pentaazamacrocyclics has been achieved and a first transition metal complex prepared and structurally characterized.

OK-LSAMP scholars Dustin J. Davilla, Elisabeth M. A. Allbritton, Donald G. Jones, Michael-Joseph Gorbet, and Michael B. Allen from Southwestern Oklahoma State University are now published authors!

The manuscript “An ethylene cross-bridged pentaazamacrocyclic and its Cu²⁺ complex: constrained ligand topology and excellent kinetic stability” (DOI: 10.1039/d0cc00919a) was accepted for publication in the Chemical Communications journal.

Trey Bidy

Trey Bidy is a senior at Southwestern Oklahoma State University majoring in Engineering Technology. Summer 2020 he completed an internship with a structural engineering firm, Dunham Engineering. Some of the projects he worked on include: New water tower construction in Northlake, TX; Tyson Inc. Water Piping; Water tower rehabilitation in Norman, OK; Fractionalization plant in Stillwater, OK.



Emmanuel Akinwale



Summer 2020 Emmanuel Akinwale interned with Spirit AeroSystems. During his time there he worked on multiple projects including: standardization of production templates used to track takt time and cycle time for each of their different stations (Flow Valve, Solenoid, Turbine and Final Assembly); optimization of the Final Assembly workstation; implementation of a digital data user form for the LTV final test daily log/repair rework sheets; created a manual for user form to be used by operators.

Aaron Austin, Casandra Salinas, and Aaron Wheeler

Oklahoma State University named 14 students as 2019-20 Niblack Research Scholars, each receiving \$8,000 scholarships and the opportunity to conduct research guided by faculty sponsors and graduate student mentors.

The annual program is funded by OSU alumnus Dr. John Niblack and his wife, Heidi Niblack. As an undergraduate at OSU, Niblack said his research experience impacted the direction of his life. Niblack graduated from OSU in 1960 and, after graduate studies, conducted research and managed the development of many well-known pharmaceuticals for Pfizer Inc., the \$34 billion global company. He was eventually named Pfizer vice chairman and, following retirement, founded the Niblack Research Scholarship to offer OSU undergraduates the same research opportunity he had.



Congratulations to OK-LSAMP scholars:

Aaron Austin, Physics
Edmond, Oklahoma

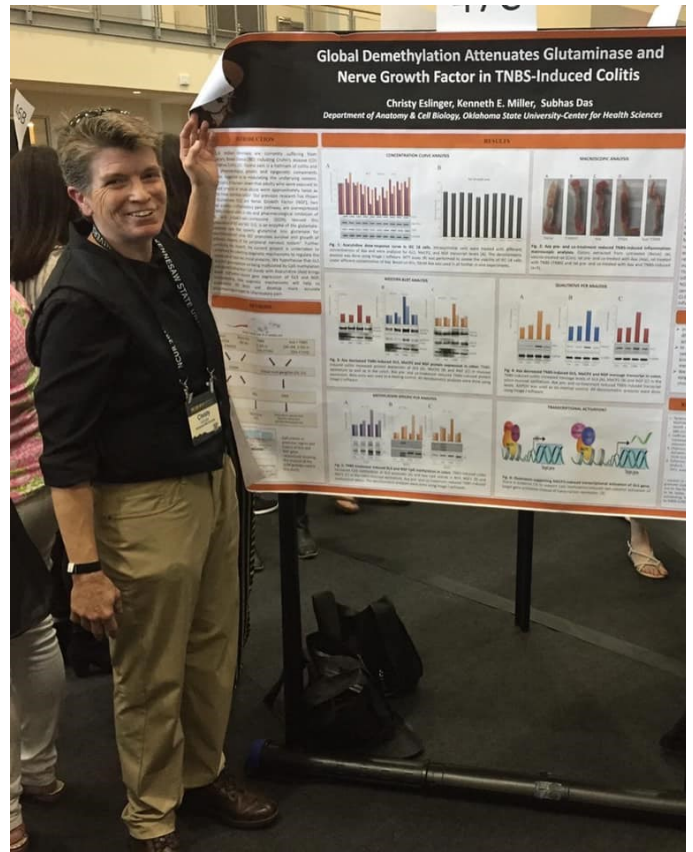
Casandra Salinas, Microbiology
Oklahoma City, Oklahoma

Aaron Wheeler, Chemical Engineering
Tulsa, Oklahoma

Christy Eslinger

Christy Eslinger, from Oklahoma State University, was highlighted in the Biomed Traces is a newsletter distributed by the Biomedical Sciences Graduate Committee (BSGC) for Biomedical Sciences Graduate Program faculty for her accomplishments!

“Christy worked as an undergraduate researcher in the lab of Subhas Das, attended the Biochemistry and Molecular Biology Graduate Student Association’s 16th Annual Research Symposium in Biological Sciences, September 19 - 20, 2019, at OSU Stillwater. Christy won the First Prize in the Undergraduate Category for her poster presentation. She also won the First Prize in the Poster Competition at the 25th Annual Research Symposium of Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP), October 4-5, OSU Stillwater. Additionally, Christy was awarded a travel award for the Louis Stokes Midwest Regional Center of Excellence (LSMRCE) conference Building a Diverse STEM Talent Pool: Classrooms to Careers in Indianapolis, IN and was awarded a travel award to join the Annual Biomedical Research Conference for Minority Students (ABRCMS) meeting on November 13 - 16 in Anaheim, CA.”



Brandon Henriquez



Brandon Henriquez participated in a summer internship at Oklahoma State University and worked under Dr. Noden.

Aaron Austin

Aaron Austin, from Oklahoma State University, had the opportunity to participate in a Research Experience for Undergraduates at UC Davis the summer of 2019. His research project consisted in conducting condensed matter physics experiments.



Above Austin is necking down a quartz tube to seal ampoules that they grew their crystals in at high temperatures of about 1100 °C. To the left he is loading a sample to do electrical measurements in their physical property measurement system where liquid helium cools the machine to almost 2 °K .



“My job was to grow antiferromagnetic crystals via the solution growth method, a well know crystal growth method. I then characterized this materials magnetic and electrical response at very low temperatures less than 10 degrees Kelvin. I ultimately wrote a paper over my project and was given the opportunity to present my research orally to the entire REU and Physics department at UC Davis. The research was extremely worthwhile to me because I had an outstanding mentor and networked with exceptional peers that I still contact from time to time. The whole experience was a blast, I stayed with the other students in a shared house where each weekend we explored Davis and areas around California including San Francisco and Mount Lassen which are very popular tourist spots in the U.S. It was also so valuable because I still contact the people I stayed with and hope to work with them in the future through collaborations of any sort.”

OK-LSAMP RECENT GRADUATES



CLASS OF 2020
Jacee L. McCoy

Jacee McCoy graduated May 2020 with an Honors Bachelor's of Science in Biochemistry with minors in Chemistry, Microbiology and Spanish. She will begin medical school 2021 and currently works at Ohio State University's Wexner Medical Center as a research assistant in a science laboratory, studying the mitochondrial dysfunction in late-stage hemorrhagic shock.

Karina Flores graduated with a B.S. in Biology from the University of Oklahoma. She is now pursuing a Ph.D. in Microbiology at the Sackler Institute for Graduate Biomedical Sciences at New York University.



CLASS OF 2020
Karina Flores

Ty Montgomery graduated with a dual-degree in Biochemistry & Molecular Biology and Animal Science. While at Oklahoma State, he participated in OK-LSAMP, McNair, undergraduate research, and Rugby. He was recognized as a Senior of Significance as well as a Ferguson College of Agriculture Senior of Distinction. He is now pursuing a Master's in Animal Science at The Pennsylvania State University. We're very proud of all of your accomplishments!



CLASS OF 2020
Ty Montgomery



CLASS OF 2020
Alejandro Torres

Alejandro Guadalupe Torres graduated from Northeastern State University with a B.S. in Cell and Molecular Biology . He plans to continue his preparation to become a neuroscientist . He is now pursuing a Ph.D. in Biomedical Sciences at Oklahoma State University-CHS in Tulsa.

“The OK-LSAMP has enabled me to continue expanding my horizons while doing novel research and introduced me to many opportunities available to present my findings. Also, I have met several other scholars with an interesting drive for re-search. I feel identified and empowered to continue pursuing my passion for exploring in science.”

Rainee DeRoin graduated from OSU with a BSAG in Environmental Science with an option in Water Resources . She is now pursuing a Masters in Biology at Arkansas State University and is working in an ecotoxicology lab.

“OK-LSAMP helped me find my passion in research and showed me that I can be a part of the academic community. They became my home away from home and I will forever be grateful for them!”



CLASS OF 2020
Rainee DeRoin



CLASS OF 2020
Alex Lopez

Alexandra Lopez Betancourt graduated with a degree in Biosystems Engineering with a focus in Food Processing & Bioprocessing and a minor in Microbiology . Throughout her time in OSU she has conducted research in four different projects in areas related to soil quality and biofuels. Additionally, she has also completed multiple internships with the Grand River Dam Authority. She will be attending graduate school overseas next year to study Renewable Energy.



CLASS OF 2020
Alexa Bejarano

Alexandra Bejarano graduated this May from the University of Tulsa with a B.S. in Computer Science and a minor in Mathematics. She is now in graduate school at the Colorado School of Mines in pursuit of a PhD in computer science.

Christy Eslinger graduated from OSU with a BS in Microbiology/ Cell & Molecular Biology .

“OK-LSAMP was a champion for my research. [...] I have made lasting connections in the scientific community that I will continue to take with me from here on out. Not to mention, unwavering friendships and support from my peers and fellow classmates. I never felt alone in this adventure and always knew that someone in the program would have my back. Finally, I gained guidance and knowledge. There was always a seminar or meeting to attend that was full of information. Truly a blessing to be a part of.”

Christy is now at OSU-Center for Health Sciences in Tulsa, OK pursuing a PhD in Biomedical Sciences.



CLASS OF 2020
Christy Eslinger



CLASS OF 2020
Luis O. Juarez

Luis O. Juarez graduated from the University of Tulsa this past May. He will be working in the Chemical Engineering field. Currently he is working as a Process Engineer Co-Op at the Jenks Mill.

BRIDGE TO DOCTORATE HIGHLIGHTS

Stephanie Prado Carbonell

The NSF Bridge to the Doctorate Fellow Stephanie Prado had the opportunity to mentor undergraduate researchers. Louis Stokes Alliances for Minority Participation (LSAMP) cohort of undergraduates at the University of Oklahoma.

"I challenged them to think of 4 tangible goals that they will be able to accomplish during the 1 month period of winter break. I was able to share different goals they could work on over winter break such as scholarships apps, grad school apps, writing a summary of research work, looking for summer research/internship opportunities, think about a summer studying abroad, GRE prep, looking for a research conference, thinking about publishing in the journal of undergraduate research work etc."

The presentation is available here: [Tinyurl.com/LSAMPsteph](https://tinyurl.com/LSAMPsteph)



Zach Ridge



Zach Ridge was a BD at OSU Center for Health Sciences, he successfully defended his thesis.

Congratulations!

Jorge Lightfoot



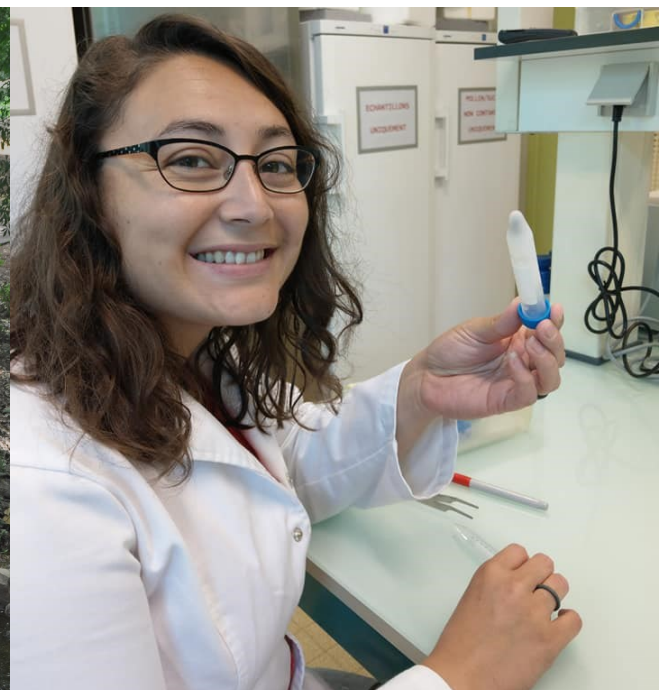
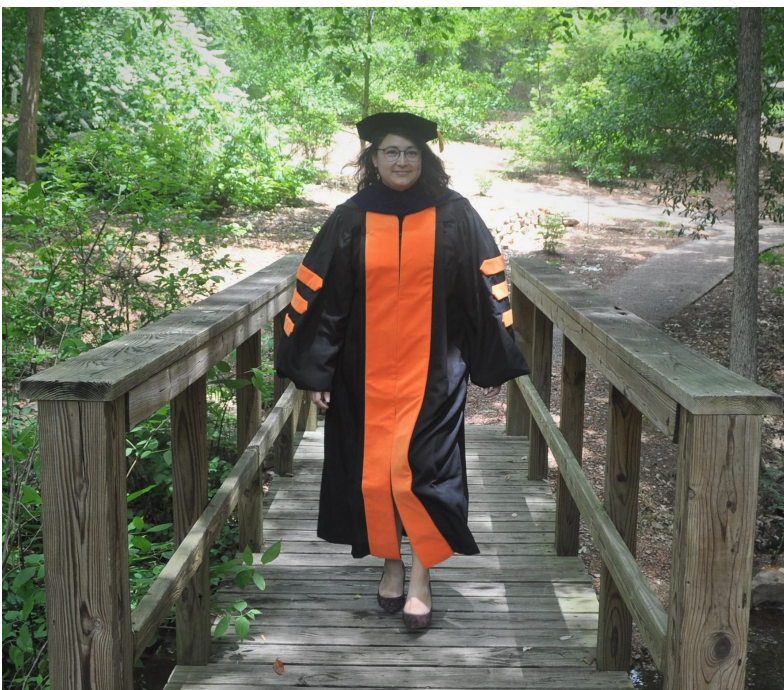
Dr. Jorge Lightfoot received his PhD from Oklahoma State University August 2019. His project focused on creating a novel RNA interference mechanism to metabolically engineer the fungal cell factory *Aspergillus nidulans*. He is now a Post-doctoral Research Fellow at the University of Oklahoma Health Sciences Center.

Congratulations!

Ana-Chicas Mosier

Dr. Chicas-Mosier received her PhD from Oklahoma State University in Integrative Biology Spring 2020. She is now a Post-Doctoral Fellow at Auburn University in the Entomology and Plant Pathology department.

Congratulations!



OK-LSAMP AND BD ALUMNI

Kayla Davis

Kayla Davis was featured on The Harvard Gazette To Serve Better stories under the Science of success. Read her story below from the article:

“We want to get the kids hooked and convince them that they can solve real problems if only they put some effort into this.”

As the crow flies, it’s 1,450 miles from Kayla Davis’ hometown of Stillwater, Okla., to Boston, where she has spent the past five years as a Ph.D. student in biological and biomedical sciences at the Harvard Graduate School of Arts and Sciences. Yet in some ways she has never felt closer to home.

Three years ago Davis co-founded the Oklahoma Science Project (OSP), an online resource with the goal of improving access to and promoting science, technology, engineering, and math (STEM) education in her home state. She felt compelled to action by reports of the fallout from steep cuts to state education funding in recent years due to fiscal shortfalls.

Davis, whose passion for science policy and for helping her fellow students began in high school, was most troubled that there were no funds specifically allocated for STEM education in 2016, and that 20 percent of school districts operate on four-day school weeks.

“It was soul-crushing to us as people who are interested in science education and pedagogy,” recalls Davis of the first time she and co-founder Forrest Rogers, also a Stillwater native, heard this statistic. “So we came up with a resource for students who are interested in science to get something out of that fifth day of school when they’re sitting at home.”

Davis and Rogers, a Ph.D. candidate in biological psychology at the University of California, Davis, created a free set of real-world science lessons that introduce learners to the Python coding language and range in topics from biology to statistics, and physics to image analysis.

The emphasis on programming is important for students in Oklahoma, a state that leads the nation in STEM jobs available — especially in computer science — for workers with some college education.

“Providing just a little bit of foundational knowledge and programming could be really transformative not only for these kids’ trajectories, but also for Oklahoma’s career landscape. I have met a lot of people who have an upper limit on their goals,” Davis said.



“We want to get the kids hooked and convince them that they can solve real problems if only they put some effort into this.”

At Harvard, Davis found a welcoming community of scientists and programmers — recruited through a graduate student listserv — willing to volunteer their services to help build OSP’s programming. The new recruits offered valuable expertise in helping to design the site for ease of use.

The team also received funding and support through the Harvard Initiative for Learning &

Teaching (HILT), which helped OSP increase content, establish a brand, and consult with experts in the educational aspects of programming.

While OSP has accomplished much, Davis said being so far away from Oklahoma brings challenges. This year, OSP hopes to change that through the alliance with HILT.

“The best way to get to students is to go through educators. We’ll start by building relationships with different organizations in Oklahoma that work with those in the classroom,” Davis said.

She believes in the potential of the program to change attitudes — and the course of STEM education in her home state.

“Because a lot of these teachers have no hands-on experience with coding, they’re reluctant to use any kind of programming in their classrooms. But after they use our resources, they are much more inclined to want to teach it.”

Dr. Cara Cowan Watts

Dr. Cara Cowan Watts Honored with AISES Ely S. Parker Award



Albuquerque, NM., Sept. 29, 2020 — The American Indian Science and Engineering Society (AISES) has named Dr. Cara Cowan Watts the 2020 Ely S. Parker Award winner. Now in its 37th year, the Ely S. Parker Award recognizes an Indigenous professional who has achieved an exceptional career while supporting education in STEM (science, technology, engineering, and mathematics) disciplines. Dr. Cowan Watts joins a distinguished community of leaders who have provided extraordinary, lifelong support not only in their many different STEM fields but also in advancing opportunities for others. Dr. Cowan Watts was selected from an impressive national pool of nominees by the AISES Board of Directors.

The Ely S. Parker Award is the highest professional honor that AISES confers. Recipients follow the example of Ely S. Parker, a 19th-century Seneca Nation Chief who broke multiple racial barriers while establishing an enduring legacy that continues to inspire today’s Indigenous leaders.

“We take great pride in selecting Dr. Cara Cowan Watts as this year’s Ely S. Parker Award winner,” said, Gary Burnette, AISES board chair. “Cara demonstrates sustained contributions and outstanding leadership in STEM that have positively impacted thousands of Indigenous youth.”

Dr. Cowan Watts is CEO and principal owner of Tulsa Pier Drilling (TPD), a privately held small business with operations in Oklahoma and Arkansas. She built the company into an industry leader, and today TPD is one of the fastest-growing, 100 percent Native American–owned companies. TPD has a skilled workforce specializing in rough terrain, hard rock, and challenging drilling situations.

“It is an honor to receive this recognition from AISES, an organization I deeply admire. AISES helped me to embrace and develop my leadership skills as well as contributed to my personal growth,” said Cara. “AISES challenged me to set the bar high for myself and sparked my passion to serve my communities when and where that help is most needed.”

Kay Porter, who nominated Dr. Cowan Watts, came to know her when she was a Fellow in the National Science Foundation Louis Stokes Alliance for Minority Participation (LSAMP) Bridge to the Doctorate (BD) program in Oklahoma. Dr. Cowan Watts was one of 12 fellows in the first cohort of the BD program. LSAMP Scholars are selected from a national pool of applicants, and to be chosen is a distinct honor. Porter said, “Cara has consistently been active in serving Native students in numerous capacities. From Cara’s early involvement in STEM programs to today’s activities, she has never tired of promoting AISES and other programs to help improve the lives of Native students. Cara is a professional others strive to be like and look up to.”

Dr. Cowan Watts has dedicated her life to leading by example in public service. She is a former Cherokee Nation Tribal Councilwoman (2003–2015) who helped start the Cherokee Nation National Science and Engineering Fair to boost excitement about STEM. She supported the annual Cherokee Nation STEM summer camp and the Native Explorers program at the University of Oklahoma. She was involved in bringing the AISES National American Indian Science and Engineering Fair to Oklahoma State University. To get students interested in STEM disciplines, the Cowan Watts family created an annual Excellence in Engineering Award for students in grades five–12.

Dr. Cowan Watts is a ninth-generation resident of Rogers County, Oklahoma, and a direct descendant of Old Settler Cherokee Chief John Rogers, who lived in the Cooweescoowee District of the Cherokee Nation. In her tenure as a tribal councilwoman, Dr. Cowan Watts made significant contributions to the Cherokee Nation in education, economic development, sustainability, tribal sovereignty, health care, water quality, and water rights. Today, she is active in three Cherokee organizations: Rogers County Cherokee Association, Victory Cherokee Organization, and Tulsa Cherokee Community Organization.

While earning her doctorate in biosystems engineering at Oklahoma State University in 2015, Dr. Cowan Watts prepared a dissertation on water quality standards for waters culturally significant to the Cherokee Nation. Additional academic degrees include a BS in mechanical engineering and a MS in telecommunications management from Oklahoma State University.

Currently president of the AISES Oklahoma Professional Chapter, Dr. Cowan Watts is a lifetime AISES Sequoyah Fellow and previously served on the Board of Directors (2001–05 and 2007–08). She is a member of the Tulsa Engineering Foundation, Society of Women Engineers, American Society of Agricultural and Biological Engineers, Tau Beta Pi — The Engineering Society, Pi Tau Sigma — International Mechanical Engineering Honor Society, and the ADSC which is the International Association of Foundation Drilling.

Throughout her career Dr. Cowan Watts has been offered appointments and invited to serve on boards, deliver presentations, and contribute to scientific papers. In 2003 and 2018, she was named one of the Journal Record Fifty Making a Difference honorees in Oklahoma.

In 2018, Dr. Cowan Watts accepted on behalf of Tulsa Pier Drilling an AISES Partner Service Award in the organization’s Special Service Award category.

She is also co-owner and co-manager of Sideways Cattle Company, an American beef operation and American Quarter Horse Association ranch. She is serving her second elected term on the USDA Farm Service Agency Committee for Rogers and Tulsa County. She is owner and contract consultant of Cherokee Star — a company specializing in facilitation and project management, communication planning, education, and presentation services.

About AISES

Founded in 1977, The American Indian Science and Engineering Society (AISES) is focused on substantially increasing the representation of North America’s Indigenous people – American Indians, Alaska Natives, Native Hawaiians, Pacific Islanders, First Nations, Métis, Inuit – in STEM (science, technology, engineering and math) studies and careers. This robust nonprofit currently supports individual student and professional members across the U.S. and Canada in critically needed STEM disciplines. Through chartered college and university chapters, tribal chapters, and affiliated K-12 schools, members benefit from diverse STEM-focused programming that supports careers and promotes student success and workforce development in multiple areas. To learn more visit aises.org.

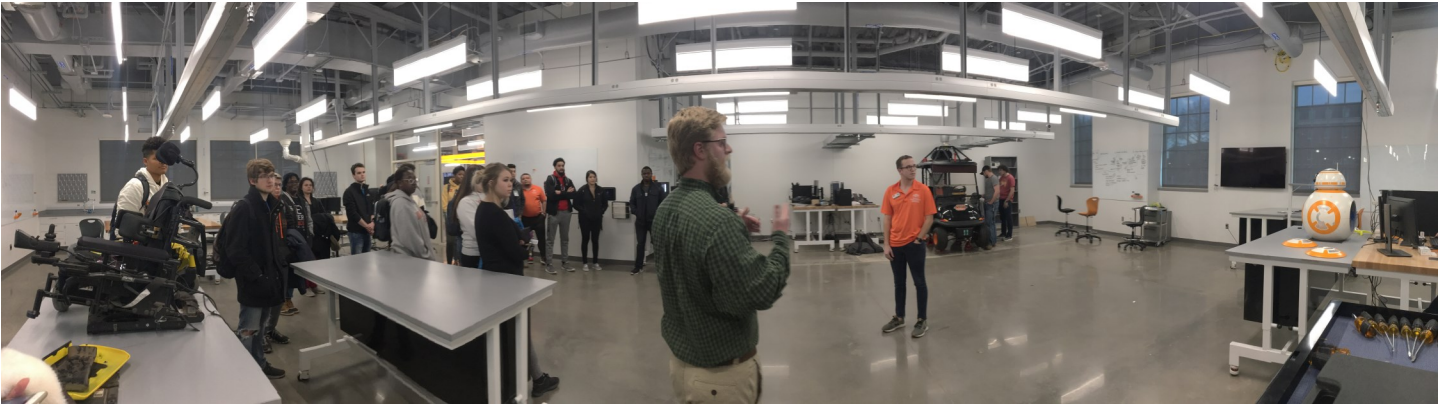
About Tulsa Pier Drilling

Tulsa Pier Drilling is a commercial pier drilling service that generally includes drilling only, or turn-key installation of slurry, and/or cased piers. Tulsa Pier Drilling provides truck- and track mounted solutions from 18-inch to 14-feet in diameter foundation drilling up to 130 feet deep depending on soil conditions. For more information, visit tulsapierdrilling.com.



PROGRAM NEWS

ENDEAVOR Lab Tour 2020



ENDEAVOR is the centerpiece of a paradigm shift underway at Oklahoma State University to expand instruction beyond the classroom and increase undergraduate laboratory and exploratory time for interdisciplinary, hands-on and industry-aligned learning. The newest building on the Stillwater campus of Oklahoma State University, ENDEAVOR will transform the landscape of research, innovation and design, and is the only one of its kind in the United States.

OK-LSAMP Scholars had the opportunity to visit January 23, 2020.



OSU wins fourth consecutive national diversity award

From article:

Oklahoma State University received the Institution Committed to Diversity award from Minority Access Inc., for the fourth consecutive year during the 20th annual National Role Model Conference in September in National Harbor, Maryland.

The award is given to high achieving organizations for their commitment to diversity.

The conference draws innovators, recruiters, researchers, faculty, administrators, students, mentors and alumni, as well as

institutions with exemplary records in producing minority researchers.

OSU alumnus Dr. Erinn Tucker received the award on behalf of the university.

Dr. Jason Kirksey, vice president for Institutional Diversity and chief diversity officer at OSU, was pleased with the award.

“It is certainly humbling and quite an honor to have OSU’s ongoing efforts to enrich and fortify our culture of inclusion recognized with another nationally prestigious award,” he said. “This past year witnessed a number of significant efforts that elevate OSU’s stature as a national leader and role model, including the dedication of the Nancy Randolph Davis sculpture, CEO Action’s unconscious bias bus tour on campus, the election of its second female of color Student Government Association president in three years, the establishment of an Inclusive Excellence Faculty Award, and the completion of a five-year diversity capital campaign that raised \$6.4 million and established approximately 50 new endowed diversity-focused scholarships. This award, as well as previous ones, highlight OSU’s unwavering commitment to promoting and advancing inclusive excellence throughout our campus.

Thursday, October 31, 2019



Minority Access President Andrea D. Mickle (left) presents Oklahoma State University alumnus Dr. Erinn Tucker with an Institution Committed to Diversity award.

Still Lighting the Way

National Science Foundation awards \$3.9 million grant to OK-LSAMP program

From article:

Growing up on a small ranch in the rural Mexican town of Atolinga, Casandra Salinas had plenty of time to daydream about her future on the 30-minute bus ride to and from school. “I didn’t really dream big,” she said. “I didn’t think I would have the opportunity to.” Her father died in 2010, and the California-born Salinas ended up in Oklahoma City with her aunt. Despite attending three different high schools and a slew of other challenges, Salinas maintained a 4.0 GPA. Still struggling with English and lacking the guidance and connections that some take for granted, she was burdened with doubt. She had long dreamed of becoming a doctor but thought the path might be beyond her reach. “I thought maybe it wasn’t for me because of my background or my financial situation,” she said. “I thought that’s just not going to happen.” An OSU admissions counselor came to visit during her senior year in high school, and everything changed. “She was talking to students about OSU, and she told me I could make it at OSU,” Salinas said. “She encouraged me to apply.” preparing underrepresented scholars to enter STEM fields and engage in research around the world.



Opening the door

Salinas was accepted and came to OSU in the fall of 2016, quickly falling in love with the campus and the people. Still, juggling her class load in a new collegiate environment and working at a restaurant, the first-generation college student felt overwhelmed and unprepared. “I felt imposter syndrome, like I shouldn’t be here, I shouldn’t be doing research,” she said. But help arrived in the form of the Oklahoma Louis Stokes Alliance for Minority Participation program (OK-LSAMP). Through her involvement in the Hispanic Student Association, Salinas met OK-LSAMP director Brenda Morales. “Brenda Morales mentored me and pushed me to apply for the OK-LSAMP program. I got accepted, and then I applied for the McNair Scholars program as well.” Through OK-LSAMP, Salinas started her research project on cystic fibrosis in the summer of 2018 in the department of microbiology and molecular genetics under Dr. Marianna Patrauchan. Now a senior, the biochemistry and molecular biology major is working in the same lab today and has presented her findings at various conferences. At the recent Oklahoma Women Impacting Science and Entrepreneurship conference in Tulsa, she earned the top award for outstanding undergraduate poster presentation.



Inspiring Scholars

Named after the late Ohio congressman and civil rights pioneer Louis Stokes, the OKLSAMP program opens students’ eyes to possibilities and opportunities available at OSU and all Oklahoma Alliance institutions. The National Science Foundation recently awarded a \$3.9 million grant to the program, ensuring that the Oklahoma alliance will be able to continue its mission of preparing underrepresented scholars to enter STEM fields and engage in research around the world. “We’re helping OK-

LSAMP Scholars understand that there are different ways that research happens, and it’s not always what you imagined or what you were told,” said Dr. Jason F. Kirksey, vice president for institutional diversity and chief diversity officer at OSU, who serves as principal investigator for OK-LSAMP. “So when our scholars get to see and hear industry professionals talk about where they started, the

students recognize that their backgrounds, including the struggles of their parents, are exactly the same. “At that point, our students become motivated and inspired that they are able to accomplish the achievements of the career professionals talking to them.” Kirksey said the program does more than open the door — it keeps the door open, instilling confidence in its scholars. “This program creates an opportunity to really fuel those passions and lets the students experience things that few programs offer,” he said.

By the numbers

The National Science Foundation implemented the LSAMP program nationally in 1991. The Oklahoma Alliance was established in 1994 to develop programs aimed at increasing the number of students from underrepresented populations earning degrees in STEM disciplines. With Oklahoma State University as the lead institution, OK-LSAMP now includes 12 universities across the state that have awarded a total of more than 13,000 bachelor’s degrees. OK-LSAMP was required to demonstrate continued growth and forward momentum to secure this round of funding from the NSF, Morales said, and the program continues to boast strong numbers. The enrollment of underrepresented students in OK-LSAMP institutions increased 370 percent since 1994. From 2015-18, 62 scholars participated in 69 research experiences in 25 countries and over 40 locations, demonstrating the program’s focus on international research. In addition, scholars participated in study-abroad seminars, panel discussions and workshops for these scientific and cultural experiences. “At OK-LSAMP, we are proud to provide opportunities that will impact the scholars, research and the global scientific community,” Morales said. “Thanks to the National Science Foundation LSAMP grant we are able to continue to inspire young, underrepresented STEM students to through academic integration, professionalization and scientific community integration.” Salinas said she never could have imagined the opportunities that OK-LSAMP has shown her. “Now I can see myself pursuing a career as a biomedical scientist. Looking back, that wasn’t even on my radar. Back when I was in middle school and high school, it seemed impossible. But I’ve had amazing mentors and professors, and I’m very happy and very proud that Oklahoma State University has these programs for students who really need them.” The program has also opened opportunities for her little brothers, including a 17-year-old who is considering going to college himself. Salinas said she now has the tools to help them navigate the college journey. “OK-LSAMP didn’t just open doors for me — it opened doors for them, too. And it’s going to allow me to do something impactful for my family, my community and myself,” she said. “I would love to be a liaison to my hometown and help bring resources there, but I also love Oklahoma. This is home, too.”

Bridge to doctorate

Fellow OK-LSAMP scholar Rainee DeRoin has a different success story that also started with the program. While researching programs at OSU, the first-generation college student learned about OK-LSAMP through the Retention Initiative for Student Excellence (RISE) program. DeRoin always aspired to do water quality research and the OKLSAMP program gave her that opportunity. And, because OK-LSAMP researchers get hands-on research opportunities as undergrads, she didn’t have to wait until grad school to delve into her passion. Former OK-LSAMP scholar Adrian Saenz was getting his master’s degree and doing a research project on Eastern red cedar management. DeRoin saw her opportunity. “I just knew we were getting water samples and I was like, if it’s got something to do with water, I’m doing it,” she said. DeRoin, a Tulsa native, had never left Oklahoma until her freshman year at OSU. Three years later, she has been to Washington, D.C., Georgia, New Mexico, Alabama, and, most recently, Germany for the World Congress for Undergraduate Research. She was also selected to go to Hawaii to showcase her work and to network with researchers from around the globe. In October, the environmental science senior attended the National



Diversity in STEM Conference (SACNAS) in Honolulu to present the latest findings of the water research initiative. Now, she's looking forward to a bright future — one that she said would not have been possible without the OK-LSAMP program. "I never dreamed about going to grad school, but OK-LSAMP has opened that door," she said. "They have this funding program called Bridge to Doctorate and hopefully I will get it, and I will be on track to get my Ph.D. Because I've already done so much research through OK-LSAMP, I will have a chance to go straight to a Ph.D. "It's crazy from where I came from. At Nathan Hale [High School], I think only four of the people I knew in my class went to college. I have OK-LSAMP to thank for that."



Monday, December 2, 2019

Dr. Cecil receives 2020 PAESMEM

Dr. Joe Cecil is one of the recipients of **2020 Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM)**.



"I feel humbled and honored to receive this award on behalf of my students, their parents, and my mentors. It is a testament to my K–12 and university collaborators, who have inspired and worked with me in helping minority, autistic, and physically disabled students soar high and realize their dreams of becoming engineers and scientists. The support from NSF, NASA, and others underscores our nation's commitment to foster an inclusive culture, encouraging all students to pursue careers in STEM."

J. Cecil is a Professor of Computer Science at Oklahoma State University (OSU) in Stillwater since 2016; he was in industrial engineering from 2009 to 2016.

Cecil's mentoring, which began at New Mexico State University in 2001, focuses on both K–12 and university students. To date, nearly 800 students grades 1–12 have participated in the Soaring Eagle program. Through this program, he pioneered a new way to provide exciting introductions to STEM by designing Virtual Reality (VR) based Learning Environments (VLEs). This program encourages minority students, women, autistic students, those with physical disabilities, and

others towards STEM careers. Cecil is exploring the design of VLEs to help autistic students learn STEM.

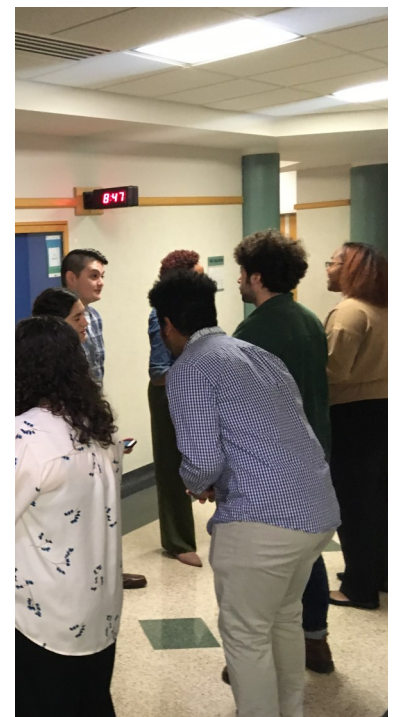
VLEs (with haptic and 3D immersive interfaces) have also been created for university students to learn engineering concepts (ranging from robotics to genetic algorithms). Through the National Science Foundation's Louis Stokes Alliance for Minority Participation (LSAMP) and Research Experiences for Undergraduates (REU) programs, he has encouraged underrepresented students to pursue graduate degrees in STEM. His university mentees have explored the design of VR simulators for surgery, NASA's Moon Mission, and other contexts, which has resulted in more than 80 peer reviewed conference and journal papers.

Cecil has a Bachelor of Engineering in mechanical engineering from College of Engineering, Guindy - Anna University (India), an M.S. in industrial engineering from State University of New York, and a Ph.D. in industrial engineering from Texas A&M University. He is the recipient of OSU's Outstanding Faculty Award, the Institute of Industrial Engineers' Technical Innovation Award, and the OK-LSAMP Outstanding Mentor award.

OK-LSAMP Preparing for Higher Degrees (PHD) Camp



OK-LSAMP scholars from all across the state came together for the Preparing for Higher Degrees (PHD) camp. Scholars were able to learn about many aspects of preparing for graduate school and navigating it successfully! PHD Camp took place at Southwestern Oklahoma State University March 7th and 8th.





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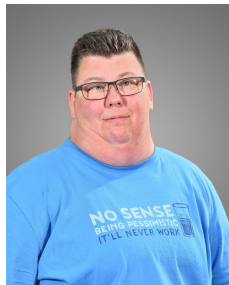
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LOUIS STOKES & LSAMP



In 1991, the National Science Foundation created six multi-institutional Alliance for Minority Participation (AMP) programs. In 1998, **Congressman Louis Stokes'** name was added to the program.

Congressman Stokes passed away 2015. The LSAMP community and the nation has lost a great man. You can read all about Congressman Stokes' career at:

<http://history.house.gov/People/Detail?id=22311>

Dr. A. James Hicks was named LSAMP program director in 1997. He received a Ph.D. in biology from the University of Illinois at Urbana and additional training at Harvard University, the National Institutes of Health, and the Missouri Botanical Gardens. When Dr. Hicks took over LSAMP, there were 25 Alliances in the nation. Today, there are more than 40 active LSAMP alliances with over 800 colleges and universities involved in increasing the quality and quantity of students from underrepresented populations who receive degrees in science, technology, engineering, and mathematics.



A Brief History of OK-LSAMP

In 1992, the Oklahoma State Regents organized the Oklahoma Alliance for Minority Participation in Science, Engineering, and Mathematics (OKAMP SEM). Dr. Earl Mitchell, Oklahoma State University (OSU) Professor, was chosen to serve as Chair of the Alliance. In 1993, Dr. Mitchell, with the help of Dr. Ann Ackerman from South Oklahoma City Junior College, wrote and submitted an AMP proposal to the National Science Foundation (NSF). Included in the proposal was additional matching support for the program at the regional universities provided by the Oklahoma State Regents for Higher Education. In 1994, OSU, as the lead institution, along with seven partner institutions was awarded the grant. The OKAMP program was established to address the critical undersupply of minority students pursuing BS degrees in Science, Mathematics, Engineering, and Technology (SMET).

Today, 12 Oklahoma institutions of higher education make up the Oklahoma consortium. Through the years, many changes have been made including the addition of Congressman Louis Stokes' name to the AMP programs nation-wide, and the change of SMET to Science, Technology, Engineering, and Mathematics (STEM). A graduate school initiative - the Bridge to the Doctorate (BD) program was implemented with Oklahoma providing graduate support for 9 cohorts of BD Fellows since the BD initiative began.

Throughout the 2019-2020 academic year, the Oklahoma Alliance increased the number of scholars to 280 from 267 in the 18-19 academic year. Of those 280 Scholars, 84 completed Bachelor of Science degrees and 30 of the 84 graduates were admitted to graduate programs, a total of 35% of the scholars. During the 2019-2020 academic year 149 (53%) of the Alliance scholars participated in research activities, and 26 of the scholars participated in international research experiences at 23 locations. Due to COVID-19, the spring semester affected our scholars research, international experiences, conference presentations and internships. Despite the cancelation of many activities, OK-LSAMP worked with scholars to ensure they were able to acquire experiences that would allow them to be prepared and competitive for graduate school.

PHASE VI OK-LSAMP



OBJECTIVES



2019-20
RESULTS



GOALS

Recruit, Retain, and Graduate 25% More URM's in STEM

93

Students Joined
the OK-LSAMP
Program



Annual Goal: 79

93%

Retention



Annual Goal: >93%

84

Students
Graduates



Annual Goal: 88

Increase Students Transferring From 2-year to 4-Year Institutions

19

New Transfers



2020-21 Goal: >19

83%

Transfer
Retention



2020-21 Goal: >83%

40%

Transfer
Graduates



2020-21 Goal: >40%

Increase the Number of Scholars Gaining International Experiences by 30%

26

Students have had international experiences

23

Countries where students did academic work

10

International experiences canceled due to COVID-19

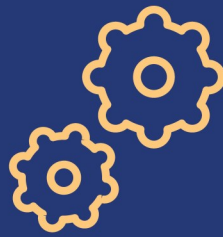
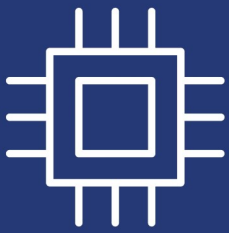
Five-Year Goal: 81 International Experiences

Increase Graduate School Participants by 25%



30 Scholars Were Accepted to Graduate School

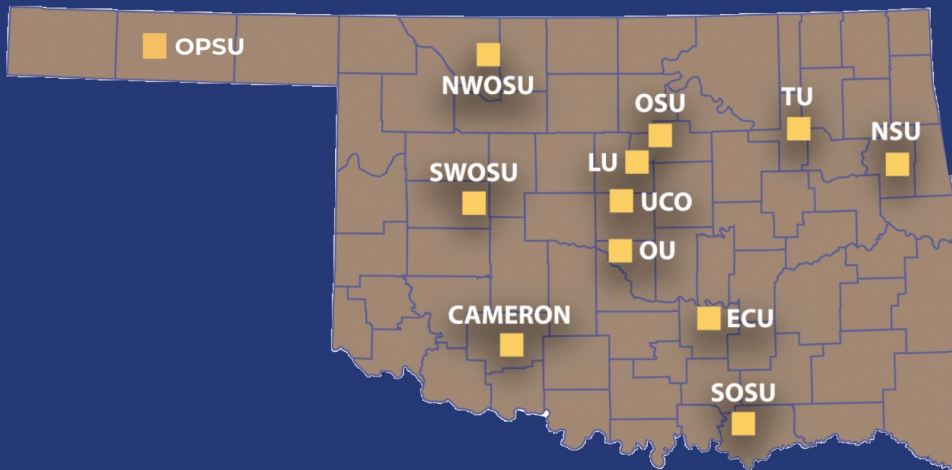
Five-Year Goal: 150 Scholars Enter Graduate School



What is OK-LSAMP?

Funded by the National Science Foundation (NSF), the program is a partnership of Oklahoma colleges and universities.

Together, these schools develop programs aimed at increasing the number of minority students who receive STEM degrees.



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