**Program Schedule**

**5th Annual Promoting Undergraduate Research Conference**

**PROMOTING UNDERGRADUATE RESEARCH MODELS AT EVERY LEVEL: INQUIRY, COMMUNITY ENGAGEMENT, ASSESSMENT, AND RETENTION**

September 26, 2014 | Presbyterian Health Conference Center

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**9:00-10:00**

**LOOKING OUT – Engaging Communities and Corporations**

**Symposium Concurrent Session 1 | Communities**

Opportunities in Undergraduate Research for Maximum Student Success – *Dr. Diana Spencer, TCC*

The biotechnology program at TCC has developed a series of experiences that scaffold authentic inquiry-driven investigations that provide for maximum retention and success of the participant students. Using monographs from the NRC, NAS, CUR and AAAS as guides, the research opportunities have been integral to a rigorous program that connect the student to the techniques and experimental design necessary for solving how to effectively feed, fuel, heal and feed the world. Collaborations with multiple institutions provide access to student opportunities coupled with fertile ground for faculty development and creativity. Development of Curricular and Summer Undergraduate Research Experiences (CURE and SURE) and a regional consortium of nine higher education academic institutions will be described. Several specific examples of how the multifaceted collaborations continue to build the bioscience capacity in Oklahoma will be shared.

**College/University Librarians as Facilitators – Katherine Sleyko, ECU Library**

Research and libraries often conjure up images of scavenger hunts or even a regurgitated literature review. But academic libraries can be key tools in helping students do original research. Librarian and faculty collaboration can bring about amazing results and energize students. The library doesn't just have to teach students the same old database hunting skills—we can introduce students to archival & primary source research, applying existing literature to obscure objects, and more. I will bring up two examples of such projects at ECU and describe the potential for more.

**Moderator – Dr. Amanda Evert**
Kairos Concurrent Session 2 | Corporations
College/University/Business Partnerships-SWOSU & OSRHE Economic Development – Lisa Thiessen, SWOSU; Stan Greil, RSC & OSRHE Board
Stan Greil is on the OSHRE Board of Economic Development and works with initiatives across the state to include undergraduate students as interns, and sometimes research interns, in corporate settings. Lisa Theissen is Director of the SWOSU Center for Economic and Business Development. She will give a case study of successful undergraduate research in a corporate setting, with benefits to the corporation, the student, and the university.

OSU College of Engineering, Helmerich Research Center, OCAST & Manufacturers – Dr. Ranji Vaidyanathan, OSU
Engineering education in the age beyond engineering disciplinary boundaries are needed by undergraduate students to assist small- and medium-sized manufacturers in Oklahoma so that they can respond to changing market conditions and develop with new and/or improved products, processes and services. Financial risk and technical skill constraints reduces the manufacturer’s ability to respond when market opportunities are apparent. Oklahoma State University’s Helmerich Research Center created in 2007, works very closely to assist small and medium manufacturers, along with manufacturing extension agents across the state. We have conducted projects for several manufacturers by leveraging funding from OCAST and the manufacturers. A few successful projects and how they have been used to enrich the undergraduate research experience will be shared in this presentation.

Moderator - Dr. Linda Mason, OSRHE

10:00-10:15 Lobby Break |

10:15-11:45 LOOKING IN – Measuring Outcomes

Symposium Concurrent Session 3 | OSU Freshman Assessment - Tim O’Neil, Director of Freshman Research Scholar’s Program, OSU
Oklahoma State University has implemented a model to provide assessment of learning outcomes for students engaged in undergraduate research. Drawing from a 15 year longitudinal assessment of OSU’s Freshman Research Scholars program, the discussion will be on both qualitative and quantitative metrics to measure learning outcomes.

Digital Humanities and Undergraduate Research for Non-Humanities Majors: Assessing the Potential – Dr. Katherine Pandora, OU
The University of Oklahoma has developed and used assessments on digital humanities-based undergraduate learning in humanistic inquiry and research. The emergence of tools, methods, practices, values, and projects within Digital Humanities provide intriguing opportunities to create undergraduate research experiences that embody the process of humanistic inquiry through pathways that are potentially less intimidating and more flexible than traditional research formats. Digitally-based projects may be particularly well-suited for exploration even by undergraduates who are non-humanities majors. Assessing the viability of such digital humanities-based undergraduate learning environments is the first step in broadening our approach to undergraduate humanities research.

Moderator – Dr. Marc Klippenstine, ECU
The University of Central Oklahoma recently implemented an innovative model to provide support and meaningful assessment of learning outcomes for students engaged in undergraduate research, creative, and scholarly activities. We will focus on practical and tested tools that faculty and administrators can use to assess undergraduate research.

Moderator – Daphne LaDue, OU

11:45-1:00  Lobby Lunch (Provided) | Dr. Elizabeth Ambos, Executive Officer, Council on Undergraduate Research (CUR)

1:00-2:00  Symposium  Mentoring Workshop 1 | Getting Started
Workshop participants will discuss strategies for establishing a good relationship, designing a research project, setting expectations and maintaining effective communication.

Moderator: Tim O’Neil (OSU)

2:00-3:00  Symposium  Student Panel | Undergraduates from across the state will share their experiences with research.

Moderator: Linda Mason (OSRHE)

3:00-3:15  Lobby Break |

3:15-4:00  Symposium  Mentoring Workshop 2 | Handling Challenges
Workshop participants will discuss the elements of effective mentorship, handling challenges, dealing with ethics, assessing understanding, and fostering independence.

Moderator: Tim O’Neil (OSU)

4:00-4:15  Symposium  Undergraduate Research Program Spotlight Award | Chancellor Glen D. Johnson (OSRHE)
Received by Dr. Jason Johnson, Chair of URSAC  University Research and Scholarly Activity Committee, SWOSU

4:15-4:30  Symposium  Closing and Evaluation | Dr. Linda Mason (OSRHE)
The Participants in the Promoting Undergraduate Research Conferences wish to thank the Oklahoma State Regents for Higher Education and Chancellor Johnson especially, for his unfailing support of research in Oklahoma’s colleges and universities.

Dr. Glen D. Johnson Jr.
Chancellor, Chief Executive Officer
Oklahoma State Regents
for Higher Education

Glen D. Johnson leads a state system comprised of 25 state colleges and universities, 10 constituent agencies, one higher education center and independent colleges and universities coordinated with the state system. He reports to a constitutional board whose nine members are appointed by the governor and confirmed by the senate. Johnson provides leadership on matters relating to standards for Oklahoma higher education, courses and programs of study, budget allocations for institutions, fees and tuition, and strategic planning. He is responsible for an annual higher education budget in excess of $1.9 billion as well as the state endowment fund, with a market value over $200 million.

Johnson became the 8th chancellor of the Oklahoma State System of Higher Education in January 2007 after a national search. Before assuming the role of chancellor, Johnson served as the 16th president of Southeastern Oklahoma State University in Durant for 10 years.

Johnson served in the Oklahoma House of Representatives from 1982 to 1996 and was speaker of the house from 1990 to 1996. At the time of his election as speaker, he was the youngest sitting speaker in the United States. Johnson has been recognized both statewide and nationally as a strong, untiring advocate for funding for education, both secondary and higher education, in Oklahoma. He is an honors graduate of the University of Oklahoma, with an undergraduate degree in political science and a juris doctor degree from the OU College of Law. He was a member of Phi Beta Kappa at OU and received the Letzeiser Award as one of OU’s outstanding seniors.

He is the son of former US Congressman Glen D. Johnson, Sr. and Imogene Johnson. He was born in Oklahoma City and attended grade school in Washington, D.C. He graduated from Muskogee High School in 1972. Johnson and his wife Melinda, a teacher at Edmond Memorial High School, live in Oklahoma City.
Luncheon Guest Speaker

Elizabeth L. Ambos, Ph.D.
Executive Officer for the Council on Undergraduate Research (CUR)

CUR (http://www.cur.org) supports and facilitates high-quality undergraduate student-faculty collaborative research and scholarship. Over 700 institutions and 10,000 individuals belong to CUR, an international non-profit organization. CUR believes that the best way to capture student interest and create enthusiasm for a discipline is through research in close collaboration with faculty mentors.

Prior to becoming CUR’s Executive Officer, Beth Ambos served as Assistant Vice Chancellor for Research Initiatives and Partnerships, from 2006-2012. In this capacity, she supported the 23-campus California State University (CSU) system research and sponsored programs efforts, fostering external and internal support for CSU mission-related initiatives and partnerships, including support from federal and state government and private foundations. Before her appointment at the CSU system office, Beth Ambos held several administrative appointments at California State University, Long Beach, including Associate Vice President for Research and External Support, Graduate Dean and Associate Dean in the College of Natural Sciences in Mathematics. She held a professorship in the Department of Geological Sciences at CSULB, and is the main author or co-author on more than 30 peer-reviewed journal or book chapter publications, and more than 90 presentations at professional conferences. She has helped obtain and/or manage more than $60M in grant and contract funds over the past two decades.

Beth Ambos received her A.B. in Geology from Smith College (magna cum laude), and her M.S. and Ph.D. degrees from the University of Hawaii at Manoa in marine geology and geophysics. After completing her Ph.D. degree in 1984, she was a National Research Council Post-Doctoral Fellow at the United States Geological Survey in Menlo Park, California, and then held a post-doctoral appointment at the University of Southern California in Los Angeles. She also served as Associate Program Director at the National Science Foundation from 1992-1993, in the Division of Ocean Sciences; a Director-at-Large for six years for Sigma Xi (1995-2001), the Science Research Honor Society; and Chair of the Steering Committee for the National Science Foundation funded Digital Library for Earth System Science (DLESE) from 2001-2003; and was a founding member of the Board of Directors for the Southern California Conferences for Undergraduate Research, from 2006-2012.
Dr. Linda Mason
Coordinator of Grants and External Funding Assistance
Oklahoma State Regents for Higher Education

Linda Mason is Coordinator of Grantwriting for the Oklahoma State Regents for Higher Education, and provides grantsmanship empowerment to all Oklahoma higher education institutions, focusing on the undergraduate institutions. She has written, assisted in writing and directed projects for hundreds of grants for hundreds of millions of dollars. She teaches a UCO graduate course, Grant Proposal Writing. She has an EdD in Curriculum and Instruction, earned in 1974 from Oklahoma State University. She has reviewed grants for the National Science Foundation, the Corporation for National and Community Service, the US Department of Labor, the US Department of Health and Human Services, the US Department of Education, the Oklahoma State Regents, the Oklahoma Department of Commerce, and the Oklahoma Department of Transportation. She was awarded the NCURA International Research Fellowship in 2013 for study at Brunel University, London. Linda is a native Oklahoman from Coweta and a first generation college graduate. She and her husband have 2 children and 3 grandchildren.

Dr. Blake Sonobe
Vice Chancellor for Academic Affairs
Oklahoma State Regents for Higher Education

Dr. Sonobe assumed his position with the Regents in January 2013. Sonobe has served as the Senior Vice President and Provost for Academic and Student Affairs at Southwestern Oklahoma State University since 2005. He began his tenure at SWOSU in 1990, teaching in the Department of Chemistry. He served as Chair of the Chemistry Department from 1997-99, and Interim Chair/Chair of the Department of Chemistry and Physics from 1999-2005.

Sonobe has been active in the Weatherford community. He is a member of Weatherford Rotary Club, serving as president in 2000-01. He has also been a member of the Gen. Thomas P. Stafford Air and Space Museum board of directors since 2006 and served as president in 2011. Sonobe was a member of the Vision 2020 strategic planning committee for Weatherford and has been active in the Weatherford Area Chamber of Commerce.

Sonobe holds a bachelor's in chemistry from the U.S. Air Force Academy and a master's in nuclear chemistry from Texas A & M University. He received his doctorate in organic chemistry from the University of California, Davis.
Tim O’Neil  
Undergraduate Research Coordinator  
Oklahoma State University

Tim O’Neil is the Undergraduate Research Coordinator in the Henry Bellmon Office of Scholar Development and Undergraduate Research at Oklahoma State University, where he is also a doctoral candidate in English. He strives to ensure that OSU students benefit fully from attending a research university by providing them with mentored research opportunities and programs that specifically introduce students to research and its context through orientations, interactive websites, workshops, undergraduate research journals and campus events. Tim graduated from OSU with Honors degrees in English, History and Political Science and is Oklahoma’s only recipient of the prestigious Jacob K. Javits Fellowship. He is currently preparing a critical edition of Cotton Mather’s letters to The Royal Society, collectively known as the Curiosa Americana. O’Neil is also Editor in Chief of the Oklahoma Journal of Undergraduate Research.

Diana Spencer  
Biotechnology Coordinator  
Tulsa Community College

Diana Spencer obtained her Doctorate of Philosophy in Biosciences from Oklahoma State University in 2004. Diana is the Biotechnology Coordinator at Tulsa Community College. Diana has served as principal investigator for the NSF Advanced Technology Education grant: Stimulating Enthusiasm, Exploration and Discovery Through Biotechnology Education (SEEDBEd), and the National Institutes of Health grant: Medicines, Explorations and Discoveries in Biotechnology Education (MEDBEd), and an Oklahoma State Regents of Higher Education economic development grant. Additionally, Dr. Spencer serves as the Oklahoma INBRE Community College Coordinator and as co-PI on an NSF SSTEM grant. These grants have totaled more than $1M to the region. Diana serves as a faculty host to the NSF DUE ATE program Genomic Approaches in Biotechnology through DNALC and is TCC Project Director for the NSF grant Community College Undergraduate Research Initiative (CCURI) through James Hewlett at Finger Lakes Community College. Diana was awarded the Oklahoma Science Teachers Association College Teacher of the Year in 2011 and the Tulsa Community College Faculty Award for Teaching Excellence in 2012. Recently, Diana was selected as a National CUR Councilor for a three year term.
Katherine Sleyko  
Public Services Librarian  
East Central University  
Katherine received her MLIS in 2012 from Dominican University. She joined ECU in February 2013 and is active in library associations, including ALA, OLA and OK-ACRL. Librarians at ECU are assigned departments to serve as liaisons, and through working closely with these liaisons she’s had the opportunity to help implement and even design research assignments with undergraduate students.

Dr. Amanda Evert  
Vice President  
Redlands Community College  
Dr. Amanda Evert joined the Redlands Community College team in 2005. At Redlands, she has served as a communications specialist, instructor, Title III grant manager, academic division director and most recently as the Vice President for Communication, Undergraduate Research and Director of the Native American Serving Non-tribal Institution grant funded All Nations Business Institute. In the last nine years, Dr. is an advocate for technology-enhanced learning, undergraduate research, and resource development initiatives designed to improve the educational opportunities of students. Dr. Evert has authored and assisted in implementing state, private, and federal grant projects. Recently, she was a primary author on a $500,000 NASA grant to support undergraduate research at the community college level. Dr. Evert and her husband Jeremy are natives of western Kansas. They are both products of the community college system and they are very proud of their Associate degrees and Phi Theta Kappa memberships. They genuinely believe in the power of community colleges to change lives and improve communities.

Lisa Thiessen  
Center for Economic and Business Development Student Intern Program  
Southwestern Oklahoma State University  
Lisa Thiessen is a Research Analyst for the Southwestern Oklahoma State University Center for Economic and Business Development in Weatherford, offering business counseling, economic development assistance, and training to small businesses and prospective small businesses in southwest Oklahoma. The organization was selected as the 2009 Small Business Administration National Small Business Development Center Service Excellence and Innovation Center of the Year and Lisa was awarded the 2011 Oklahoma SBA Veteran Small Business Champion of the Year. Lisa holds a MBA from SWOSU and is a Certified Economic Development Finance Professional. Lisa is a 2008 graduate of Leadership Weatherford, a 2010 graduate of the Oklahoma Community Institute’s Citizens Academy, and a 2013 graduate of Leadership Chickasha.
Stan Greil  
**Vice President of Workforce Development**  
**Rose State College**

Stan Greil serves as Rose State College's Vice President of Workforce Development. Greil has been selected as a 2014 Oklahoma Veteran Small Business Co-Champion of the Year by the Oklahoma District Office of the U.S. Small Business Administration. Greil, U.S. Air Force veteran and honorary AWACS Commander, played a pivotal role in the reinstatement of the Rose State College Small Business Development Center (SBDC) and development of its Hardin-Miller Advisory Committee. Since its reinstatement in 2012, the Center has provided assistance to small businesses through programs and workshops such as the Rose State College SBDC Veterans' Conference, a free event for veterans who are looking to start or grow a business. Greil maintains working relationships with Tinker Air Force Base and serves on the Oklahoma State Regents for Higher Education Economic Development Council.

Dr Ranji Vaidyanathan  
**Varnadow Professor of Materials Science and Engineering**  
**Oklahoma State University-Tulsa**

Dr. Ranji Vaidyanathan is presently the Varnadow Professor of Materials Science and Engineering at the Helmerich Research Center at OSU Tulsa. At Oklahoma State University, Ranji works collaboratively with faculty members from various disciplines and colleges to develop products and solutions for Oklahoma small manufacturers. As the Varnadow Professor, Dr. Vaidyanathan works with the Helmerich Research Center faculty to develop a major research and technology transfer thrust in polymers and composite materials. Ranji received his Ph. D in Materials Science and Engineering from North Carolina State University, Masters in Mechanical Engineering from North Carolina A&T State University and B. Tech in Metallurgical Engineering from Banaras Hindu University. He also has attained the professional engineering degree in Ceramic Engineering.

Katherine Pandora  
**Associate Professor**  
**University of Oklahoma**

Katherine Pandora is an Associate Professor at the University of Oklahoma in the Department of the History of Science. She has been involved in directing undergraduate research projects in the humanities and social sciences in the areas of computer-mediated communication and digital humanities for the last fifteen years. She is the recipient of an Associates' Presidential Professorship and the Longmire Prize for Teaching in the College of Arts and Sciences at OU.
Dr. Marc Klippenstine  
East Central University

Dr. Klippenstine received his B.A. from the University of Regina and his M.A. and Ph.D. from York University in Toronto, Ontario, Canada. He is currently an Associate Professor of Psychology at East Central University and has been the institution’s I.R.B. Committee Chair since 2010. His area of research is primarily in the intersection of law and social psychology, with a focus on the role of victim emotions in cases of sexual assault. Being that ECU is primarily a teaching university, he has instituted an extensive undergraduate program of research in psychology, with his goal being to expose students to the research side of the discipline. This has included the development of a three-course rotation that includes exposure to the research process, and working with honors students in the area of psychology.

Dr. Gregory Wilson  
Assistant Vice President, Office of Research and Grants  
University of Central Oklahoma

Dr. Greg Wilson serves in Academic Affairs. He came to UCO in 2001 as a faculty member in biology. His teaching area is human and comparative anatomy and his research interests include molecular techniques to infer the population genetic structure of a variety of vertebrates. He has mentored both undergraduate and graduate research students, and he promotes, encourages, supports and participates in research, creative and scholarly activities at UCO. Dr. Wilson earned a B.A. in Biology from Central College (Central University of Iowa), an M.S. in Biology from Fort Hays State University, and a Ph.D. in Zoology from Oklahoma State University. He is a tenured Professor in the Department of Biology. Recent research projects include investigating host/parasite interactions of bats and bat flies and how climatic fluctuations which occurred during and following the Pleistocene impact the contemporary population genetic structure of several species of mammals in Oklahoma and adjacent states. Dr. Wilson has 16 publications in peer-reviewed journals.

In 2005, Dr. Wilson received the Vanderford Faculty Award in Support of Undergraduate Research, Creative, and Scholarly Activity and in 2007 he received the Hauptman Fellowship Award for engaging students in research. From 2004-2007, he served as a Faculty Mentor for the Summer Bridge component of the NSF SURE-STEP Program. Dr. Wilson has given over 90 presentations, the majority of which are co-authored with students at regional, national, and international conferences. His students have presented their research at the Oklahoma State Capitol and at the annual Posters on the Hill event in Washington, D.C. He currently serves as Chair-elect and Counselor in the At-Large Division of the Council on Undergraduate Research (CUR).
Dr. Charles Hughes  
**Associate Vice President for Institutional Effectiveness**  
**University of Central Oklahoma**

Dr. Hughes's responsibilities include serving as co-coordinator of UCO’s University Planning Council, managing the annual academic operational planning process, academic budgeting, coordinating the program review and specialized accreditation processes, managing the institution’s continuous improvement Action Team processes, and supervising the areas of Institutional Research, Institutional Assessment, and the Center for Education in Transformative Teaching and Learning. He also serves as the Academic Liaison Officer for institutional accreditation through the Higher Learning Commission. He previously served as Associate Dean of the College of Mathematics and Science where he was responsible for his college’s strategic planning, budgeting, assessment, and curriculum. He is also a Professor of Engineering and Physics and has served as Assistant Chair in that department. He has co-facilitated several university-wide Action Teams including two teams focused on examining and improving UCO’s results on the National Survey of Student Engagement and a team examining ways to improve UCO’s assessment processes. He co-facilitated UCO’s Program Prioritization Process and for several years helped coordinate UCO’s ongoing participation in the Baldrige-based Oklahoma Quality Award process. He received the Provost’s “Modeling the Way” Award in 2007. Chuck received a BS in Applied Physics from Michigan Technological University in 1981. Following that, he earned his MS in 1984 and his PhD in 1988, both in Physics and both from the University of Georgia where he pursued research related to relativistic and nonrelativistic quantum mechanical models of nuclei and particles. Before coming to UCO, Chuck worked at Lawrence Livermore National Laboratory and at Arkansas State University.

Dr. Cia Verschelden  
**Executive Director of Institutional Assessment**  
**University of Central Oklahoma**

From 2009-2012, Dr. Cia Verschelden served as Vice President for Academic Affairs at Highland Community College, after a year as a Visiting Scholar at the Higher Learning Commission in Chicago. Before the HLC post Cia had been on the faculty at Kansas State University since 1989, teaching for 11 years in the Social Work Program, and on the interdisciplinary faculties in Women’s Studies and American Ethnic Studies, becoming Director of Women’s Studies in 2003. She taught courses in social welfare history and policy, women’s studies, and in nonviolence studies. She was involved with assessment of student learning as a faculty leader at K-State from 2001 and was appointed in 2005 as the Director of the Office of Assessment. She has been working with the Higher Learning Commission for 10 years, as a team mentor for Assessment Workshops, the Assessment Academy and as a Systems Appraiser for AQIP and a Consultant-Evaluator. At UCO, in addition to her assessment work, she teaches an upper-level/graduate course in sociology and a section of Success Central. She holds a BS in psychology from Kansas State, an MSW from The University of Connecticut, and an EdD from Harvard University.
Dr. Daphne S. LaDue
Center for Analysis and Prediction of Storms
National Weather Center, Norman

Dr. LaDue is the Principal Investigator and Director of the Research Experiences for Undergraduates Program at the National Weather Center in Norman, Oklahoma. She has been awarded three REU grants from NSF. She returned to school in 2003 and completed her doctorate in Adult & Higher Education at the University of Oklahoma in October 2011. Through her coursework she found many ways to enhance her REU program, including improved mentor training, addition of critical thinking and metacognitive research skill development, and helping participants explore how to apply their meteorological knowledge in entrepreneurial ways. Prior to directing REU, she established a research record assisting on projects as diverse as radiative transfer of ozone in the mesosphere and investigation of the utility of satellite data in severe storm identification and tracking.

Dr. Jason Johnson
Professor of Chemistry & Biochemistry
Southwestern Oklahoma State University

Representing the University Research and Scholarly Activity Committee at SWOSU, Johnson is receiving the spotlight award from Chancellor Glen D. Johnson. Since its inception in 1993, URSAC has been instrumental in providing leadership in encouraging research and among faculty and students. The committee has developed and implemented strategies that help maintain a healthy research base among the faculty and students. In addition, URSAC, in conjunction with the Office of Sponsored Programs, promote cross-disciplinary research and scholarly output. In addition to an annual campus research fair, URSAC provides leadership in organizing student and faculty participation in the Oklahoma Research Day and other state and national activities.

SWOSU has a long history of bridge and undergraduate research programs. For example, the Southwestern Summer Science and Mathematics (SSMA) Academy, begun in 1974, is one the longest running high school summer academies in Oklahoma, designed to give high school juniors and seniors a two-week college experience in science, mathematics, and technology. Students invited to participate in this program are housed on campus where they have access to SWOSU facilities. The Academy includes many activities focused on developing problem solving skills and experiential learning. Thus, the ultimate goals of SSMA are to ameliorate the transition from high school to college, engage more students into higher education pursuits, and promote STEM careers. More than 1,500 students have participated in this Academy with outstanding outcomes.

SWOSU has also received funding for over 10 years from the Louis Stokes Oklahoma Alliance for Minority Participation in STEM disciplines (LS-OKAMP) which is
an outstanding example of undergraduate research programs sponsored by the National Science Foundation and Oklahoma State University and to extended universities, like SWOSU. The LS-OKAMP program at SWOSU is designed to address underrepresented minority students pursuing advanced degrees in STEM disciplines. The ultimate goal of LS-OKAMP is to encourage minority students to pursue advanced degrees leading to research or teaching positions. SWOSU's LS-OKAMP program has produced several research students who have attended Harvard, Howard, New York City College, Mayo Clinic and other top institutions. A total of 77 SWOSU students have participated in this worthwhile program.

SWOSU is a member of the NASA Oklahoma Space Grant Consortium which provides scholarship funds for students in STEM disciplines. The Consortium consists of eight universities, two industrial affiliates, one city government affiliate, and two information science education affiliates.

URSAC works collaboratively with the Office of Sponsored Programs in sponsoring the Annual Research and Scholarly Activity Fair on the campus of SWOSU. Last year, the Fair celebrated 20 years of bringing together faculty and students from over six states and 43 cities in Oklahoma, as well as Saudi Arabia, Taiwan, and China.

Faculty members at SWOSU have been engaged in undergraduate research for more than 20 years. More than $6.2 million has been secured in extramural support. With this support, a wide range of students at SWOSU have been exposed to research, career development, and experiences in STEM disciplines and the humanities.

## Student Presenters

### Victor Acosta, UCO
**Logo Creator**

Victor Acosta is a senior Graphic Design major, with an Illustrating and Spanish minor at the University of Central Oklahoma. Victor is a native of Mexico. He plans to work in a design company in Oklahoma upon graduation. He won a silver place National Student ADDY award in 2012 for his invitation design, “Cirque du Soleil.” His logo was selected as the Oklahoma Journal of Undergraduate Research official logo. It is an open book in the form of J. The colors represent the Oklahoma state colors. Victor won a cash prize for his logo submission.

### Margaret McCown
**University of Central Oklahoma**

This past May, Margaret attended an Advanced Archival Research class conducted in London, UK. After months of preparation, reading, planning, grant writing, and scholarship applications, her dreams of travelling abroad for international research were achieved. Under the tutelage of Dr. Jessica Sheetz-Nguyen, Margaret performed original research with the London Foundling Hospital archive, housed in the London Metropolitan Archives collection. Now, a Research Creative & Scholarly Activities grant recipient, Margaret is a research assistant and getting paid to do the work of her passion.
Akash Patel  
*University of Oklahoma*

Akash Patel graduated from The University of Oklahoma in May 2014 with a B.A. in Political Science and Constitutional Studies. He is the founder and executive director of the Aspiring Americans Initiative, a non-profit organization serving undocumented immigrant high school students. His research revealed that many undocumented youth were exploited, detained, deported, recruited into criminal activity, and compelled to drop out of the school system entirely.

Sarah Vrla  
*Cameron University*

Sarah Vrla is an undergraduate honors student majoring in biology at Cameron University. She is doing research on the potential UV communication of the Kangaroo Rat (*Dipodomys Ordii*). Her research has required hands-on research both in the lab and the field. The main focus of her research project is to map the density of specific photo receptors on the retina of the Kangaroo Rat and compare those densities with other small mammals, as well as look for geographical variation between Kangaroo Rat species under varying environmental conditions.

### Steering Committee for Promoting Undergraduate Research Conference

Gerry Cherry, Amanda Evert, Marc Klippenstine, Daphne LaDue, Linda Mason, Tim O'Neil, Nancy Thomason, Greg Wilson, Tony Wohlers

Nancy K. Thomason  
*East Central University*

She is currently the interim director of the Office of Sponsored Programs and Research at East Central University. Prior to this position, she was the executive director of ECU’s Center for Continuing Education and Community Services. In 2000, she was the president of the Association of Continuing Higher Education (ACHE). She earned a B.S. from The Ohio State University in Columbus, Ohio and a M.Ed. from Saint Francis College in Fort Wayne, Indiana.
Dr. Anton Wohlers  
Associate Professor of Political Science and Academic Research Director  
Cameron University  

His academic work and publishing has focused on aspects of public policy, including e-government, biotechnology’s role in society, and economic development policy. As part of this role as Academic Research Director, he has encouraged undergraduate research on the campus of Cameron University by organizing Oklahoma Research Day and other events aimed at involving students in research. Wohlers is Section Editor for Behavioral Science for the Oklahoma Journal of Undergraduate Research. He holds a Ph.D. in Political Science from Northern Illinois University (2004), where he studied the role of neighborhood groups in local agenda-setting.

Gerry Cherry  
Retired Grant Facilitator  
University of Central Oklahoma  

Special thanks go to Gerry Cherry, MA, CRA 2006-2016, for her tireless work in creating the proceedings. Cherry is retired as a Grant Facilitator for UCO; is a member of the Emeritus Faculty Association, University of Central Oklahoma; has been a mentor, Oklahoma State Regents for Higher Education Summer Grant Writing Institute, 2005-2013; and is a federal grant reviewer for the US Department of Education, the National Corporation for National and Community Service, and the National Department of Human Services.