2011

PERFORMANCE EFFECTIVENESS

REVIEW

Oklahoma
Louis Stokes Alliance for Minority Participation

Submitted to
The National Science Foundation
4201 Wilson Boulevard
Room 815
Arlington, VA  22230
Oklahoma Alliance Institutions
2011

PERFORMANCE EFFECTIVENESS REVIEW
P.E.R.

Oklahoma

Louis Stokes Alliance for Minority Participation

in Science, Technology, Engineering, and Mathematics

(OK-LSAMP STEM)

Submitted by

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Lead Institution

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Personnel</td>
<td>1</td>
</tr>
<tr>
<td>Introduction</td>
<td>2</td>
</tr>
<tr>
<td>Personnel Changes</td>
<td>3</td>
</tr>
<tr>
<td>Program Objectives and Activities</td>
<td>3</td>
</tr>
<tr>
<td>Program Component One</td>
<td>3</td>
</tr>
<tr>
<td>On-Site and Community College Recruitment</td>
<td>3</td>
</tr>
<tr>
<td>Alliance Extra Activities</td>
<td>5</td>
</tr>
<tr>
<td>Shared Database</td>
<td>7</td>
</tr>
<tr>
<td>Program Component Two</td>
<td>7</td>
</tr>
<tr>
<td>Program Component Three</td>
<td>8</td>
</tr>
<tr>
<td>Annual Research Symposium</td>
<td>10</td>
</tr>
<tr>
<td>Ethics in Research Training</td>
<td>10</td>
</tr>
<tr>
<td>International Experiences</td>
<td>11</td>
</tr>
<tr>
<td>Monthly Scholars Meetings</td>
<td>12</td>
</tr>
<tr>
<td>Program Component Four</td>
<td>13</td>
</tr>
<tr>
<td>National Conference on Undergraduate Research (NCUR)</td>
<td>16</td>
</tr>
<tr>
<td>National Society of Black Engineers (NSBE)</td>
<td>16</td>
</tr>
<tr>
<td>Society for the Advancement of Chicanos and Native American in Science (SACNAS)</td>
<td>16</td>
</tr>
<tr>
<td>Women of Color Conference</td>
<td>17</td>
</tr>
<tr>
<td>Research Internship Experiences</td>
<td>17</td>
</tr>
<tr>
<td>Internship Partnerships</td>
<td>17</td>
</tr>
<tr>
<td>Evidence of Institutionalization, Outreach and Faculty Highlights</td>
<td>20</td>
</tr>
<tr>
<td>Faculty and Student Team (FaST) Grants</td>
<td>20</td>
</tr>
<tr>
<td>Faculty Publications and Activities</td>
<td>20</td>
</tr>
<tr>
<td>Articulation Agreements with Community Colleges</td>
<td>24</td>
</tr>
<tr>
<td>Scholar and BD Fellow Publications</td>
<td>25</td>
</tr>
<tr>
<td>Scholar Highlights</td>
<td>25</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Staff Training and Development</td>
<td>28</td>
</tr>
<tr>
<td>Bridge to the Doctorate</td>
<td>29</td>
</tr>
<tr>
<td>Cohort I and II</td>
<td>29</td>
</tr>
<tr>
<td>Cohort I and II Significant Highlights</td>
<td>29</td>
</tr>
<tr>
<td>Cohort III</td>
<td>30</td>
</tr>
<tr>
<td>Cohort III Fellow Highlights</td>
<td>31</td>
</tr>
<tr>
<td>Cohort IV</td>
<td>33</td>
</tr>
<tr>
<td>Cohort IV Fellow Highlights</td>
<td>34</td>
</tr>
<tr>
<td>Evaluation Procedures</td>
<td>35</td>
</tr>
<tr>
<td>APPENDIXES</td>
<td>37</td>
</tr>
<tr>
<td>A - Oklahoma Native American Students in Higher Education (ONASHE)</td>
<td>38</td>
</tr>
<tr>
<td>B - Oklahoma State University Summer Workshops and Camps</td>
<td>40</td>
</tr>
<tr>
<td>C - University of Oklahoma Summer Workshops and Camps</td>
<td>47</td>
</tr>
<tr>
<td>D - 16th Annual Research Symposium</td>
<td>52</td>
</tr>
<tr>
<td>E - Wentz Foundation Awards</td>
<td>54</td>
</tr>
<tr>
<td>F - Joint Annual Meeting Poster</td>
<td>57</td>
</tr>
<tr>
<td>G - National Conference on Undergraduate Research (NCUR)</td>
<td>59</td>
</tr>
<tr>
<td>H - National Society of Black Engineers (NSBE)</td>
<td>61</td>
</tr>
<tr>
<td>I - Women of Color Conference</td>
<td>63</td>
</tr>
<tr>
<td>J - Scholar / BD Fellow Publications</td>
<td>65</td>
</tr>
<tr>
<td>K - Scholar Highlights</td>
<td>73</td>
</tr>
<tr>
<td>L - Staff Recognition from Women of Color</td>
<td>86</td>
</tr>
<tr>
<td>M - University of Oklahoma Bridge to the Doctorate Update</td>
<td>89</td>
</tr>
<tr>
<td>N - Oklahoma Rating for Native American Graduates in Alliance Institutions</td>
<td>95</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Comparison Numbers to Meet Stated Goal</td>
<td>4</td>
</tr>
<tr>
<td>2. Comparison of Scholars by Gender</td>
<td>4</td>
</tr>
<tr>
<td>3. Number of Scholars by Ethnicity</td>
<td>5</td>
</tr>
<tr>
<td>4. Annual Research Symposium Attendees by Category</td>
<td>10</td>
</tr>
<tr>
<td>5. International Locations Scholars Travelled</td>
<td>12</td>
</tr>
<tr>
<td>6. Ranking of Alliance Institutions for Native American Degrees Awarded</td>
<td>13</td>
</tr>
<tr>
<td>7. Number of Graduates by Institution Entering into Graduate Programs</td>
<td>14</td>
</tr>
</tbody>
</table>
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INTRODUCTION

The Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) program concluded Year Two of the five year National Science Foundation (NSF) grant (HRD 09020027--2009-2014). This also concludes 17 years of successful LSAMP activities in Oklahoma.

Oklahoma continues to meet the NSF goal to increase the number of minority and under-represented students majoring in science, technology, engineering, and mathematics at the 11 alliance institutions.

In 2010-2011 the Oklahoma Alliance had 170 Scholars; 37 completed Bachelor of Science degrees and 15 were admitted to graduate schools. During the academic year, 50 percent participated in research activities and 58 percent of the scholars participated in summer research at national and international locations.

Dr. Mark E. Payton, Interim Dean of the Graduate College and Professor of Statistics, Oklahoma State University, completed his first year as the Principal Investigator/Program Director for both the OK-LSAMP and Bridge to the Doctorate programs. Immediately after being appointed as the PI, Dr. Payton travelled to each of the Alliance institutions to meet the campus leader (either the president or provost) and the campus coordinator. During these sessions, he discussed Alliance objectives and goals, as well as securing support for the program from the campus leader.

Two scholars from Oklahoma State University were selected to receive the Graduate Research Fellowship Program fellowship award. One will begin graduate studies in Arizona and one in Illinois.

The 16th Annual Research Symposium welcomed 181 attendees for a day of workshops, poster and oral presentations, ethics training, and guest speakers. Dr. Henry Neeman, Director of the Oklahoma Super Computing Center for Education and Research at the University of Oklahoma served as the keynote speaker.

Oklahoma State University Bridge to the Doctorate Fellows worked toward completion of their third year of graduate studies. Four completed Master of Science degrees, with two remaining to work toward Ph.D. requirements and two taking employment in their respective fields of study. Fellows at the University of Oklahoma Bridge to the Doctorate program continued to make progress and all 12 positions were filled.

Overall, the OK-LSAMP program has met the goals established in the initial proposal to the National Science Foundation. During Phase IV, OK-LSAMP held high standards for scholars, thus producing quality graduates in the STEM disciplines. Scholars maintained high grade point averages, participated in research with faculty
mentors, and received internship opportunities. All this and more aided in graduation with the qualifications that open the potential for receiving advanced degrees.

PERSONNEL CHANGES

For the first time in several years, there were no personnel changes at any of the Alliance institutions. All campus coordinators remained and lead institution staff also stayed the same.

PROGRAM OBJECTIVES AND ACTIVITIES

The Oklahoma Alliance, consisting of 11 institutions of higher education (three comprehensive research institutions, one historically black college, and seven regional universities), proposed a five year continuation of Louis Stokes Alliance for Minority Participation activities. Based on 16 years of previous success, the Alliance will continue to support the NSF mission to recruit and retain under-represented students in the Science, Technology, Engineering, and Mathematics (STEM) disciplines. To accomplish these goals, the following program objectives were proposed.

Program Component One

*To recruit and retain a minimum of five percent increase yearly in the number of eligible students in STEM fields.*

On-Site and Community College Recruitment

The recruitment of scholars was evidenced on each of the 11 Alliance institution campuses. Campus Coordinators sought top under-represented students in the STEM fields. Coordinators used a variety of avenues in the recruitment process. Events such as High School Visitation Days, Freshman Orientation Events, and Parent-Student Campus Tour Days were utilized to identify potential scholars. Additional recruitment was conducted on-site at high school and community college events. Information tables were set up at science fairs, summer workshops for high school students, tribal events and powwows, and personal contact with students. OK-LSAMP opportunities were presented during a session at the Oklahoma Native American Students in Higher Education (ONASHE) conference, February, 2011 (Appendix A).
The 11 Oklahoma Alliance institutions supported 170 LSAMP scholars in the 2010 – 2011 academic year. This total reflects a 11 percent increase from the previous year of 153 scholars. The objective was to increase the number of scholars by 5 percent each year of the project. Objective One has not only been met, it has exceeded the 5 percent increase in the original proposal (Table 1).

Table 1
Comparison Numbers to Meet Stated Goal

<table>
<thead>
<tr>
<th>Institution</th>
<th>No. Scholars 2009-2010</th>
<th>No. Scholars 2010-2011</th>
<th>Increase/Decrease</th>
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<tbody>
<tr>
<td>Cameron University</td>
<td>6</td>
<td>4</td>
<td>-2</td>
</tr>
<tr>
<td>East Central University</td>
<td>14</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Langston University</td>
<td>27</td>
<td>24</td>
<td>-3</td>
</tr>
<tr>
<td>Northeastern State University</td>
<td>7</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Northwestern Oklahoma State University</td>
<td>5</td>
<td>3</td>
<td>-2</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>42</td>
<td>51</td>
<td>9</td>
</tr>
<tr>
<td>Southeastern Oklahoma State University</td>
<td>13</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Southwestern State University</td>
<td>4</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>University of Central Oklahoma</td>
<td>11</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>University of Oklahoma</td>
<td>16</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>University of Tulsa</td>
<td>8</td>
<td>6</td>
<td>-2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>153</strong></td>
<td><strong>170</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 2
Comparison of Scholars by Gender

<table>
<thead>
<tr>
<th>Category</th>
<th>YEAR</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009-2010</td>
<td>2010-2011</td>
</tr>
<tr>
<td>Male</td>
<td>72</td>
<td>81</td>
</tr>
<tr>
<td>Female</td>
<td>81</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>153</td>
<td>170</td>
</tr>
</tbody>
</table>
Table 3

Number of Scholars by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>2009-2010</th>
<th>2010-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>64</td>
<td>65</td>
</tr>
<tr>
<td>Native American</td>
<td>46</td>
<td>57</td>
</tr>
<tr>
<td>Hispanic</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Asian American</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>White—First Generation</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>More than One Race &amp; Unknown</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td>170</td>
</tr>
</tbody>
</table>

Figure 1. 2010-2011 Ethnicity Breakdown

Campus Coordinators on Alliance campuses recruited students based on degree emphasis, grade point averages, and desire to complete an undergraduate degree and seek admission into graduate school programs. The recruitment of scholars began during high school visitation days and freshman orientation programs. Additional recruitment was by school and local newspaper articles and invites by Scholars to present their research at specific research programs.

Alliance Extra Activities
Summer research and bridge programs are a critical part of the Alliance experience and offer a unique time to “get the word out” regarding the OK-LSAMP program and the benefits of being a Scholar. Several Alliance institutions held workshops for incoming freshmen and high school juniors and seniors. Each of these workshops offered opportunities for local presentations on the benefits of being a Scholar in the LSAMP program.

OSU, as lead institution, continued to participate in several on-campus summer workshops for minority high school students from across the state. OK-LSAMP has close working relationships with several programs (Appendix B). They include, but are not limited to:

*Retention Initiative for Student Excellence (RISE) and RISE Jumpstart* -- a program designed to aid minority students as they make a smooth transition into college life.

*Inclusion Leadership Program (ILP)* -- a year-long program designed to pair minority college students and students from high schools in Tulsa and Oklahoma City to develop the skills and knowledge to become effective leaders in a more diversely inclusive society.

*ConocoPhillips Minority Engineering Program Summer Bridge* --- designed for incoming freshmen Engineering majors to spend one month of campus, taking class and transitioning into the academic atmosphere.

Other programs sponsored by the Oklahoma State Regents for Higher Education were designed to promote awareness of science and engineering through the *Fired Up About Engineering Camp* and *Smart Cars*. Both programs were designed to promote engineering awareness to 20 under-represented high school students.

*The Retired Educators for Youth Agricultural Programs (REYAP) program* was designed to bring under-represented youth, ages 14-18, to the OSU campus for a week of activities promoting diversity awareness, advocacy, leadership and education in the STEM disciplines.

The University of Oklahoma also offered several residential and day camps for under-represented youth (Appendix C). These camps included, but are not limited to:

*BP Engineering Academy* -- A residential camp which encouraged young men who have completed their 9th grade year and/or be in the graduating class of 2012 to 2013 and demonstrate an interest in mathematics and/or science to participate.

*BP DEVAS Summer Camp (Discovering Engineering Via Adventure in Science).* Designed as a residential camp for young women, with a strong interest in engineering, mathematics, science, and/or technology, a curiosity of how things work, or
want to help solve big problems of the world and who will be entering the 10th, 11th, or 12th grade in fall 2011.

**Engineering GLAMS (Girls Learning and Applying Math and Science)** -- Designed as a day camp for girls entering their 7th or 8th grade year in fall 2011.

**Shell Passport to Engineering** -- A four-day residential camp for selected middle school students from Northeast Academy in Oklahoma City.

**AT&T Summer Bridge Program** -- Designed for incoming freshmen students to help with the transition from high school to the university atmosphere and to increase their math competency. One additional camp was created by a BD Fellow from the University of Oklahoma for the National Society of Black Engineers entitled, *Summer Engineering Experience for Kids (SEEK)* held in Washington, D.C.—20 sixth grade students were taught engineering concepts.

Throughout the academic year the Oklahoma Alliance was involved with TRiO Programs (*Talent Search and Upward Bound, and Student Support Services*) throughout the state. TRiO programs involve high school and freshman under-represented students. During the summer months, OK-LSAMP staff made presentations to the TRiO students and assisted in program activities.

**Shared-Database and Listserv**

Campus Coordinators continued to work closely with the Grant Coordinator in the collection of Scholar and BD Fellow data. The Grant Coordinator, housed at the lead institution site (Oklahoma State University), maintained the alliance database. Information collected on each of the scholars in Oklahoma was used to complete information requested by the National Science Foundation (NSF) and the program evaluator (Rosemary Hayes, Director of the Center for Institutional Data Exchange and Analysis, Norman, Oklahoma). Data were collected continually throughout the year with updates to the program on an as-needed basis. Information was collected from the Campus Coordinators as well as by email to individual scholars. A listserv was established to have direct contact with scholars for certain information. The information includes, but is not limited to: degree program, presentations, research projects, completion of degree, and acceptance into graduate school. The Alliance management team will continue to send regular updates regarding opportunities from across the nation aiming to reach more students and increase the quality of academic opportunities. This database/listserv were shared among alliance institutions as students changed schools, thus allowing the scholars to move freely from one institution to another and to remain as OK-LSAMP scholars in good standing.
Program Component Two

To support scholars academically, personally, and professionally, ensuring they build the connections and skills needed to excel.

Focal points on graduate school preparation included participation in the Graduate Preparation component of the program, interaction with matriculating graduate students, the application process, and research experiences.

- Graduate school preparation modules are listed on the OK-LSAMP website (www.ok-lsamp.okstate.edu) for all Alliance institution use.

- Scholars continue to take advantage of the on-line Graduate Record Examination (GRE) preparation course offered to the Alliance scholars through Oklahoma State University-OKC. The classes have been developed to provide learning activities to assist students in acquiring knowledge, practicing skills and completing steps necessary to gain admission to graduate school with successful completion. The classes focus on (1) what is the GRE, why it should be taken, how to prepare, contents and format, (2) test-taking skills relevant to computer aided test format, (3) practice tests, (4) scoring, and (5) average score requirements for specific fields of study.

- Scholar meetings implemented throughout the Alliance offered a forum for educational speakers and workshops focused on graduate school preparation and career development.

- Fifteen 2010-2011 OK-LSAMP graduates were accepted to graduate schools throughout the nation. Examples include:
  
  - Graduate Research Fellowship
    University of Illinois
    Arizona State University
    Duke University
  - University of Nebraska
  - University of Oklahoma
  - Drexel University – BD Program

- Support to state and national conferences to present research projects. Examples include:
  
  National Conference on Undergraduate Research (NCUR), Ithaca, NY
  Oklahoma Research Day, Tahlequah, OK
  Oklahoma Research Day at the Capitol (invite only), Oklahoma City, OK
  16th Annual Research Symposium, Stillwater, OK
Program Component Three

To introduce a new focus on enhancing scholar preparation for global success.

Participants from each Alliance institution are encouraged to take an active part in activities that enhance and assess academic performance, arouse accountability consciousness, and provide other experiences that lend to graduate school and workforce preparation.

- The Annual Research Symposium offered workshops focusing specifically on Graduate Education.
- The Annual Research Symposium addressed Scientific Integrity and Ethics with workshops lead by a qualified ethics instructor.
- Scholars were provided opportunities to attend lectures on Ethics during monthly scholar’s meetings.
- The University of Tulsa course, ES 4001: Research Ethics, continues to be available for scholars. The course is taught by Dr. J. C. Diaz, OK-LSAMP Campus Coordinator for TU.
- Scholars throughout the Alliance continue to be encouraged and supported in traveling to visit graduate schools.
- Scholars were continually advised to enroll in graduate level course work during their senior year. This allowed the scholars to begin accumulating graduate credits before beginning a graduate program of study.
- Scholars throughout the Alliance continue to take advantage of the on-line GRE Preparation course offered through OSU-OKC’s Ed-2-Go series. This self-paced course has proven to be beneficial to the scholars. Copies of the resource book used for the course were supplied to each of the Alliance campuses. This allowed the Scholars to use the book without any additional expenses to them.
• Scholars throughout the Alliance are encouraged to apply to a minimum of five graduate schools.

• Campus Coordinators are provided resources (GRE Handbook/CD Study Guides) and encouraged to provide scholars with graduate school preparation.

• Scholar meetings are held at a minimum of once per month. Various topics are presented to the scholars such as graduate school preparation, test taking strategies, and opportunities for summer internships, along with ideas for suggestions on completing applications. Scholar meetings were also used as a means for Scholars to present their research to their peers. This provided a “non-intimidating” environment for presentations.

Annual Research Symposium

The 16th Annual Research Symposium was held September 25, 2010, on the Oklahoma State University, Stillwater campus (Appendix D). The Symposium welcomed 181 attendees for a full day of workshops, poster and oral presentations, ethics training and guest speakers. This number indicated a 21.0 percent increase from the 2009 Symposium in the number of scholars attending and presenting research. Additionally, the number of faculty attending the symposium increased by 27.2 percent.

The program keynote speaker, Dr. Henry Neeman, University of Oklahoma, Supercomputing Center for Education and Research, spoke on “Supercomputing in Plain English.”

Table 4

Annual Research Symposium Attendees by Category

<table>
<thead>
<tr>
<th>Attendees</th>
<th>15th Annual</th>
<th>16th Annual</th>
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<tbody>
<tr>
<td>Undergraduate Students</td>
<td>76</td>
<td>92</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Faculty</td>
<td>33</td>
<td>42</td>
</tr>
<tr>
<td>Staff</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Parents</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Special Guests</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>179</strong></td>
<td><strong>181</strong></td>
</tr>
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</table>

Ethics in Research Training
Each Scholar in the Oklahoma Alliance is required to attend an annual Ethics in Research training session. The training may be taken at the Annual Research Symposium, Scholar meetings, a class, or as a workshop provided by one of Oklahoma’s Campus Coordinators trained to offer such workshops. Scholars are issued a certificate of completion at the end of the training and the information is submitted to the Grant Coordinator for inclusion in the database.

International Experiences

Scholars were offered research experiences in a variety of locations. The international research internships help to prepare them for their future career by adding experiences that can help build relations with foreign clients, and add diverse perspectives and experiences to the research skills they acquire during their academic career.

Ten scholars and three BD Fellows participated in international research experiences in ten different international locations. Scholars and Fellows who participated in international experiences during 2010-2011 included:

Courtney Garcia – SWOSU: marine chemistry in Cadiz, Spain for eight weeks.

Elaine Harder – CU: Animal reproduction at one of the world’s largest breeding companies in Brazil.

Quintin Hughes – OU BD: Thailand, Engineers in Practice program.

Ryan Jordan – OU BD; Tanzania, Africa to conduct research on modern shell bed deposits in Kigoma Bay.

Jason Kimmell – OU BD: Italy engineering research and mentoring students in local schools.

Diana Lucero – OU: REU in Smart Structures at the University of Connecticut (UC) and the Korea Advanced Institute of Science and Technology. The Program is 10 weeks long with four two weeks at the University of Connecticut, and six weeks in Korea.

Megan Salisbury – OU: Study abroad in Aberdeen, Scotland. She studied environmental science.

Katharine Stewart – NSU: Spent 8 weeks in Costa Rica conducting research in the Rain Forest with the Native American and Pacific Islander Research Experience (NAPIRE) program sponsored by the Organization of Tropical Studies.
Kelsey Raus – OU: Traveled to Bolivia, spent 6 weeks during the summer participating in the Sooners Without Borders program.

Kelsey Raus – OU: also conducted research in Italy on a Study Abroad program.

Tyeshia Waters – OU: presented her research at the Annual Technical Conference and Exhibition in Florence Tuscany, Italy.

Joshua Warren – OSU: Traveled to Turkey on a REU experience, conducting research on honey bees as part of a multi-national team of scientists from the U.S., Turkey, Greece, and Bulgaria.

Lauren White – OSU: Kenya and the Philippines. She conducted rural education outreach research during the Spring 2011 semester and returned in May, 2011 for a full year of international research.

Table 5

International Locations Scholars Traveled

<table>
<thead>
<tr>
<th>Student</th>
<th>International Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elaine Harder</td>
<td>Brazil</td>
</tr>
<tr>
<td>Courtney Garcia</td>
<td>Spain</td>
</tr>
<tr>
<td>Quintin Hughes</td>
<td>Thailand</td>
</tr>
<tr>
<td>Ryan Jordan</td>
<td>Africa</td>
</tr>
<tr>
<td>Jason Kimmel</td>
<td>Italy</td>
</tr>
<tr>
<td>Diana Lucero</td>
<td>Korea</td>
</tr>
<tr>
<td>Kelsey Raus</td>
<td>Italy</td>
</tr>
<tr>
<td>Kelsey Raus</td>
<td>Bolivia</td>
</tr>
<tr>
<td>Megan Salisbury</td>
<td>Scotland</td>
</tr>
<tr>
<td>Katharine Stewart</td>
<td>Costa Rica</td>
</tr>
<tr>
<td>Tyeshia Waters</td>
<td>Italy</td>
</tr>
<tr>
<td>Joahua Warren</td>
<td>Turkey</td>
</tr>
<tr>
<td>Lauren White</td>
<td>Kenya</td>
</tr>
</tbody>
</table>

Monthly Scholar Meetings

Monthly scholar meetings are held on each campus under the direction of the Campus Coordinator. The monthly meetings are intended to provide support for the scholars, while bringing in guest speakers. Presentations were made on current research
projects and a variety of other topics, not limited to: financial affairs, time management, and how to apply for summer internships. The monthly meetings allow scholars to become better acquainted with each other and to gain information about other majors, research projects, and activities.

Program Component Four

To institutionalize effective pathways to STEM graduate study and careers at all Alliance institutions.

The inter-institutional collaboration among the 11 Alliance institutions continues to serve as the catalyst for establishing comprehensive and coherent programming aimed at enhancing the academic preparedness of targeted undergraduate students for graduate studies.

In a recent report, Diverse Issues in Higher Education, reported Oklahoma schools rank in the top for awarding degrees to Native Americans. Three Oklahoma universities in the OK-LSAMP Alliance rank in the top three institutions for Native Americans completing degree requirements. Oklahoma State University is ranked first with 355 graduates, Northeastern State University with 335 graduates, and the University of Oklahoma is ranked third with 241 graduates. Additionally, the Oklahoma Alliance has three other schools ranked in the top 12 for graduates. This represents 9.6 percent of all graduates in Oklahoma as being Native American.

Table 6

Ranking of Alliance Institutions for Native American Degrees Awarded

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Institution</th>
<th>Number of Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Oklahoma State University</td>
<td>355</td>
</tr>
<tr>
<td>2</td>
<td>Northeastern State University</td>
<td>335</td>
</tr>
<tr>
<td>3</td>
<td>University of Oklahoma</td>
<td>241</td>
</tr>
<tr>
<td>6</td>
<td>Southeastern Oklahoma State University</td>
<td>170</td>
</tr>
<tr>
<td>10</td>
<td>East Central University</td>
<td>143</td>
</tr>
<tr>
<td>12</td>
<td>University of Central Oklahoma</td>
<td>127</td>
</tr>
</tbody>
</table>
Thirty-seven scholars received Bachelor of Science degrees in the 2010-2011 academic year. Fifteen scholars were admitted to graduate programs throughout the United States. This indicates 40.5 percent of OK-LSAMP scholars are continuing their education by entering graduate programs (Table 8).

Table 7

Number of Graduates by Institution Entering into Graduate Programs

<table>
<thead>
<tr>
<th>Institution</th>
<th>Number of Graduates</th>
<th>Admitted to Graduate Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameron University</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>East Central University</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Langston University</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Northeastern State University</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Northwestern Oklahoma State University</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Southeastern Oklahoma State University</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Southwestern Oklahoma State University</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>University of Central Oklahoma</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>University of Oklahoma</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>University of Tulsa</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>TOTALS</td>
<td>37</td>
<td>15</td>
</tr>
</tbody>
</table>

- All Alliance institutions offer scholar programs including, but not limited to: (1) financial and academic support, (2) academic year research mentoring components and (3) a summer research internship program. Across the Alliance, these programs focus on retention, high academic achievement, and graduate school preparation.

- Tutoring is available for students experiencing difficulty with coursework. The OK-LSAMP program provides compensation to the tutor.

- Eleven scholars traveled to Ithaca, New York, for the 2011 National Conference on Undergraduate Research (NCUR).
- OSU Scholars participated in the Wentz Research Project --- a part of the Wentz Foundation awards program. The 4 scholars were awarded $4,500 each to conduct research with a faculty mentor and plan and prepare for graduate school (Appendix E).

- Scholars participated in the National Society of Black Engineering Conference, Kansas City, Missouri. One former Scholar received the Leadership Excellence Award and will serve as Regional NSBE Parliamentarian. One scholar received the Board of Corporate Affiliates Scholarship.

- Scholars participated in summer internship/research positions throughout the nation and world.

- The Oklahoma Alliance presented a poster at the National Science Foundation Joint Annual Meeting in Washington, D.C., June 5-10, 2011 (Appendix F).

- Inter-institutional collaboration – each summer, a number of scholars conduct internships at Alliance institutions. Each Alliance institution is funded to offer summer internship opportunities on their campus, but, because of inter-institutional collaboration, scholars may also conduct research on Alliance campuses.

- Graduate school preparation information workshops for OK-LSAMP scholars are available to the Alliance through the Oklahoma State University Graduate College and the University of Oklahoma Graduate College.

- Bridge to the Doctorate Fellows from both OSU and OU participated in the Annual Research Symposium. This allowed scholars to ask individual questions regarding graduate school and receive feedback from someone with whom they could relate.

- Graduate school preparation modules and helpful handouts are located on the OK-LSAMP website for use by all Alliance Institutions.

- Alliance meetings with the program administration and Campus Coordinators are held. The meetings are a forum for ongoing communication on overall program operation and specific program implementations on each campus.

- The Principal Investigator visited each Alliance campus to discuss the program with the institution president or provost. Additionally, he met with the Campus Coordinator and with scholars.

- A web page continues to be maintained by OSU as the lead institution. The page contains active links to the National Science Foundation and Alliance Institutions. Additional links include Alliance activities, forms, current and past newsletters,
reports, and graduate school information. The web address is: www.ok-lsamp.okstate.edu.

- Program newsletters and other program publications enhance communications between Alliance institutions, maintain the coherence of the program, and provide informational recruiting for new scholars, mentors and program supporters.

- The data system developed for the Alliance with information on current and past alumni scholars and Bridge to the Doctorate Fellows continues to be upgraded and improved. Information includes, but is not limited to: major, presentations at workshops/conferences, internships, GPA, degrees awarded and graduate school applications.

National Conference on Undergraduate Research

The National Conference on Undergraduate Research (NCUR) is held annually to provide opportunities and “is dedicated to promoting undergraduate research, scholarship, and creative activity in all fields of study” (NCUR, 2010). In 2010-2011, the Oklahoma LSAMP Alliance had 11 scholars attend the conference in Ithaca, New York. The scholars made both oral and poster presentations. Mark Payton, PI and Tim Hubin, Campus Coordinator, SWOSU, both attended the conference (Appendix G).

National Society of Black Engineers (NSBE)

Seven scholars attended the National Society of Black Engineers Conference in Kansas City, MO. The conference/organization is designed to “stimulate and develop student interest in various engineering disciplines, increase the number of minority students studying engineering, and encourage members to seek advanced degrees” (NSBE, 2010). During the conference, Darryl Wells, Mechanical and Aerospace Engineering senior, received an award sponsored by the Board of Corporate Affiliates. Darron “DJ” Lamkin, former Scholar and current graduate student, was selected as the NSBE Region 5 Chair and serves as Oklahoma Parliamentarian (Appendix H).

Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)

The annual SACNAS conference was held in Anaheim, California. J. Connor Ferguson, OSU Plant and Soil Sciences senior, and Laura Scott, OSU Zoology senior, both received travel scholarships to the conference. Both Scholars presented their research in their respective disciplines.
Women of Color Conference

The Women of Color STEM Conference recognizes outstanding women in the STEM fields and provides excellent opportunities for professional development, networking, and recruiting. It is co-sponsored by CCG’s Women of Color Magazine and the IBM Corporation. The 2010 conference was held in Dallas, Texas, October 29-31, 2010. Oklahoma was represented with 40 OK-LSAMP Scholars and sponsors (Appendix I).

Research Internship Experiences

Scholars are encouraged to participate in academic year and summer internship programs, locally, nationally, and internationally. The academic year research experiences provide opportunities for Scholars to work closely with faculty mentors on their campuses and to learn from some of the best researchers in their field. The summer internship program allows scholars to gain first-hand experiences in their chosen career fields, while learning new skills and acquiring skills that will help them transition from the academic environment into their future work environment. Internships also allow the scholars to apply what they have learned in the classroom to real-work situations.

Table 8

Academic Year Research Experiences and Internship Experiences

<table>
<thead>
<tr>
<th>Institution</th>
<th>Academic Year Research</th>
<th>Summer Internship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameron University</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>East Central University</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Langston University</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Northeastern State University</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Northwestern OSU</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>32</td>
<td>39</td>
</tr>
<tr>
<td>Southeastern OSU</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Southwestern OSU</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>University of Central Oklahoma</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>University of Oklahoma</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>University of Tulsa</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>86</strong></td>
<td><strong>98</strong></td>
</tr>
</tbody>
</table>
Listed below are selected examples of internship activities conducted by OK-LSAMP scholars.

**Internship Partnerships**

One of the goals of the OK-LSAMP program is to have each Scholar complete applications to a minimum of three internship locations. The following represents a partial list internship locations.

**Baylor College of Medicine, Houston, TX** – A private medical school known for its excellence in education, research, and patient care.

**Boeing, Oklahoma City, OK** – The world’s largest aerospace company and the largest manufacturer of commercial jet airliners and military aircraft combined. ([www.boeing.com](http://www.boeing.com))

**Brookhaven National Labs (BNL), Long Island, NY** – BNL conducts research in the physical, biomedical, and environmental sciences, as well as in energy technologies and national security. BNL also builds and operates major scientific facilities available to university, industry and government researchers from across the nation. Discoveries made at Brookhaven have won six Nobel Prizes.

**BP, Houston, TX** -- BP is one of the world's leading international oil and gas companies, providing its customers with fuel for transportation, energy for heat and light, retail services and petrochemicals products for everyday items ([bp.com](http://bp.com))

**Creek Nation Summer Youth Work Program** -- The Summer Youth Employment Program is designed to provide Native Americans between the ages of 16 and 21 with work experience and the opportunity to develop life skills. All participants work forty hours a week. The eight-week program helps young people gain experience, training, responsibility and money. Mentors are provided for each youth in the program.

**Chesapeake Energy, Oklahoma City, OK** – The second largest producer of natural gas, a Top 15 producer of oil and natural gas liquids, and the most active driller of new wells in the United States ([chk.com](http://chk.com)).

**Chevron Energy,** – A global leader in the energy field, the company provides opportunities for internships in all aspects of oil and manufacturing ([Chevron, 2010](http://chevron.com)).

**ConocoPhillips, Bartlesville, OK** – The third-largest integrated energy company in the United States, the fourth largest refiner, and the sixth largest reserves holder of nongovernment controlled companies, known for worldwide technological expertise in reservoir management and exploration. ([www.conocophillips.com](http://www.conocophillips.com))
Devon Energy Corporation, Oklahoma City, OK – Devon is an independent oil and gas company that explores for and produces oil and natural gas worldwide.

Exxon Mobil, Houston, TX – Exxon Mobil has been a leader in the energy industry since its beginnings. Exxon is the world’s largest publicly traded international oil and gas company, providing energy that helps underpin growing economies and improve living standards around the world. (www.exxonmobil.com)

Holly Corporation, Tulsa, OK – an independent petroleum refiner and marketer producing high-value products such as gasoline, diesel and jet fuel as well as specialty lubricants, oil and waxes.

Johns Hopkins Summer Research, Baltimore, MD – The Summer Internship Program (SIP) provides experience in research laboratories to students of diverse backgrounds, including underrepresented minority students and students from economically disadvantaged and underserved backgrounds that have completed one – two or more years of college. The purpose of this exposure to biomedical and/or public health research is to encourage students to consider careers in science, medicine and public health (Johns Hopkins, 2010).

NASA, Langley Aerospace Research Center, Hampton, VA – Researchers at Langley are focusing on some of the biggest technical challenges of our time: global climate change, access to space and revolutionizing airplanes and the air transportation system. (www.nasa.gov)

De Na Zin Wildness, NM – Funded by the Whitten Foundation, to study geological strata and vertebrate fossils and plant fossils, as well as bulk carbon organic samples in conjunction with the New Mexico Museum of Natural History and Science.

Native Explorers, Center for Health Sciences, Tulsa, OK Black Mesa, OK – learn field techniques and measuring geologic sections, creating field notes and records, and learn Native American cultural experiences.

Native American Research Center for Health Programs, Norman, OK – Provide a cooperative structure for the development and implementation of high quality, culturally sensitive and community supported research linked to health disparity issues. Collaborative effort will facilitate the participation of American Indians and Alaskan Natives in the research process through training and mentoring opportunities within both academic and community settings. (www.glitc.org)

Niblack Research Project, Stillwater, OK – The project supports research of undergraduates on the Oklahoma State University, Stillwater campus. Recipients are sponsored by a member of the research faculty to oversee the progress of the research with day-to-day monitoring.
Nomac Drilling, El Reno, OK – A part of the Chesapeake Drilling Company.

Oklahoma IdeA Biomedical Research Excellence (INBRE) – INBRE is a grant awarded by the National Institutes of Health Institutional Development Award (IdeA) Program. The award will bring over $17 million in research funding to fourteen Oklahoma institutions. The institutions include: University of Oklahoma Health Sciences Center, Norman, Oklahoma; Northeastern State University, Tahlequah, Oklahoma; and Southwestern Oklahoma State University, Weatherford, Oklahoma.

Organization for Tropical Studies (OTS) Native American and Pacific Islander Research Experience (NAPIRE), Costa Rica – OTS is a non-profit consortium that has grown to include 63 universities and research institutions from the United States, Latin America and Australia. In the early 1960’s, scientists from U.S. universities forged working relationships with colleagues at the Universidad de Costa Rica in the interest of strengthening education and research in tropical biology. (www.ots.ac.cr)

Orthopedic Center of Tulsa, Tulsa, OK – a center dedicated to the wellbeing of patients with locations in Tulsa and Claremore.

Research Experiences for Undergraduates (REU) – REU programs are funded by the National Science Foundation and conducted on specific campuses in specific programs. Programs in which OK-LSAMP scholars participated include, but are not limited to: Arizona State University, Drexel University, Louisiana State University, Oakland University, Oklahoma State University, University of Alabama, University of North Texas, Washington State University, University of Connecticut and Korea.

Schlumberger, Sugar Land, TX – One of the world’s leading oilfield services supplying technology, information solutions, and integrated project management to the oil and gas industry. Sugar Land is one of 25 research facilities worldwide.

Tuskegee University, Tuskegee Institute, AL – Summer REU program in computer sciences.

University of Tulsa Junior Robotics Institute, Tulsa, OK – The Robotics Institute involves OK-LSAMP scholars in the promotion of science and engineering by mentoring high school students for two weeks during the summer in various aspects of robot building and programming.
Faculty and Student Teams (FaST) Grants

During the Summer 2011 one Faculty and Student Teams (FaST) grant was awarded. The FaST grant provided opportunities for faculty and students to travel to three different locations to conduct research. Selected faculty and students associate with members of the respective laboratories and professional staff in an educational training program to help provide the tools, knowledge, and resources needed to compete in future research funding opportunities (www.bnl.gov).

One Native American FaST team conducted research at Argonne Labs in Argonne, Illinois. The teams spent 10 weeks on site and were able to explore, develop and conduct research in different disciplines.

Faculty Publications and Activities

Mark E. Payton, PI, Oklahoma State University


Camille DeYong, Campus Coordinator, Oklahoma State University


Timothy Patton, Campus Coordinator, SoutheasternOSU


Patton, T. M. (2011). An assessment of channel catfish diets and predation upon native fishes in the San Juan River, New Mexico and Utah. United States Bureau of Reclamation. $41,000 Grant.

Simin Pulat, Co-PI and Campus Coordinator, University of Oklahoma


Conference presentation (2010,October). Global End-to-End Freight Movement Modeling, Cipher ICFS Meeting, Norman, OK.

Greg Wilson, Campus Coordinator, University of Central Oklahoma

Promotion from Associate Professor to Professor of Biology, University of Central Oklahoma.


Chen, W.R., Simmons, C.K., Endicott, B.E., Barthell, J.F. and Wilson, G.M. (2010). STEP@UCO: an undergraduate research program as an integral part of transformative learning for students throughout their college life in STEM disciplines. Council on Undergraduate Research, Weber State University, Ogden, UT, 19-22 June. (Poster)
Cloud, T.L., Koppari, K.L. Haynie, M.L. and Wilson, G.M. (2010). Comparative phylogeography of the deer mouse and white-footed mouse in Oklahoma and adjacent states. Oklahoma Academy of Science, Northeastern State University, Broken Arrow, OK, 5 November. (Poster)


**Frank White, Campus Coordinator, Cameron University**


White, F. J. Awarded Oklahoma IDeA Network of Biomedical Research Excellence Summer Mentor Award: $7,200.

White, F. J. Awarded the Buck and Irene Clements Lectureship Award: $6,000.

White: F. J., Collaborating with Dr. Dennis Frisby, Carla Guthridge, and Phillip Schroder on $25,000 grant to evaluate antibiotic resistance in organic and traditional swine production.


White, F. J. Presenter, Society for the Study of Reproduction Annual Meeting, Milwaukee, WI.
White, F. J. Presenter, Oklahoma Research Day at Cameron University, Lawton, OK.

Articulations Agreements with Community Colleges

The Oklahoma Alliance continues to work with community colleges throughout the state. The Oklahoma State Regents for Higher Education articulation agreement and policy “guarantees transferring students successfully completing Associate of Science or Associate in Arts degrees into higher education institutions in the Alliance.”

Oklahoma State University continued collaboration with Northern Oklahoma College (NOC) in the NOC-OSU Gateway Program. The program is located on NOC’s Stillwater campus. Students who have applied for freshman admission to OSU, but do not meet current admission requirements may qualify for admission to the NOC-OSU Gateway Program. Gateway courses transfer as equivalent to specific OSU courses and meet general education requirements. Students in the NOC-OSU Gateway Program are eligible to be OK-LSAMP Scholars and be paired with a faculty mentor.

The “dual enrollment” program between Tulsa Community College (TCC) and OSU continues to be successful. Students applying for the dual admission program are accepted at both TCC and OSU. Once admitted, a 4-year plan is developed. Students will complete courses at TCC before attending OSU, thus allowing students to graduate from Oklahoma State University.

Alliance institutions continue to work with community college staff in identifying minority and under-represented STEM major who are transferring to four-year institutions.

SCHOLAR AND BD FELLOW PUBLICATIONS

Scholars and Bridge to the Doctorate Fellows, along with their mentors, submitted articles for publication in peer-reviewed journals. Listed below are the scholars and title of their publications. Selected examples of the articles are listed in Appendix J.


Hughes, S. Editor. AACC International (American Association of Carbohydrates).


**SCHOLAR HIGHLIGHTS**

OK-LSAMP scholars are among the top students on Alliance campuses and throughout the nation. This year, Oklahoma had Scholars participate as Goldwater Scholars, UDALL Scholars, and BD Fellows and former scholar selected to participate in the Nobel Laureate Conference in Germany.

Additionally, scholars are consistently honored through President and Dean’s Honor Rolls, serving as officers and members of student organizations, and recipients of numerous scholarship awards. Additional news articles and related photos are found in Appendix K. Listed below are select examples of Scholar highlights.

*Sheila Baradaran*, OU, received Program of Excellence in Chemical Engineering Research.

*Justina Bradley*, LU, was selected to present Oklahoma Research Day at the Capitol. She won first prize in her division for her poster and research based on her summer research experience at Brookhaven National Labs in Long Island, New York. Additionally, Justina was featured on the main page for Brookhaven Labs following her internship experience.
Eric Butson, NSU, was a part of a FaST team selected to conduct research at Brookhaven National Labs in Long Island, New York. He was selected to give an oral presentation of his summer research project to staff at Brookhaven. This honor goes to few students.

J. R. Conanan, OU, Dean’s Honor Roll, Tom J. Love Outstanding ASME student member, Third place in the Old Guards Oral Presentation at the ASME Student Professional Development Conference (SPDC), Highest Technical Score Award in the Old Guards Oral Presentation at the ASME Student Professional Development Conference (SPDC), received 3 Honor’s College Undergraduate Research Opportunity Program Scholarships, and the Worstell Scholarship.

Matthew Duncan, OSU, was selected as one of 17 students from around the world to attend the American Association of Petroleum Geologists Annual Leaderships Summit in Tulsa, Oklahoma. During the conference Matt was elected to the Student Chapter Leadership Committee, and named as a Student representative to the AAPG Astrogeology Advisory Board.

Ryan Edwards, OU, presented research at two national conferences and three state conferences. Additionally, his involvement in community service is above others in the program.

J. Connor Ferguson, OSU, received one of the highest honors at OSU as an Outstanding Senior and as a Senior of Significance. Additionally, he served as a judge for the first Sac and Fox Nation Science and Engineering Fair for Native American elementary-high school students.

Elaine Harder, CU, traveled to Brazil and was awarded an internship with CRV Lagoa (the largest animal breeding company in the world); made four presentations at state conferences: Research Day at the Capitol (invitation only) placed first among regional universities and second overall; Oklahoma IDEA Network of Biomedical Research Excellence summer program; Oklahoma Research Day, and the OK-LSAMP Research Symposium.

Diana Lucero, OU, honored as the Minority Engineering Program Outstanding Junior and attended/presented at one state and four national conferences.

Alex Macharia, UCO, made three presentations at state conferences on “aneurysms have on hypertension.”

Lydia Meador, OSU, received a Graduate Research Fellowship Program (GRFP) award and was recognized as an Outstanding Senior in the College of Arts and Sciences as well as being recognized as an OSU Senior of Significance.

Andrew Mock, OSU, received a 2011 Graduate Research Fellowship Program (GRFP) award. Andrew will attend graduate school at the University of Illinois.
Ricardo Montoya, OSU, Presentation at the NCUR conference selected for inclusion in the Conference Proceedings, received several awards for his architectural projects and attended the national AEI National conference.

Candice Pawnee, LU, participated as a judge for the first Sac and Fox Science Fair for elementary-high school Native American students.

Megan Salisbury, OU, recipient of the OU Honors College Undergraduate Research Opportunity Program (UROP) funding, as well as the OU College of Engineering Interdisciplinary UROP and a finalist in the BP Award for Achievement Scholarship.

Dominique Thomas, CU, made one presentation at an international conference and three presentations at national conferences on multimedia design. Additionally, she has been accepted into graduate school.

Larmar Williams, UCO, made three presentations at state conferences on “aneurysms have on hypertension.”

Tanner Williams, SWOSU, presented a paper at the Society of Neuroscience 2011 international conference in Washington D.C. The conference had over 30,000 neuroscientists from around the world present.

STAFF TRAINING AND DEVELOPMENT

OK-LSAMP staff continually seek professional development opportunities. Learning is a continuing, life-long process that those working in education must embrace.

Susy Calonkey, Bridge to the Doctorate and OK-LSAMP Program Staff Coordinator, the University of Oklahoma: (1) member, American Society of Engineering Education (ASEE); (2) served as recruiter and outreach coordinator for the College of Engineering; (3) Dean’s Leadership Council Staff Advisor; (4) coordinated Dean’s Leadership Council Retreat; (5) E-1 First Year Engineering Student Club, staff adviser; (6), attended the Joint Annual Meeting in Washington, D.C., June, 2011; (7) attended the Oklahoma Engineering Foundation Engineering Fair, Oklahoma City, OK; (8) Delegate to World Creativity Forum, November 2010; (9) Attended Inaugural National Science Fair, Washington, DC, October 2010; (10) Member, Women’s Philanthropy Network, University of Oklahoma; (11) Board Member, Norman Community Foundation.

Kay Porter, Program Manager, Oklahoma State University: (1) State Coordinator for Women of Color National Conference; received Certificate of Achievement from the Career Communications Group for work with Women of Color (Appendix L); (2) served on the Planning Committee for the Women in Science Conference, Oklahoma City, OK for junior and high school girls; (3) served on the OSU Institutional Diversity Board; (4) served as Secretary to the Oklahoma State University Native American Faculty and Staff
Association; (5) Council Member, OSU Alumni Council and Alumni Leadership Council, representing the American Indian Alumni Association; (6) attended the Oklahoma Native American Students in Higher Education (ONASHE) state conference, Tahlequah, Oklahoma; (7) served on the Minority Engineering Program (MEP) summer selection committee; (8) Committee member for the Institutional Diversity Honors Convocation; (9) member Mexican American Engineers and Scientists (MAES) organization; (10) advisory council member, NSF project Red Light/Green Light; (11) board member, Oklahoma Distinguished Young Women of America (formerly Oklahoma Junior Miss Scholarship Program; (12) participated in Read Across America program; (13) presentations to state-wide higher education advisor council; (14) judge for the first Sac and fox Nation Science and Engineering Fair, Stroud, OK; (15) Board member, Native American Studies Center; (16) attended the Joint Annual Meeting in Washington, D.C., June 2011.

**Fara Williams**, Grant Coordinator, Oklahoma State University: (1) attended and presented at the Oklahoma Native American Students in Higher Education (ONASHE) state meeting, Tahlequah, Oklahoma; (2) participated in Read Across America with local elementary school; (3) volunteer during the Women in Science Conference, Oklahoma City, Oklahoma; (4) presented the LSAMP/BD program to faculty on the OSU campus; (5) met with parents and prospective scholars to explain one-on-one the benefits of OK-LSAMP; (6) Attended summer workshop for high school minority students, designed, developed, and hosted by an OK-LSAMP Scholar, entitled: Class Matters; (7) attended the Joint Annual Meeting in Washington, D.C., June 2011; (8) board member, Oklahoma Project WILD Facilitator program; (9) Served as a recruiter for the Hispanic American Foundation College Days; (10) attended Women of Color National Conference; received Certificate of Achievement from the Career Communications Group for work with Women of Color (Appendix L); (11) Judge, Cherokee Nation Science Fair; (12) presentation, Cherokee Meet and Greet reception; (13) judge at Oklahoma Research Day, Lawton, Ok; and (14) completed various safety training programs.

**BRIDGE TO THE DOCTORATE**

The Oklahoma Bridge to the Doctorate program has completed two cohorts of the program. Cohort III was awarded to Oklahoma State University in August 2008, for two years of NSF funding. Cohort IV, University of Oklahoma, was awarded in April 2009, to begin August 2009.

**Cohort I and II**

Cohorts I and II Bridge to the Doctorate Fellows at both OSU and OU have been successful in completing a total of 9 Master of Science degrees and 1 Doctor of
Philosophy degree. Eight (8) Doctor of Philosophy degrees are expected to be completed by December, 2010. Five students either transferred to another institution or left the program.

Cohort I and II Significant Highlights

**Felix De La Cruz,** University of Oklahoma, Cohort II completed requirements for the Master of Science degree in Mechanical Engineering in May, 2010

**Steven Harris,** University of Oklahoma, Cohort II completed requirements for the Ph.D. in Biochemistry and was accepted into the Seeding Postdoctoral Innovators in Research and Education (SPIRE) program at the University of North Carolina.

**Desmond Harvey,** University of Oklahoma, Cohort II became the Coordinator for the Multicultural Engineering Program (MEP) program at Oklahoma State University. The program works on recruitment and retention of under-represented undergraduate students in all STEM disciplines, especially engineering.

**Jacob Henderson,** University of Oklahoma, Cohort II, completed requirements for the Master of Science degree in Electrical Engineering, May 2011 served as assistant to summer engineering K-12 camps during the summer. Additionally, he has travelled to public schools to make presentations on the Sooner Flight Academy and Robotics.

**Quintin Hughes,** University of Oklahoma, Cohort II, completed requirements for the Master of Science degree in Engineering Education and will defend his Ph.D. work in July, 2011. During the summer 2011 Quintin participated in the Engineers in Practice program in Thailand.

**Kevin James,** University of Oklahoma, Cohort II served as director for a course he developed with the National Society of Black Engineers entitled: Summer Engineering Experience for Kids (SEEK). The course was for 6th grade students in the Washington, D.C. area. Additionally, Kevin will be spending 3 weeks in Thailand participating in the Engineering in Practice program, teaching engineering lessons.

**Brek Wilkins,** Oklahoma State University, Cohort I, completed degree requirements for the Ph.D. and accepted a post-doc with the Oklahoma State University Center for Health Sciences, Tulsa, OK.
Cohort III

Cohort III, awarded to Oklahoma State University, recruited 12 Fellows for entry into graduate programs. Eight began in the Fall 2008 term and four began in the Spring 2009 term. One additional Fellow was added in May, 2011 to fulfill grant funds.

Marcus Benjamin, received his BS degree in Chemistry from Jackson State University, 2006. BD emphasis: Chemistry. Expected MS completion date: Fall 2011.

Tomica Blocker, received her BS in Biology from Langston University, 2008. BD emphasis: Zoology. Expected MS completion date: Fall 2011 with continued Ph.D. work through the GRFP.

Zachary Carpenter, received his BS and MS degree in Electrical Engineering from the University of Tulsa. BD emphasis: Electrical Engineering. Expected Ph.D. completion date: Spring 2012.

Scott Fine, received his BS degree in Plant and Soil Sciences from Oklahoma State University. BD emphasis: Plant and Soil Sciences. Completed MS degree, July 2010 and continues in Ph.D. program.

Erik Gonzales, received his BS degree in Physics from East Central University. BD emphasis: Physics. Expected MS completion date: Fall 2012.

Jonathan Gonzales, received his BS degree in Physics from East Central University. BD emphasis: Electrical and Computer Engineering. Completed the MS degree in Fall, 2009, expected Ph.D. completion date: Spring 2012.

Matt Hough, received his BS degree in Plant and Soil Sciences from Oklahoma State University. BD emphasis: Plant and Soil Sciences. Completed MS in May, 2011 and accepted employment in his field.

Shawna Hughes, received her BS degree in Biology from South Carolina State University. BD emphasis: Food Sciences. Expected MS completion date: Fall 2011.

Minh Ngo, received her BS degree in Biochemistry and Molecular Biology from Oklahoma State University. BD emphasis: Forensic Sciences-Toxicology. Completed MS in December 2010 and accepted employment in her field. Her current employer will be paying for graduate school as a condition of employment.

Richard Osei, received his BS degree in Computer Science from Langston University. BD emphasis: Computer Science. Expected MS completion date: Fall 2011.

Molly Parkhurst, received her BS degree in Zoology from Oklahoma State University, BD emphasis: Zoology. Expected MS completion date: May 2012.
Cody Pinkerman, received his BS degree in Aerospace and Mechanical Engineering from Oklahoma State University. BD emphasis: Mechanical and Aerospace Engineering. Completed M.S. July, 2010 and continues in Ph.D. program.

C. Doug Yarholar, received his BS degree in Civil Engineering from Oklahoma State University. BD emphasis: Civil Engineering. Completed the MS degree in May 2010 and accepted employment in industry.

Cohort III Fellow Highlights

Bridge to the Doctorate Fellows participated in several activities during the third year of the program. All Fellows participated in the 16th Annual Research Symposium held on the OSU campus and hosted by the OK-LSAMP program staff. Fellows participated in OSU Research Week activities as moderators and presenters; participated in program/department specific research activities; and four Fellows attended the Joint Annual Meeting (JAM) in Washington, D.C., in June, 2010. One BD Fellow received funding for her research through the Graduate Research Fellowship Program (GRFP) and was chosen to represent Langston University, her alma mater, featuring STEM programs and opportunities for minority women. Additionally, Fellows provided one-on-one mentoring to undergraduate students; gave presentations on the benefits of graduate school; attended the Women of Color Conference and Women in Science conference; visited local area middle schools, high schools, and other universities to promote STEM education and encourage the students to consider a STEM career field. Fellows had articles accepted for publication and made presentations at national conferences in their field.

Individual highlights include, but are not limited to:

Tomica Blocker, (1) Peer mentor for undergraduate OSU Zoology students and Langston University, a historically black college, STEM in preparation for their graduate careers; (2) presentation, Westbrook Elementary School 3rd Grade classrooms. Oklahoma City, OK: “It’s not magic, its science!!” (interactive program to promote love of science among children); (3) Volunteer at the 16th Annual Research Symposium, (4) Served as Treasurer for the Oklahoma State University Black Graduate Student Association; (5) Served on the Graduate-Undergraduate Mentorship Program in the Oklahoma State University Black Graduate Student Association, (5) Serve as an high school mentor for summer Upward Bound program, (6) attended the Women of Color Conference, Dallas, Texas.

Scott Fine, (1) had one article submitted for publication in the Journal of Environmental Quality and has two more ready for submission to the Agronomy Journal; (2) made a poster presentation at the American Quaternary Association National Biennial Meeting in Laramie, WY; (3) Completed requirements for the Master of Science degree in July, 2010; (4) Volunteered at the 16th Annual Research Symposium; (8) has served as
a Teaching assistant on multiple occasions for his major advisor; (9) Assistant Soil Judging Coach (placed second at regional and earned the right to compete in the 2011 National Collegiate Soils Contest in Bend, Oregon).

Zach Carpenter, (1) volunteer for the FIRST robotics competition and served as a robot inspector; (2) STEM presentation to middle school students on the importance of pursuing degrees in STEM.


Matthew Hough, (1) Selected to present his research on wetlands at the Society of Wetland Scientists in Salt Lake City, Utah; (2) presented at the National Soil and Science Society of American annual meeting in Pittsburgh, PA; (3) Volunteer at the 15th Annual Research Symposium; (4) volunteer at OSU Research Week, (5) completed a national hydric Soils class in North Carolina.

Shawna Hughes, served as the Associate Editor of the AACC International Carbohydrates Newsletter. Additional activities included: (1) attending the FAPC Research Symposium with a poster presentation entitled “Confocal Scanning Laser Microscopy (CLSM) Studies of Foam Stability and Cell Structure of Underdeveloped Dough Containing Surfactant,” (2) attended the 16th Annual Research Symposium; (3) Attended the NSF Joint Annual Meeting in Washington, D.C., July 2010; (4) Served as a volunteer for the Friends of Diversity Golf Tournament and Into the Streets; (5) Served as Secretary to the OSU Black Graduate Student Association.

Minh Ngo, participated in teaching a group of 49 high school and junior high school students about the degree program in forensic science. Students were provided with hands-on laboratory experiences. Additionally, she presented a poster at the Center for Health Sciences Research week entitled: “Development of an analytical method for vinca-alkaloids using liquid chromatography tandem mass spectrometry (LC/MS/MS).”
Cody Pinkerman, (1) volunteer, 16th Annual Research Symposium; (2) mentored and assisted undergraduate students in class and labs, (3) presented and co-authored an article "Modeling Hypersonic Propulsion Using Finite Element CFD" for the 49th AIAA Aerospace Science Meeting, Orlando, Florida.

Cohort IV

The University of Oklahoma was awarded a Bridge to the Doctorate program to begin in the Fall 2009 semester. The following Fellows were accepted into the program:

Chris Aguayo – Received a Bachelor of Science degree in Aerospace Engineering from the University of Oklahoma. His career goal is “to become a test pilot and focus on optimization and efficiency aircrafts.”

Brittanie Atkinson – Received a Bachelor of Science degree in Biochemistry and Molecular Biology from Langston University. Her career goal is “to perform research investigating mechanisms that are operative to the pathogenesis of autoimmune diseases.”

Mario Franklin – Received a Bachelor of Science degree in Industrial Engineering from the University of Oklahoma. His career goal is: “to pursue a Ph.D. in Industrial Engineering with an emphasis in Engineering Education.”

Juan Herrera – Received a Bachelor of Science degree in Computer Engineering from the University of Oklahoma. His career goal is: “to develop novel computer architectures that use less power while increasing reliability and performance.”

Jason Kimmel – Received his Bachelor of Science degree in Mechanical Engineering from the University of Oklahoma. His career goal is: to teach electromechanical engineering at a major university.

Lorne Jordan – Received a Bachelor of Science degree in Chemistry and Biochemistry from Bowling Green State University. His career goal is: “To become a leader in oncological research and contribute to the effects of the National Center Institute.”

Ryan Jordan – Received a Bachelor of Science degree in Geology from Oklahoma State University. His career goal is: “to continue work in Africa and develop programs that expose undergraduate students to international research in new and interesting locations and to reveal earth's history by utilizing geophysics in creative ways.”
Meghan Liles – Received a Bachelor of Science degree in Biochemistry and Molecular Biology from Oklahoma State University. Her career goal is: “To perform research investigating mechanisms that are operative in the pathogenesis of autoimmune diseases.”

Chris Mace – Received a Bachelor of Science degree in Geology from Oklahoma State University. His career goal is: “To work in governmental research or the petroleum industry.”

Chrystal Moore-McAndrews – Received a Bachelor of Science degree in Microbiology from Northeastern State University, Oklahoma. Her career goal is: “To operate a research lab examining antibiotic resistance in bacteria.”

Shawna Ong – Received a Bachelor of Science degree in Electrical Engineering from the University of Oklahoma. Her career goal is: “To further research experiences and impact in the defense industry with an independent research division.”

Ryan Watley – Received a Bachelor of Science degree in Chemistry from the University of Arkansas-Pine Bluff. His career goal is: “To work with organize synthesis mechanisms and to impact biological research.”

Cohort IV Highlights

The second year of the BD program noted one Fellow defending his MS thesis with others expected to complete MS degree requirements by December, 2011. Fellows are continuing with Ph.D. requirements immediately upon receiving the MS. Two Fellows are preparing for general exams to be taken in the spring 2012 semester. One Fellow left the program upon completion of his M.S degree and returned to industry in his chosen career field.

Fellows attended a grant writing workshop and a professional ethics training in responsible conduct of research. Two Fellows in the Medical Sciences program have attended extensive training to understand the different professions in the unit.

Fellows have also been involved in activities such as Loveworks, a mentoring program for 6-8 grade students in the after school program; a tutoring program in the local high school; Tech Camp for elementary school students; freshman orientation projects; IEEE Hope project for elementary school students; involvement in the Black Graduate Student association; and projects with the OSU BD program Fellows.

Fellows presented their research at three state conferences, three national conferences, and one international conference.
Individual highlights include, but are not limited to:

*Chris Aguayo:* (1) assistant director for the 2011 AT&T Summer Bridge Program; (2) coordinated an aerospace engineering session during an additional summer bridge program; (3) panel presentations and guest speaker to undergraduate students in engineering; (4) serve as a mentor to several engineering undergraduate students.

*Shawna Ong:* (1) founding member and graduate liaison of the society of Asian Professional Engineers, (2) Attended 2010 NSBE in Toronto, Canada, (3) attended the 2010 IEEE Southwest Symposium on Image Analysis & Interpretation in Austin, Texas, (3) attended the Joint Annual Meeting in Washington, D.C., June 2010; (4) high school tutor in Trig and Special Math classes for local public school; (5) work with the elderly and special needs individuals in free time.

*Lorne Jordan:* (1) Secretary, OU Black Graduate Student Association; (2) President of Phi Lambda Upsilon (Chemistry graduate student organization); (3) volunteer 16th Annual Research Symposium, Stillwater, OK; (4) volunteer for various community service projects.

**EVALUATION PROCEDURES**

Dr. Rosemary Hayes, Director for the Center for Institutional Data Exchange and Analysis, located on the University of Oklahoma campus, Norman, Oklahoma remains as the outside evaluator for the Oklahoma Louis Stokes Alliance for Minority Participation program. Dr. Hayes works closely with the Grant Coordinator to collect data on all Scholars in the Alliance. The data is used to prepare a yearly evaluation report by Alliance institution. The report contains recommendations for improvement on each Alliance campus as well as Alliance-wide. In addition to recommendations, evaluators report on the positive efforts and activities that are being conducted both by Alliance campuses as well as Alliance-wide. Once-per year, the evaluation team meets with program staff and the Principal Investigator to discuss project outcomes and changes in the data base.
APPENDIX A

OKLAHOMA NATIVE AMERICAN STUDENTS IN HIGHER EDUCATION (ONASHE)
2011 ONASHE Conference Program

4th Annual Oklahoma Native American Students in Higher Education Conference

Northeastern State University

Tahlequah, OK
February 18-19, 2011
APPENDIX B

OKLAHOMA STATE UNIVERSITY

SUMMER WORKSHOPS

AND CAMPS
Smart Cars
Summer Academy

“Smart sensors” are being used in hundreds of application areas, like environmental monitoring, homeland security, medicine, aerospace and automobiles. Throughout the “Smart Cars” week long residential academy, students will use smart sensor concepts and develop a smart sensor system for steering an autonomous race car.

APPLICATIONS ARE DUE BY APRIL 1, 2011

High school students entering the 11th – 12th are encouraged to apply at http://diversity.okstate.edu
Fired Up about Research, Science, & Engineering Summer Academy

What is Fired Up?

This camp is completely FREE and will be an intensive week-long residential program during which participants will be challenged with laboratory and field-based scenarios centered on a common theme—Fire. The participants will also investigate careers, learn new skills, and prepare for the fascinating world of technology. Some of the specific activities will include forensics, robotics, and the science and engineering of fire.

APPLICATIONS ARE DUE BY APRIL 15, 2011

High school students entering the 10th–12th grade are encouraged to apply at http://diversity.okstate.edu
For 15 years, REYAP has been sowing and growing and is now reaping success. Early introduction to agricultural education strongly influences subsequent career choices.

- All REYAP high school senior interns attend college with most majoring in agriculture.
- REYAP’s programs and activities contributed to a 72 percent increase in students majoring in agriculture at Langston University.
- Five REYAP students have been recognized as USDA 1890 National Scholars.
- REYAP students have won national science research and public speaking competitions.
- REYAP interns are recruited from across the nation.
- REYAP alumni with degrees in agriculture are highly recruited for professional positions in fields such as natural resource management, animal science, agribusiness, agricultural education and food science.

REYAP Vision
Culturally diverse youth will live the American dream as they become informed and inspired by opportunities in agriculture.

For additional information, contact:
REYAP
P. O. Box 1647
Tulsa, OK 74101
Phone: (918) 619-3111
Fax: (918) 296-9729
Email: reap@sbcglobal.net
www.reyap.org

Promoting Opportunities in Agriculture for Culturally Diverse Youth
Welcome TRiO Students

Student Support Services
Provides opportunities for academic development, assists students with basic college requirements, and motivates students toward the successful completion of their postsecondary education.

Educational Talent Search
Provides academic, career, and financial counseling to its participants and encourages them to graduate from high school to continue on to and complete their postsecondary education.

Upward Bound
Provides opportunities for participants to succeed in their high school performance and ultimately in their higher education pursuits.
What is Talent Search?

Educational Talent Search is a federally funded TRIO grant program targeting middle and high school students who are low-income and potential first generation college students.

The primary goal of the program is to help students successfully complete high school and encourage them to continue their education at the postsecondary level. Our services are not limited to academic support, but extend into the areas of college awareness, career exploration, and life skills. We also provide opportunities to visit various college campuses and take part in cultural and educational activities not otherwise available to them.

We serve approximately 600 students in our target area which includes Agra, Carney, Cleveland, Davenport, Ripley, and Yale.

Contact Information

OKLAHOMA STATE UNIVERSITY
EDUCATIONAL TALENT SEARCH
TRIO Department – Division of Institutional Diversity
422 Scott Hall, Stillwater, OK 74078
Phone: 405-744-6402
Fax: 405-744-4202
Email: tsou@okstate.edu
http://triodepartment.okstate.edu

The Oklahoma State University Educational Talent Search Program will treat all eligible applicants equally, regardless of race, color, national origin, gender, sexual orientation, religion or physical disability. Oklahoma State University, in compliance with Titles VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IV of the Education Amendments of 1972 (Higher Education Act), Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, handicap, or status as a veteran, in any of its policies, practices or procedures. This provision includes, but is not limited to, admissions, employment, financial aid and educational services. Talent Search is 100% federally funded by the U.S. Department of Education.
APPENDIX C

UNIVERSITY OF OKLAHOMA

SUMMER WORKSHOPS

AND CAMPS
WHO: Girls entering their 7th or 8th grade year in fall 2011 should apply. African American, Hispanic/Latino, American Indian/Alaskan Native, and/or First Generation students are strongly encouraged to apply; however, the program considers all applicants.

WHAT: The Engineering GLAMS Summer Program is a four-day introduction and exploration of science, technology, engineering and mathematics (STEM) through fun, hands-on design projects with OU professors and current students. The program requires a $30 deposit per student, but will be refunded upon your selection and participation.

WHY: Do you know that engineers create makeup and other beauty products? Do you want to do something that could improve the world or cure a disease? Do you want to design cool gadgets or create virtual worlds? These are just some of the cool things women engineers get to do! This program will help you explore and understand how to apply math, science and technology to see how as an engineer, you can affect the world. Come discover engineering with other girls your age!

ELIGIBILITY REQUIREMENTS:
1.) Must be a girl of any ethnic background.
2.) Middle school student in their 7th or 8th grade level in the Fall 2011 semester.
3.) Must be a U.S. citizen.
4.) Available for one week (June 20-23) in Summer 2011.

Application deadline: May 7th, 2011

Contact Information:
Tiffany Smith, Director – Engineering GLAMS- (405) 325-3892
WEBSITE: www.ou.edu/coe/glams
June 20 – 26, 2010
www.ou.edu/devas

Application Deadline: April 30, 2010
The BP Devas Summer Camp program is a weeklong journey exploring engineering through hands on projects while staying on the University of Oklahoma (OU) Norman campus. The camp program fee per student includes all housing, meals, seminars, tours, entertainment and engineering project supplies.

Who: Young women entering the 10th, 11th, or 12th grade in the Fall 2010 should apply. African-American, Hispanic/Latina, American Indian/Alaskan Native students are strongly encouraged to apply, however the program considers ALL applicants.

Contact Information
Tiffany Smith, BP DEVAS Director • 405-325-4096 • devas@ou.edu • www.ou.edu/devas
Shell Passport to Engineering Camp

**WHO:** Students entering 7th or 8th grade in the fall of 2011 should apply. African American, Hispanic/Latino, American Indian/Alaskan Native and/or first generation students are strongly encouraged to apply. However, all applicants are considered for the program.

**WHAT:** Passport to Engineering will introduce students to diverse engineering disciplines including solar power and battery powered electronics. To reserve a spot, a $30 deposit per student is requested. This will be refunded upon selection and completion of the program. If you are unable to pay the deposit, please contact us for other arrangements.

**WHY:** Engineers are the brains behind the coolest technologies. Do you want to design spaceships, roller coasters, or life-saving medicine? Do you want to do something that could improve society and our way of life? These are just some of the cool things engineers get to do! This program will help you explore and understand how to apply math, science and technology to see how as an engineer, you can affect the world. Come discover engineering with other students your age!

**Eligibility Requirements:**
1. Middle school student in her 7th or 8th grade level in the Fall 2011 semester.
3. Available for four days (June 6-9) in Summer 2011.

**Application deadline: May 7th, 2011**

**Contact Information:**
Jackie Foos, Director – Passport to Engineering- (405) 325-3445
WEBSITE: [www.ou.edu/coe/passport](http://www.ou.edu/coe/passport)
BP Engineering Academy
June 12-18, 2011

www.ou.edu/bpea

The BP Engineering Academy is a 1-week residential summer program for young men in high school entering 10th, 11th, and 12th grade in 2010 who also have an interest in math, science, and/or technology. Students from African-American, Hispanic/Latino American, American Indian/Alaskan Native, and/or first generation backgrounds are strongly encouraged to apply however the program considers all applicants. If you are selected for this program your on-campus experiences will include the following:

- Design, Build and Fly a creation of your own in OU’s two new engineering buildings
- Full access to our high-tech engineering facilities and research laboratories
- Hands on exposure to different engineering fields via fun activities with our best OU engineering professors
- Meeting other students like yourself from all over the United States

Application deadline: May 7th, 2011

Contact Information:
Teara Flagg, Director – BP Engineering Academy – (405) 325-0095
EMAIL: bpea@ou.edu WEBSITE: www.ou.edu/bpea
16th ANNUAL RESEARCH SYMPOSIUM
Saturday, September 25, 2010

Keynote Speaker: Dr. Henry Neeman, Director, Supercomputing Center for Education and Research (OSCER), University of Oklahoma

Noble Research Center
Oklahoma State University, Stillwater, OK
9:00 AM – 3:00 PM

Oral/Poster Presentations by OK-LSAMP & Invited Scholars from Other Programs
Historically Black College/University Undergraduate Program (HBCU-UP)
McNair Scholars Program
Native Americans in Biological Sciences (NABS) Program
Undergraduate Biomedical Education Program (UBEPI)

APPENDIX E

WENTZ FOUNDATION AWARDS
Oklahoma State recognizes Wentz Research Project Scholars

Monday, 25 April 2011 16:14

Forty four Wentz Scholars were recognized and honored April 22 at the annual Lew Wentz Foundation and Oklahoma State University Awards Program. The prestigious Wentz Research Project scholarship of $4,500 per year helps outstanding undergraduates prepare for graduate study or national competitions. With this award, students have the opportunity to work with a faculty mentor. In addition to the research awards, Wentz also sponsors general leadership scholarships worth $2,750 each, music awards, and a special category of awards for non-traditional students who have overcome significant obstacles to work on their degrees.

"OSU has always owed much to the Wentz Foundation for decades of generous programming that has helped countless students," said Leo Firmat, director of scholarship development, the office that manages Wentz Research. "Being able to fund such high level research for several years now has made it possible for our best students to compete for major awards, be admitted to the top graduate schools, and acquire excellent jobs. This program shows why." At Feldy's award, students of $000 were presented to three Wentz Scholars for their poster displays. The winners were: Henry Herrmann, Stillwater philosophy senior, "On Substitution of Public Opinion"; Rafe Hazen, Allen, Texas chemical engineering senior, "Assessing the Fracture Behavior of a Rock"; and Daniel Eady, Broken Arrow civil and environmental engineering senior, "Effects of Stress and Strain on Concrete Mixes Used as Infrastructure in Developing Countries." Judges for the awards were Associate Dean of ELL and Jennifer Garrett; Nell Kinsey, Jamie Sieber, Lee Miller and Brian Strocker from Normadics.

The Wentz Scholarships were established in 1986 with a $50,000 endowment gift that was five times larger than the sum of all other student loan funds at what was then Oklahoma Agricultural and Mechanical College.

Before the poster presentation awards were given out, the OSU Serenity String Quartet performed two songs. Two students who played in the quartet were Wentz Music Scholars. Also on the program were Bob Stenberg, OSU Provost, who spoke on how research can affect students' lives, as did his wife Patricia Hood-Wentz; and Professor of Atmospheric Sciences, who spoke about Mr. Wentz's lifetime contributions to society, and how the Wentz Fund got started and is used today in different areas.

Students who received Wentz General Scholarships, Non-Traditional Scholarships, Music Scholarships, and the Ponca City Scholarship also were recognized. The Wentz Project Scholars and the subjects of their research were:

- Evan Boucher, Biological/Physical Sciences/Mathematics, "Monitoring Microinvertebrate Populations as a Tool to Measure Impacts of Management Practices on Sustainable"
- Kellie Brookes, Biological/Physical Sciences/Mathematics, "Effects of Radon in the Soluble G Protein of Human Respiratory Synthetase Virus (RSV) on infectivity"
- Shyli Barnes, Biological/Physical Sciences/Mathematics, "Effect of Interactive Tamarind Seed on Soil Salinity in Ripeban Area of Oklahoma"
- Trina Golt, Engineering/Technology, "Continuous Statistical Data Analysis of an EKG and iPhone Integration."
- John Cooper, Biological/Physical Sciences/Mathematics, "Drug Delivery Studies to Prepare Agents to Treat Cancer."
-Obastous Cagle, Agriculture, "Modular Effects on Insulin and IGF-1 Levels in Growing Horses - new: Dietary Effects on Insulin and Glucose in Growing Horses."
- Jonathan Crossley, Biological/Physical Sciences/Mathematics, "Special Values of L-Functions."
- Amanda Curtis, Biological/Physical Sciences/Mathematics, "Modular Analysis of Dendroclastic Binding Site on Igs."
- Cate Dooling, Social Sciences/Education Business, "The Influence of Icon Perception on Investment Decision-Making."

Jonathan De Los Santos, Social Sciences/Education Business, "Influence of Parenting Behavior on Interpersonal Dysfunction";
Daniel Ede, Engineering/Technology, "Effects of Stress on Root Development in Concrete Blocks Used as Infrastructure in Developing Countries";
Chesna Ferguson, Agriculture, "Control Methods for Heterodera Fossilis, Hessian Fly and Barley Powellgrass in Winter Wheat";
Kedi Fumilin, Agriculture, "Hormones Regulation of Wilt Pathway Gene Expression in an Arabidopsis Cell Line";
Michael Gallin, Biological/Physical Sciences/Mathematics, "Blue Chipset (a fractal) Gut Passage as a Vector for the Disposal of Invasive Zebra Mussels (D. polymorpha)";
Matthew Grant, Biological/Physical Sciences/Mathematics, "Synthesis of Agents for the Treatment of Brain Disorders";
Abigaail Hatmaker, Biological/Physical Sciences/Mathematics, "Reformation in the Roman Age: Creating an Interactive Key to the Apocalypse of Oklahoma";
Katie Hafmoe, Engineering/Technology, "Investigating How Drug Properties Play a Role in the Response Characteristics from Drug Delivery Systems";
Logan Ham, Agriculture/Engineering/Technology, "Bio-Sand Filtration for Third World Communities";
Henry Hart, Humanities/Letters, "On Polarization of Public Opinion";
Kalen Holbrook, Agricultural Engineering/Technology, "Characteristics of native Oklahoma Microalgae in the Removal of Pollutants from Flue Gas";
Josi Cohen, Biological/Physical Sciences/Mathematics, "Effects of Post-Translational Modifications on the Kcr9 Protein";
Stephanie Kline, Social Sciences/Education Business, "Psychopathic Traits, Empathy, and Objective Assessment of Emotion";
Katharine Lastley, Biological/Physical Sciences/Mathematics, "The Effect of Selenium on the Bone Calcium Restoration of Mother Rats After Nursing";
Hendrik Lohr, Social Sciences/Education Business, "Assessing the Rate of PM: An Analysis of Jim Crow Politics at Oklahoma's Constitutional Convention";
Molly Marynich, Agriculture/Engineering/Technology, "Water Contamination Through Macropores";
Lydia Messina, Agriculture, "Effect of genetic modifications on antioxidant production in canola seeds";
Laura Merzian, Engineering/Technology, "Effectiveness of Riparian Buffer Zones on Surface Phosphorus Transport";
Amanda Neighbors, Biological/Physical Sciences/Mathematics, "Investigating the Dynamics of the Acute Phase Response in Zebra Finches on Analysis of Plasma and Tissue";
Sarah Osgood, Biological/Physical Sciences/Mathematics, "The Missing Link in Synecocysts";
Quinn Parman, Agriculture/Engineering/Technology, "Physical Modeling of Biofertilizer Cilia";
Marinair Parrish, Social Sciences/Education Business, "The Effect of the Age of Acquisition on Trilingual Word Translation";
Kevin Roach, Engineering/Technology, "Examining the Viability of an Antimicrobial Coating for use on Prosthetic Surfaces";
Watt Shiner, Biological/Physical Sciences/Mathematics, "Morphometric and Molecular Phylogenetic Investigations of Asclepias curvata (Greenland, Woodford, a Poobly Understood Subtropical Milkweed)";
Jason Souther, Biological/Physical Sciences/Mathematics, "Regulation of PGLF by shear stress in human vascular cells";
Jeffrey Van Schyver, Social Sciences/Education Business, "Relationships between college students with ADHD and working memory deficits";
Mark Vasquez, Biological/Physical Sciences/Mathematics, "Algebraic Signal Theory";
Maria Vera, Engineering/Technology, "Testing the Effect of High Glucose Concentration on Retinal Cell Stability";
Stephanie Wambua, Agriculture, "Assessing Genetic Diversity Among Sorghum Germination and Breeding";
Claire Wilson, Biological/Physical Sciences/Mathematics, "New Phagocytic Activation Blocker for Dialysate Patients";
Amelia Wilson, Engineering/Technology, "Utilization of a hot air blower for compact microchimical heat exchanger";
Current Wentz board members are: Dr. Burt Herke, chair; Stan Lybarger, president and CEO, Bank of Oklahoma; James C. Orlofin, chair of the Oklahoma Lottery Commission and a senior shareholder in one of Oklahoma's largest law firms; and Tom McMurtr, Ponta City News publisher. Irish Hosten, CPA, of Hosten Wealth Management, serves as administrator.
Pictures from the event and winners located at: http://www.flickr.com/photos/okstatearts/5624032562/in/set-
72157608574501376
IT’S MORE THAN JUST ANOTHER “APP”

Oklahoma Louis Stokes Alliance for Minority Participation

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58
APPENDIX G

NATIONAL CONFERENCE ON UNDERGRADUATE RESEARCH (NCUR)
Oklahoma Experimental Program to Stimulate Competitive Research (EPSCoR) again provided support for OK-LSAMP scholars to attend the National Conference for Undergraduate Research (NCUR). This year, 13 Oklahoma undergraduates (11 of whom were OK-LSAMP scholars) presented at Ithaca College. Dr. Tim Hubin, Campus Coordinator, and Dr. Jimena Aracena, mentor, from Southwestern Oklahoma State University accompanied the students to New York. Additionally, Dr. Mark Payton, OK-LSAMP PI, attended the event as a representative of the OSU Graduate College as well as OK-LSAMP. Dr. Payton says, “What made the trip totally worth it was the opportunity to be with the scholars. That was priceless.”


Kevin Wilson, SWOSU chemistry student, presented a poster on “Synthesis and Characterization of Pyridine-Armed Reinforced Macrocycles and Their Metal Complexes.” Not Pictured: Wilmon Brown, III, OSU microbiology, presented a poster on “Purification of Protein Antigens from Shigella.” Sharonke Goode, UCO chemistry, presented a poster on “Tracking Phthalate Esters and Bis Phenol A in Oklahoma Surface Waters Using SPME and GCMS.”

In 2012, NCUR will be held at Weber State University in Ogden, Utah. Abstracts will be due in December. Be sure to bookmark the NCUR website for future reference and remember to submit an abstract for next year’s event.
APPENDIX H

NATIONAL SOCIETY OF BLACK ENGINEERS (NSBE)
OSU Engineering Grad Student Honored Nationally

Lamkin recognized for leadership excellence

March 30, 2011
Story by Caitlin Kinser, OSU Library Communications Intern

For Immediate Release

STILLWATER – Darron Lamkin, a first-year industrial engineering graduate student at Oklahoma State University, was awarded the Leadership of Excellence Award at the 2011 National Society of Black Engineers conference. Lamkin, one of 300 nominees, was chosen based on his involvement in the organization and in the community.

“I’m so humbled to be nominated,” Lamkin said. “I worked extremely hard.”

Lamkin currently serves as a regional parliamentarian for NSBE. In May, he will become a regional chair, covering Oklahoma, Texas and Louisiana. Before serving as parliamentarian, he was president of the NSBE-OSU chapter which was recognized as “2008 regional chapter of the year.”

Aside from his involvement in NSBE, Lamkin spends much of his time giving back to his community. He founded the non-profit organization Class Matters in August 2010, which is targeted toward teenagers and focuses on professional and academic development, and the promotion of engineering, technology and mathematics.

He started the organization after giving speeches to underprivileged kids through the Trio Program at OSU. He realized he wanted to help teenagers by providing inspiration and teaching life lessons.

“The world is bigger than yourself, so the best way to grow is by impacting your community because helping others is what it’s all about.”

After acquiring his masters, Lamkin plans to pursue a Ph.D. in educational psychology and technology so he can understand why people think the way they do. He would like to serve as a diversity recruiter for universities. Lamkin currently works as a student assistant at Edmon Low Library. In his spare time, he enjoys spending time with his daughter, bowling and writing poetry.

Oklahoma State University is a modern land-grant system that cuts across disciplines to better prepare students for a new world. Oklahoma’s only university with a statewide presence, OSU improves the lives of people in Oklahoma, the nation, and the world through integrated, high-quality teaching, research and outreach. OSU has more than 32,000 students across its five-campus system and nearly 21,000 on its Stillwater campus; with students from all 50 states and about 110 nations. Established in 1890, OSU has graduated more than 200,000 students who have made a lasting impact on Oklahoma and the world. CREATE – INNOVATE – EDUCATE – GO STATE!
APPENDIX I

WOMEN OF COLOR CONFERENCE
Thursday, October 28–Saturday, October 30, 2010
Sheraton Dallas Hotel
Dallas, Texas

HOSTED BY
IBM Corporation
Prairie View A&M University
Career Communications Group’s Women of Color magazine

www.womenofcolor.net
APPENDIX J

SCHOLAR / BD FELLOW

PUBLICATIONS
THE USE OF SOIL TYPES TO DIFFERENTIATE THE RELATIVE AGE OF SAND DUNES ACROSS A MODERN CLIMATIC GRADIENT IN THE SOUTHERN PLAINS, USA: IMPLICATIONS FOR DETERMINING PAST CLIMATIC CHANGE

Fine, Scott T. scott.fine@okstate.edu and Carter, Brian J., Dept. of Plant and Soil Science, Oklahoma State University, Stillwater, OK 74078; and Scott, Gregory, Natural Resources Conservation Service, Stillwater Soil Survey Office, 100 USDA, Suite 206, Stillwater, OK 74074.

Sand dunes fields and sand sheets are common along the northern and eastern edge of Cimarron River throughout its course in Kansas and Oklahoma. These windblown deposits occur in vegetative types ranging from the short and tall grass prairies of northwestern Oklahoma to the forests of east-central Oklahoma, along a climatic gradient of increasing precipitation from west to east. Soil orders associated with the aeolian parent material in the eastern part of the Oklahoma are ultic, psammentic, and arenic Alfisols (Eufaula, Konawa, and Dougherty soil series for “old dunes”), lamellic Entisols (Derby soil series for “middle-aged dunes”), and typic Entisols (Goodnight soil series for “young dunes”). Soil orders for the western half of Oklahoma and Kansas consist of typic Alfisols (Devol soil series for “old dunes”) lamellic Entisols (Eda soil series for “middle-aged dunes”), and typic Entisols (Tivoli soil series for “young dunes”). The aeolian parent materials (late Pleistocene- and Holocene-aged) responsible for these series are a direct result of climatic change (decrease moisture) at the global and regional level leading to destabilization of prior stabilized dunes and alluvial sands. With the return of udic and ustic (relatively moist) soil conditions, as current, re-stabilization ultimately leads to soil development of these soil series with evidence available for multiple cycles of climate change.

Through new detailed mapping and dating of soils across the proposed study area an improved understanding of past climate change and the extent of these conditions across Oklahoma and Kansas can be determined. Descriptions of past climatic schemes hold great interest as these environmental changes have been proposed to play significant roles in the shaping of past civilizations. An understanding of these changes will be no less important to our future as these sandy soil landscapes impact regional ground-water recharge and fragile ecosystem preservation. These soil-landscapes are an important natural buffer to environmental degradation by human population growth.
Journal of Environmental Quality - Abstract

Alternative Poultry Litter Storage for Improved Transportation and Use as a Soil Amendment

1. Chad J. Penn*a, Jeffery Vitalea, Scott Finea, Joshua Paynea, Jason G. Warrena,
2. Hailin Zhanga, Margaret Eastmana and Sheri L. Herronb

* Author Affiliations

1. a Oklahoma State Univ., Stillwater, OK 74078
   b S.L. Herron, BMPs Inc. Assigned to Associate Editor Xiying Hao.

Abstract

Transportation of poultry litter out of nutrient limited watersheds such as the Illinois River basin (eastern Oklahoma) is a logical solution for minimizing phosphorus (P) losses from soils to surface waters. Transportation costs are based on mass of load and distance transported. This study investigated an alternative litter storage technique designed to promote carbon (C) degradation, thereby concentrating nutrients for the purpose of decreasing transportation costs through decreased mass. Poultry litter was stored in 0.90-Mg conical piles under semipermeable tarps and adjusted to 40% moisture content, tested with and without addition of alum (aluminum sulfate). An additional study was conducted using 3.6-Mg piles under the same conditions, except tested with and without use of aeration pipes. Samples were analyzed before and after (8 wk) storage. Litter mass degradation (i.e., loss in mass due to organic matter decomposition) was estimated on the basis of changes in litter total P contents. Additional characterization included pH, total nutrients, moisture content, total C, and degree of humification. Litter storage significantly decreased litter mass (16 to 27%), concentrated nutrients such as P and potassium (K) and increased proportion of fulvic and humic acids. The addition of aeration pipes increased mass degradation relative to piles without aeration pipes. Nitrogen volatilization losses were minimized with alum additions. Increases in P and K concentrations resulted in greater monetary value per unit mass compared with fresh litter. Such increases translate to increased litter shipping distance and cost savings of $17.2 million over 25 year for litter movement out of eastern Oklahoma.
Identification of Nuclear Genes Encoding Chloroplast-Localized Proteins Required for Embryo Development in Arabidopsis

Nicole Bryant, Johnley Lloyd, Colleen Sweeney, Fumiyoshi Miyaga and David Makino

Abstract

We describe here the diversity of chloroplast proteins required for embryo development in Arabidopsis (Arabidopsis thaliana). Interfering with certain chloroplast functions has long been known to result in embryo lethality. What has not been reported before is a comprehensive survey for embryonic defects caused by mutants altered in chloroplast proteins. From a collection of transgenic and T-DNA insertion lines at the RIKEN chloroplast function database (http://csp.orCi.riken.crp.jp/chloroplast), that likely approach less than 1% of all genes and segregate for defective seeds, we identified 236 additional examples of DME genes that likely encode chloroplast-homologous proteins. Fourteen gene identities were confirmed with ollidism tests involving duplicated natural alleles. We then surveyed recent publications and the Arabidopsis database (www.arabidopsis.org) to establish a comprehensive database of 381 nuclear genes encoding chloroplast proteins of Arabidopsis associated with embryo-defective (110 genes), plant pigments (121 genes), chlorophyll (three genes), and plastid (138 genes) phenotypes. Our work has uncovered an unknown level of complexity in chloroplast function required for embryo development. Embryo development is frequently retarded when maize callus, winter wheat, or various nonchloroplast genes are disrupted in a transgenic plant. The identification of embryo-defective genes encoding chloroplast proteins is important in understanding the regulation of chloroplast development and function in Arabidopsis. A role for nuclear genes coding for embryonic development in Arabidopsis thaliana has been demonstrated, where duplicated nuclear genes control essential early embryo development and are involved in essential chloroplast protein function.
Dreams take Native student to Costa Rica

written by Matthew Lockwood, Native American Times
Published: 13 September 2016 06:13

User Rating: 4

Cassandra Camp, Scholar, OSU

Cassandra Camp’s name is Sheni. She is a Native American student at OSU. She has dreams of becoming a teacher or a lawyer. Her goal is to go to Costa Rica to learn about the culture and language. She is working hard to save money for her trip.

She has a part-time job at a coffee shop to help pay for her education. She is a hard worker and a good student. She has a lot of friends and is very popular.

She is also a campus activist and participates in many events. She is a member of the Women’s Empowerment Club and the Native American Student Association.

She is a role model for other students and is always ready to help others. She is a kind and caring person.

She is a beautiful woman with a warm and friendly smile. She is a hard worker and a successful student. She is a Native American woman who is making a difference in the world.
By Cassandra Camp

I give thanks to the Lord for all his blessings, grace, and tests of faith that he has planned and will continue to plan for my life. I also give thanks to my family for supporting me financially and emotionally, and last but certainly not least, spiritually.

I believe that education is the key to success and it is driven by ambition, desire or university's door is personal barriers. Barriers such as age, lack of finances, lack of support... you fill in the blank.

The reality of the situation is that higher education is at everyone's finger tips. If an individual's personal barrier is their financial status then there are resources that are available. The ludicrous part about it is many scholarships do not receive applicants; therefore, the money is left unclaimed.

As a student you are charged X amount of dollars for each hour, which means you are hiring the professors to expand your knowledge and are not benefiting from what you have chosen to invest in if not present. Studying can also be thought of in the same context. A person only gets out of tomorrow what they put in today.

The pursuit of higher education among American Indians is essential for the
Nano-Scale Fluidics for Ultra-Compact Lab-On-A-Chip Device Applications
Ryan Edwards
Biomedical Engineering, University of Oklahoma

NNIN REU Site: Microelectronics Research Center, Georgia Institute of Technology, Atlanta, GA

NNIN REU Principal Investigator(s): Dr. Ali Adibi, Electrical and Computer Engineering, Georgia Institute of Technology
NNIN REU Mentor(s): Dr. Siva Yegnanarayanan, Electrical and Computer Engineering, Georgia Institute of Technology
Contact: ryan.h.edwards-1@ou.edu, ali.adibi@ece.gatech.edu, sivay@ece.gatech.edu

Abstract:
Ultra-high quality factor ($Q$) chip-scale silicon nitride (SiN) optical microresonators are very attractive for lab-on-a-chip biological sensing. Two key challenges in developing multiplexed sensor arrays are fluidic sample delivery and surface coating of the sensor surface. This project focused on designing, fabricating, and testing various SU8 microfluidic channels tightly integrated on the top of an array of SiN microresonators. Each resonator was functionalized with a specific surface coating for a particular analyte, using a large-angle surface patterning tool and the Nano eNabler™ System from BioForce Nanosciences, Inc. Fluidic channels were sealed by a polydimethylsiloxane (PDMS) or glass cover slip and inlet/outlet ports were provided for the sample injection through external syringe. Preliminary experimental results, obtained by flowing a set of Brix fluids in the microfluidic channel with different refractive index units (RIU), showed that the sensor bulk refractive index sensitivity was ~ 1 nm/RIU.
Nuclear Magnetic Resonance Structure of the Prohead RNA E-Loop Hairpin1

S. Harris and S. Schroeder

Commissariat à l'Energie Atomique, Université de Paris-Sud,-CNRS, Gif-sur-yvette, France

Received 19 May 1989; revised 14 June 1989

Abstract: The bacteriophage T7 hairpin 229 packaging motor requires profound RNA for genome encapsidation. In the present study, we have undertaken a detailed NMR structure analysis of the RNA E-loop hairpin, 5'AUUGAAGU3'. The RNA has been studied as a complex with the G14 RNA hairpin, 5'AUUGAAGU3'. The structure of the RNA hairpin is consistent with the requirements for the RNA packaging motor.

1 This work was supported by the National Science Foundation (Grant No. 87-19174) and the American Cancer Society (IRG 67-00-19).

2 X-ray diffraction studies of the RNA alone and in complex with the packaging motor have been completed.

3 The RNA hairpin was prepared by amino acid analysis of the RNA hairpin, 5'AUUGAAGU3'.

4 The RNA hairpin was prepared by amino acid analysis of the RNA hairpin, 5'AUUGAAGU3'.

5 The RNA hairpin was prepared by amino acid analysis of the RNA hairpin, 5'AUUGAAGU3'.
5 OSU students receive major science grants

STILLWATER – Five Oklahoma State University students are receiving more than $121,000 each in grants awarded by the National Science Foundation.

By the Associated Press
Published: April 26, 2011

The students names as NSF graduate fellows and receiving the grants are Lydia Meador of Broken Arrow, Laura Merriman of Holdenville, Taber Midgley of Durant, Andrew Mock of Edmond, and Jessica Morrison of Bay City, Mich.

Michael Heppler, the assistant director of the university’s Student Academic Services for the graduate college, says the grant includes $90,000 paid directly as stipends to each student as well as $10,500 annually to cover tuition and fees.

Taber and Morrison will use their fellowships at Oklahoma State. Meador will use hers at Arizona State University, Mock will use his at the University of Illinois, and Merriman will use hers at North Carolina State University.

http://www.newsok.com/article/3562165
NSF grant awarded to five OSU students

Monday, 25 April 2011 18:46

Five Oklahoma State University students have been selected to receive more than a half a million in funding from the prestigious National Science Foundation.

Named NSF Graduate Fellows this spring are **Lydia Meador**, a Broken Arrow botany, biochemistry and microbiology senior; Laura Merriman, a Holdenville biosystems engineering senior; Taber Midgley, Durant biosystems engineering graduate student; **Andrew Mock**, an Edmond civil engineering senior; and Jessica Morrison, a Bay City, Michigan, microbiology graduate student.

Receiving honorable mentions were Phillip Long, a Stillwater botany graduate student, and Elisabeth Ponce-Garcia, a Life Span Development Psychology Ph.D. student from Mustang.

“The quality and success of OSU students is on full display with both undergraduates and graduate students bringing home such major awards,” said OSU President Burns Hargis. “We are proud of these extremely talented students and the faculty and others who supported them in their success.”

The value of each three-year Fellowship is $121,500, according to Michael Heppler, assistant director of Student Academic Services for the graduate college. This includes $90,000 in funding paid directly as stipends to each student, plus $10,500 annually to cover tuition and fees and other ancillary support at the institution where each student chooses to study.

“We are very proud of the five OSU students who have been awarded NSF Graduate Research Fellowships,” said Dr. Mark Payton, Interim Dean of the Graduate College. “These awards are the result of outstanding research performed by our students and their faculty mentors, and we extend our congratulations to them and their families. We wish all our scholars the best, whether they continue their research endeavors at OSU or choose to display the Oklahoma State brand at other prestigious research institutions.”

Taber and Morrison plan to use their Fellowships at OSU. Taber will study biosystems engineering and Morrison will study microbiology.

**Meador** will be using the grant for the Biological Design Ph.D. program at Arizona State University, **Mock** will study civil engineering at the University of Illinois and Merriman will study biological and agricultural engineering at North Carolina State University.

The Fellowship program is NSF’s oldest program, founded in 1952. The program has supported more than 44,000 U.S. citizens, nationals and permanent residents in pursuing advanced degrees in science or engineering. The program is highly competitive and is designed to help the U.S. maintain a talented and diverse scientific and technological workforce. According to the NSF, the Fellows are expected to become knowledge experts who will contribute to the nation’s research, teaching, and scientific and engineering innovations.
Andrew Mock
Five Oklahoma State University students, including a Citizen Potawatomi Nation member, have been selected to receive more than a half-a-million dollars in funding from the prestigious National Science Foundation. Joining CPN member Andrew Mock in receiving the awards and being named NSF Graduate Fellows this spring are Lydia Meador, a Broken Arrow, Oklahoma botany, biochemistry, and microbiology senior; Laura Merriman, a Holdenville, Oklahoma biosystems engineering senior; Taber Midgley, a Durant, Oklahoma biosystems engineering graduate student; and Jessica Morrison, a Bay City, Michigan microbiology graduate student. Mock, of Edmond, Oklahoma, is a civil engineering senior. Receiving honorable mentions were Phillip Long, a Stillwater, Oklahoma botany graduate student, and Elisabeth Ponce-Garcia, a Life Span Development Psychology Ph.D. student from Mustang, Oklahoma. “The quality and success of OSU students is on full display with both undergraduates and graduate students bringing home such major awards,” said OSU President Burns Hargis. “We are proud of these extremely talented students and the faculty and others who supported them in their success.” The value of each three-year Fellowship is $121,500, according to Michael Heppler, assistant director of Student Academic Services for the graduate college. This includes $90,000 in funding paid directly as stipends to each student, plus $10,500 annually to cover tuition and fees and other ancillary support at the institution where each student chooses to study. “We are very proud of the five OSU students who have been awarded NSF Graduate Research Fellowships,” said Dr. Mark Payton, Interim Dean of the Graduate College. “These awards are the result of outstanding research performed by our students and their faculty mentors, and we extend our congratulations to them and their families. We wish all our scholars the best, whether they continue their research endeavors at OSU or choose to display the Oklahoma State brand at other prestigious research institutions.” Taber and Morrison plan to use their Fellowships at OSU. Taber will study biosystems engineering, and Morrison will study microbiology. Meador will be using the grant for the Biological Design Ph.D. program at Arizona State University. Mock will study civil engineering at the University of Illinois, and Merriman will study biological and agricultural engineering at North Carolina State University. The Fellowship program is NSF’s oldest program, founded in 1952. The program has supported more than 44,000 U.S. citizens, nationals, and permanent residents in pursuing advanced degrees in science or engineering. The program is highly competitive and is designed to help the U.S. maintain a talented and diverse scientific and technological workforce. According to the NSF, the Fellows are expected to become knowledge experts who will contribute to the nation’s research, teaching, and scientific and engineering innovations.

“The Native American Speaks”
When most people are in college, they are worried about playing video games, when the next big game is or what they're doing over the weekend. SWOSU chemistry major Courtney Garcia thinks about those things too, but she has a couple of other things to think about as well. Garcia was recently selected as a SWOSU representative for Research Day at the state capitol March 31. She was also recently selected by the Council on Undergraduate Research as one of 74 - out of approximately 700 people - presenters to present her research results and meet with members of the Oklahoma congressional delegation at the U.S. Capitol April 13. And, she was recently selected as one of eight students given the opportunity to participate in a 10 week research program in Cadiz, Spain, where she will do marine chemistry research with marine life beginning May 24. In her research for the capitol, she is working with a drug that is already in use and is trying to improve upon that drug for uses in HIV and anti-cancer. She will be presenting that research at the state and U.S. capitol. In Spain, she will be working in the International Research Experiences for Undergraduates program at the University of Cadiz, Spain, sponsored by Bucknell University in Pennsylvania. She will be working in an organic chemistry setting. "I will be helping characterize metabolites from various sea creatures in an organic chemistry setting," Garcia said. "I was actually born in Spain, in Madrid. This will be the first time I'll be going back since I was four years old." The research program in Spain is funded by the National Science Foundation and all travel, housing, food and additional spending money is all provided. "I am very excited," Garcia said. The next couple of months will be busy for Garcia, but she is up for the task. Garcia said she will graduate in May 2012 and will apply for M.D./Ph. D. school because she wants to be a physician and researcher. She spent last summer at Harvard medical school, serving as an intern. She will be applying to Harvard and the University of Oklahoma for M.D./Ph. D. school after she graduates from SWOSU. Garcia's mentor has been Dr. Tim Hubin, an Associate Professor in the Department of Chemistry and Physics. "He has been a great mentor and I want to thank him for all he's done to help me," Garcia said. She also wanted to thank Dr. Brian Campbell, a professor in the Department of Chemistry and Physics for his help as well. She said both have helped her throughout her career. Garcia is the daughter of Lisa and Dan Turklay of Norman. She has one sister, Sarah Black, and one brother, Dane Garcia and she is engaged to fiancée Garic Johnson.
Southwestern Oklahoma State University student Courtney Garcia of Altus (Navajo) was selected the grand prize winner at the recent 16th annual Research Day held at the Oklahoma State Capitol in Oklahoma City.

Twenty-one undergraduate student researchers from 15 Oklahoma colleges and universities gathered for the event, sponsored by the Oklahoma Experimental Program to Stimulate Competitive Research (EPSCoR), the Oklahoma State Regents for Higher Education and the National Science Foundation.

Garcia’s poster topic was on HIV/Cancer Drug. Her faculty sponsor on the project is Dr. Tim Hubin, associate professor of chemistry at SWOSU. For winning the grand prize, Garcia won a $4,000 grant to help pay for her summer research internship plus a $500 cash award. Hubin’s laboratory gets a $2,500 award for supplies.

Garcia is also a SWOSU OK-LSAMP Scholar (Oklahoma Louis Stokes Alliance for Minority Participation), a program that nurtures and assists students through their undergraduate program while creating opportunities for students to pursue graduate degrees in their selected field of science, technology, engineering or mathematics.

At the Research Day, student participants were hand-selected by their institutions to present scientific research posters during the prestigious event, which is designed to showcase the outstanding research being conducted on Oklahoma college campuses and to make legislators and the public aware of how the research can positively impact our state.

Students’ posters were competitively judged by an independent panel that selected the top seven research presentations in three categories — overall winner, regional universities and research-intensive institutions. An award ceremony, hosted by Glen D. Johnson, chancellor of the Oklahoma State System of Higher Education, was held at the end of the day.
Interns Danielle Nichols and Justina Bradley Investigate Biofuel

Interns Danielle Nichols (left) and Justina Bradley (center) share their poster with FaST program professor, Dr. Gilbert John.

As the push to liberate society from fossil fuels continues, researchers like those at Brookhaven National Lab are pursuing alternate sources of energy. This summer, Danielle Nichols and Justina Bradley, two interns in the Faculty and Student Teams (FaST) program, joined the hunt at BNL’s Environmental Sciences Department.

“We’re doing biofuels research, generating ethanol from raw natural materials,” explained Nichols, a rising senior at Oklahoma State University (OSU). Ethanol, unlike its fellow motor fuel gasoline, can be made from renewable resources. As Bradley, a rising junior at Langston University, put it, “We’re trying to find an effective and efficient way to go green.”

Under the supervision of BNL researchers Arokiasamy J. (AJ) Francis and Ashutosh Gupta, and FaST program professor Gilbert John from OSU, Nichols and Bradley investigated the production of ethanol from cellulose, a common organic compound, that had been pretreated with liquid salts called ionic liquids. In the lab, they used a glucose assay to monitor the effects of different ionic liquids on the cellulose’s breakdown into glucose. The glucose assay monitors the change in a material by measuring how much light it absorbs, using an instrument called a spectrophotometer. Specifically, the interns investigated the efficiency of two enzymes, cellulase and β-glucosidase, in converting cellulose to glucose. Ultimately, they used the bacteria Clostridium to ferment the glucose into two products: butanol and the biofuel ethanol.

“It’s been a good experience to learn new techniques in the lab and to have access to such high-quality facilities,” said Nichols. She said she also enjoyed the brown-bag lunches on Fridays, when researchers in a variety of fields presented their work to the interns.

Both Nichols and Bradley came to Brookhaven because of encouragement from their professors. “The summer was long but beneficial,” said Bradley. “I feel that it was a great experience, and has broadened my horizon for future research.” Added Nichols, “If I weren’t graduating next year, I’d come back to BNL for another summer.” After graduation, both interns plan to attend medical school.

2010-1958 INT/EXT | Media & Communications Office
Langston University’s LINC STEM Scholar Wins First (1st) Place Award at Oklahoma EPSCoR Research Day at the Capitol

Langston University’s LINC scholar and STEM (Science, Technology, Engineering, and Technology) major Justina Bradley earned a 1st place award for her poster presentation at Oklahoma EPSCoR’s 2011 Research Day at the Capitol event on March 31. Her award comes with a $500 cash prize, and recognition for her stellar achievement.

Oklahoma EPSCoR’s Research Day at the Capitol has been around since 1996, and the competition is intensely competitive. Outstanding undergraduate students from Oklahoma’s comprehensive and regional colleges and universities are nominated by their institutions to participate in the program. Participating institutions include just about every college and university throughout Oklahoma.

Nominees must prepare a scientific research poster on a research project that they have completed. Posters are competitively judged the day of the event by an independent panel. Posters are judged on 1) scientific presentation (clear purpose, hypothesis, background info, results, impact, further study expected), 2) student’s ability to explain project, 3) visual appearance of the poster, 4) clarity for general audiences, and 5) societal impact statement. A lot of work goes into preparing the poster for the competition. The event oversight team recognizes this, and requires nominees to participate in a training session in order to ensure a high quality presentation. Langston’s Department of Chemistry Chair and LINC Director, Dr. John Coleman, takes preparation to an even higher level. Nominees get his personal guidance on every detail and nuance, as well as the support of other STEM faculty and LINC staff. He says that he wants Langston’s participants to be the absolute best that they can be. “Nobody can ask for anything beyond your very best efforts,” he frequently tells his scholars who participate in this event, and other competitive scientific research related events around the country. Justina did not disappoint. Her grasp of her subject matter, poise, and overall presentation skills were apparently recognized by the independent judging panel. Her mother and father were on site to witness her presentation.

Justina’s research project, “Ionic Liquid Inhibition of Enzymatic Hydrolysis in Microrcellulose”, was completed at the Brookhaven Institute in New York during a 2010 Summer Research Internship. She earned her participation on this project from a field of competitors from across the U.S. Justina also won 2nd place earlier in March for this presentation at the National Institute of Science (NIS) and the Beta Kappa Chi Scientific Honor Society (BKX) 68th Joint Annual Meeting at Clark Atlanta University in Atlanta, Georgia.

Justina’s research project, “Ionic Liquid Inhibition of Enzymatic Hydrolysis in Microrcellulose”, was completed at the Brookhaven Institute in New York during a 2010 Summer Research Internship. She earned her participation on this project from a field of competitors from across the U.S. Justina also won 2nd place earlier in March for this presentation at the National Institute of Science (NIS) and the Beta Kappa Chi Scientific Honor Society (BKX) 68th Joint Annual Meeting at Clark Atlanta University in Atlanta, Georgia.

Langston University is pleased to have one of its own recognized at this event. It serves to display the institution’s capabilities in preparing students to be leaders in STEM disciplines to the legislature, media and the general public at the State Capitol. It also serves to validate the trust that its partner, the National Science Foundation, has placed in it by awarding the institution an HBCU-UP Implementation project grant that is aimed at increasing the number of underserved students who enter college, receive undergraduate and advanced degrees in STEM disciplines, and choose STEM careers. This is the second (2nd) Oklahoma EPSCoR Research Day at the Capitol award for a Langston LINC scholar. Steve Harris won a 2nd place award for his oral presentation in chemistry in 2006. In addition to this stellar accomplishment, Langston’s LINC scholars (including Justina) have garnered other awards on a national level for their scholarly, scientific research projects. “Our participation in the NSF HBCU-UP grant project has provided us with the impetus to leverage Langston’s many resources to create opportunities that were either not available or recognized in the past. We will use the synergy and energy to move forward,” says Dr. Coleman. LINC is primarily funded by two successive HBCU-UP grants from the National Science Foundation (NSF), with rigorous support by the Langston University community. Since the beginning of LINC, forty eight (48) awards have been earned by LINC scholars for their participation at regional and national competitive events for research presentations.
More than 20 students and faculty members from Northwestern Oklahoma State University submitted abstracts for Ranger Research Day last week. With 23 entries, the fifth annual Ranger Research Day event reached its second highest record of participants.

Student entries were critiqued and eligible for awards. Three winners were announced at the end of the day. Winners with hometown, classification, research project name and sponsor include:

• First place – Kody Jones, Mustang sophomore, “Characteristics of Frost Formation of Micro-Channel Heat Exchangers”; Dr. Steven Maier, associate professor of physics;

• Second place – Rebecca Fenton, Kiowa (Kan.) senior, “Dyslexia: A Difference in Visual Comprehension”; Dr. Cynthia Pfeifer-Hill, professor of biology;

• Third place – Gerald Mbara, Seattle (Wash.) freshman, “Identification of the Cryptic North American Treefrog”; Dr. Aaron Place, assistant professor of biology.

All participants received a certificate of participation, and researchers were encouraged to enter their research projects in Oklahoma Research Day 2011 at Cameron University on Nov. 4.

-NW-

Posted on Wed, April 6, 2011 by Erika Birk Ranger Research Day Kody Jones
For commencement, each of the University of Central Oklahoma's five undergraduate colleges award a student the title of Class Marshal. These five students have the highest grade-point averages and number of Central credit hours in their respective colleges.

Each honoree receives a Class Marshal stole, signifying the highest degree of academic excellence. First presented in 1994, the stoles have become a UCO tradition, now enhanced by a bronze Class Marshal graduation gown.

The following are the Class Marshals for the Spring 2011 Commencement.

**Ethan B. Rowell - College of Mathematics and Science**

**Ethan B. Rowell** is Biology major with a 4.0 grade point in the College of Mathematics and Science. From Ninnekah, he has been a member of the Biology Club, the Alpha Chi Honor Society and UCO Commons Hall Council, while having membership in the Texas Society of Mammalogists and the Southwestern Association of Naturalists. He was named a Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) Scholar. Future plans include pursuing a master's at UCO.
NSU announces Outstanding Seniors

In recognition of long-term academic excellence and civic dedication among students at Northeastern State University, the awards committee of the Alumni Association board of directors has named the Outstanding Seniors for 2010-11.

Seniors selected for the honor are Shane Franklin of Norman, Allyson Hall of Broken Arrow, Sheri Dawn Kennedy of Ochelata, Dylan Medeiros of Muldrow, Chris Nettles of Lawton, Matthew Reece of Westville, Darla Rodgers of Enid, Elaina Ross of Tulsa, Kyle Tate of Bixby and Seth Vansell of Crescent.

"The Jack Kaufman Outstanding Seniors awards process is challenging and the Alumni Association board of directors takes it very seriously," said Daniel Johnson, director of alumni services. "It is challenging because there is a thin line separating the amazing group of seniors who are nominated and apply each year."

From the 10 honorees, the committee will select the Jack Kaufman Outstanding Male and Female Seniors through an interview process held March 22 at the Branscum Alumni Center. The Jack Kaufman award winners will be announced at the Ovation Assembly on April 9. All Outstanding Seniors will be recognized during the ceremony.

Johnson said the 2010-11 Outstanding Seniors are exceptional students who dedicated themselves to the university and the community throughout their NSU years.

"This group being honored truly represents the spirit of NSU and our institution's core values, and the board looks forward to them adding their energy and enthusiasm to the Alumni Association," Johnson said.

The two seniors selected to receive the Kaufman award will have the honor of addressing the graduating class at the Spring 2011 commencement ceremonies.

Published: 3/31/2011 5:07:27 PM
Lydia Meador: botany and microbiology molecular genetics major

Connor Ferguson: plant and soil sciences major
Cameron University student takes honors at Research Day at the Capitol

Cameron University student Elaine Harder placed first among students from regional universities during the annual Research Day at the Capitol event held at the Oklahoma State Capitol in Oklahoma City. Harder, an agriculture major from Snyder, placed second overall and was one of 21 undergraduate students representing 15 Oklahoma colleges and universities who presented competitive research posters to the Oklahoma legislature and the public. As a result of her presentation, she has been invited to speak at the next Research Day at the Capitol and an INBRE event this year.

Working under the mentorship of Dr. Frank White, CU Professor Agriculture and Joseph H. Mullins Endowed Chair in Agriculture, Harder’s research topic is “Endocrine Disruption of Pregnancy”, which focuses on endocrine disruptions in the environment and how they may cause pregnancy loss in animals and humans. She presented research ideas on this topic last summer at an International conference in Canada, when she was the only undergraduate student selected to present.

Funding for the research project provided by the Joseph H. Mullins Endowment has allowed Harder to network with research scientists from across the world.

"Elaine Harder did a great job representing Cameron University at Research Day," says Dr. White. "Elaine has excelled in the research lab and classroom and has demonstrated a unique ability to balance classes, research, and family. I wish I had a classroom full of students with her dedication."

Research Day at the Capitol is sponsored by Oklahoma EPSCoR, the Oklahoma State Regents for Higher Education and the National Science Foundation. The event is designed to bring about awareness of the outstanding research taking place in Oklahoma’s colleges and universities.

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April 19, 2010

PR#10-079
APPENDIX L

STAFF RECOGNITION FROM

WOMEN OF COLOR
Certificate of Achievement

Kay Porter
Oklahoma State University

Recognizes
For outstanding contributions to the STEM Disciplines at the 15th Women of Color STEM Conference

October 29, 2010

[Signature]

Chair, CEO, Publisher
Career Communications Group, Inc.
Certificate of Achievement

Career Communications Group, Inc.
Recognizes

Oklahoma State University

For outstanding contributions to the STEAM Disciplines
at the 5th Women of Color STEM Conference

October 21, 2010

Date

[Signature]

Career Communications Group, Inc.

Fara Williams
THE BRIDGE TO THE DOCTORATE PROGRAM

The Directorate for Education and Human Resources (EHR) through the Division of Human Resources Development (HRD) sponsors the Bridge to the Doctorate program as a competitive supplemental activity to the undergraduate Louis Stokes Alliances for Minority Participation Program. The Bridge to the Doctorate program is designed to broaden participation through the attraction of underrepresented minority students in science, technology, engineering and mathematics (STEM) disciplines. In addition, this activity seeks to remove minority students’ hesitancy about entering graduate school and the fear of creating additional financial indebtedness associated with initial graduate education. In 2009, the University of Oklahoma welcomed its second cohort of Bridge to Doctorate Fellows.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Major</th>
<th>Career Goals</th>
<th>Graduation Date</th>
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</thead>
<tbody>
<tr>
<td>FELIX ISRAEL DE LA CRUZ</td>
<td>The University of Oklahoma</td>
<td>Mechanical Engineering</td>
<td>To specialize in the area of advanced basic sciences and the enhancement of diversity in the field of advanced materials, in particular, the area of polymeric composite laminates. Mr. De La Cruz completed his Master of Science in Mechanical Engineering degree in Spring 2010.</td>
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<tr>
<td>STEVEN HARRIS</td>
<td>Langston University</td>
<td>Chemistry</td>
<td>To set up a laboratory for the production, testing and research of new drugs.</td>
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<tr>
<td>DESMOND HARVEY</td>
<td>Langston University</td>
<td>Industrial Engineering</td>
<td>Mr. Harvey received his Master of Science degree in 2008. In Fall 2010, he will continue on his PhD in Adult and Higher Education.</td>
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<tr>
<td>Name</td>
<td>Institution</td>
<td>Major</td>
<td>Career Goals</td>
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<tr>
<td>JACOB HENDERSON</td>
<td>BS Institution: The University of Oklahoma</td>
<td>Major: Computer Engineering</td>
<td>Career Goals: To continue research in the vibrant academic atmosphere.</td>
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</tr>
<tr>
<td>QUINTIN HUGHES</td>
<td>BS Institution: Langston University</td>
<td>Major: Industrial Engineering</td>
<td>Career Goals: Creating, developing, and acquiring funding for more programs that will engage and expose under-represented minority communities to engineering &amp; the sciences, as well as other avenues that can improve overall quality of life. Mr. Hughes completed his Master of Science in 2009 and is continuing toward PhD.</td>
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<tr>
<td>KEVIN JAMES</td>
<td>BS Institution: Southern University A&amp;M College -- Baton Rouge, LA</td>
<td>Major: Electrical and Computer Engineering</td>
<td>Career goals: To be a professor at an institution where he can conduct research, establish programs for less privileged minorities and be a mentor to students needing guidance. Mr. James completed his Master of Science in 2009 and is continuing toward PhD.</td>
<td></td>
</tr>
<tr>
<td>CHRISTOPHER AGUAYO</td>
<td>BS Institution: University of Oklahoma</td>
<td>Major: Aerospace Engineering</td>
<td>Career Goals: To become a test pilot and focus on optimization and efficiency of aircrafts.</td>
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<tr>
<td>Name</td>
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<tr>
<td>BRITTANIE ATKINSON</td>
<td>Langston University</td>
<td>Biology</td>
<td>To perform research investigating mechanisms that are operative in the pathogenesis of &quot;diabetes mellitus.&quot;</td>
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<td>MARIO FRANKLIN</td>
<td>University of Oklahoma</td>
<td>Industrial Engineering</td>
<td>To pursue a Ph.D in Industrial Engineering with an emphasis in engineering education</td>
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<tr>
<td>JUAN HERRERA</td>
<td>University of Oklahoma</td>
<td>Computer Engineering</td>
<td>To develop novel computer architectures that use less power while increasing reliability and performance.</td>
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<tr>
<td>LORNE D. JORDAN</td>
<td>Bowling Green St. University</td>
<td>Chemistry and Biochemistry</td>
<td>To become a leader in oncological research and contribute to the efforts of the National Cancer Institute.</td>
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<tr>
<td>Name</td>
<td>BS Institution</td>
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<tr>
<td>RYAN JORDAN</td>
<td>Oklahoma State University- Stillwater</td>
<td>Geology</td>
<td>To reveal earth's history by utilizing geophysics in creative ways.</td>
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<tr>
<td>MEGHAN LILES</td>
<td>Oklahoma State University</td>
<td>Biochemistry and Molecular Biology</td>
<td>To perform research investigating mechanisms that are operative in the pathogenesis of autoimmune diseases.</td>
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<tr>
<td>CHRISTOPHER MACE</td>
<td>Oklahoma State University</td>
<td>Geophysics</td>
<td>To work in governmental research or the petroleum industry.</td>
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<tr>
<td>CHRYSAL Moore</td>
<td>Northeastern St. University, Tahlequah, OK</td>
<td>Microbiology</td>
<td>To operate a research lab examining antibiotic resistance in bacteria.</td>
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<tr>
<td>Name</td>
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<td>Major</td>
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<tr>
<td>Shawna Ong</td>
<td>University of Oklahoma</td>
<td>Electrical Engineering</td>
<td>To further research experience and impact in the defense industry with an independent research division.</td>
<td></td>
</tr>
<tr>
<td>Ryan Watley</td>
<td>University of Arkansas – Pine Bluff</td>
<td>Chemistry</td>
<td>To work with organic synthesis mechanisms and to impact biological research.</td>
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APPENDIX N

OKLAHOMA RATING FOR NATIVE AMERICAN

GRADUATES IN ALLIANCE INSTITUTIONS
Oklahoma Universities Top List of Most American Indian Grads

BY DARLA SLIPKE       dslipke@opubco.com       Published: June 26, 2011

Oklahoma State University student Dalton Kelley plans to graduate in December contributing to a list that's a source of pride for several Oklahoma universities -- a ranking of colleges producing the most American Indian graduates with bachelor's degrees.

Oklahoma schools again top that list, compiled annually by a national publication called Diverse Issues in Higher Education.

“We’re really proud of that statistic, but we're also constantly trying to improve,” said Kelley, a mechanical engineering technology major from Eakly. The report is based on preliminary data from the U.S. Department of Education for the 2009-10 school year. OSU ranked first with 355 Indian graduates, down 4 percent from the previous year. About 9 percent of all OSU's graduates in 2009-10 were Indian, according to the report. Northeastern State University was second with 335 Indian graduates, down about 9 percent. The University of Oklahoma ranked third with 241 graduates, about 7 percent of total graduates. That's a 7 percent decline in Indian graduates from the prior year. Oklahoma had three other schools in the top 12: Southeastern Oklahoma State University, sixth with 170; East Central University, tenth with 143; and the University of Central Oklahoma, 12th with 127. Bacone College, Northeastern State and Southeastern Oklahoma State had the highest percentage of Indian graduates among the Oklahoma schools listed, at 36 percent, 24 percent and 28 percent, respectively. About 8.6 percent of Oklahoma's population is American Indian or Alaskan Native, according to 2010 U.S. Census data. That compares to nearly 1 percent of the U.S. population. Oklahoma has 39 Federally recognized tribes. Overall, Oklahoma's public colleges and universities had 1,501 Indians graduate with bachelor's degrees in 2009-10. That represents 9.6 percent of all such graduates. Kelley, a Choctaw, said he knew a little about his heritage growing up, but not much. At Southwestern, he became involved in American Indian programs on campus. The more he learned, he said, the more he wanted to know. He later transferred to OSU and joined the Native American Student Association. Kelley was president of the organization last year and helped sponsor various cultural events, including informational sessions for high school students and an annual pow wow. Kelley said Indian students worry about leaving behind their culture when they come to college, but they shouldn't. Indians can stay connected to their culture through campus programs and meeting other Indian students, he said. Last year, OSU started a retention program where Indian students help build connections, said Robin Williams, coordinator of Native American Affairs at OSU. “That sense of community is very important for Native students” she said. Williams said she's not concerned about the decline of Indian graduates because enrollment remains high. About 60 percent of Indian students who entered OSU in 2004 graduated within six years, she said.