Office for Undergraduate Research and Artistry (OURA)

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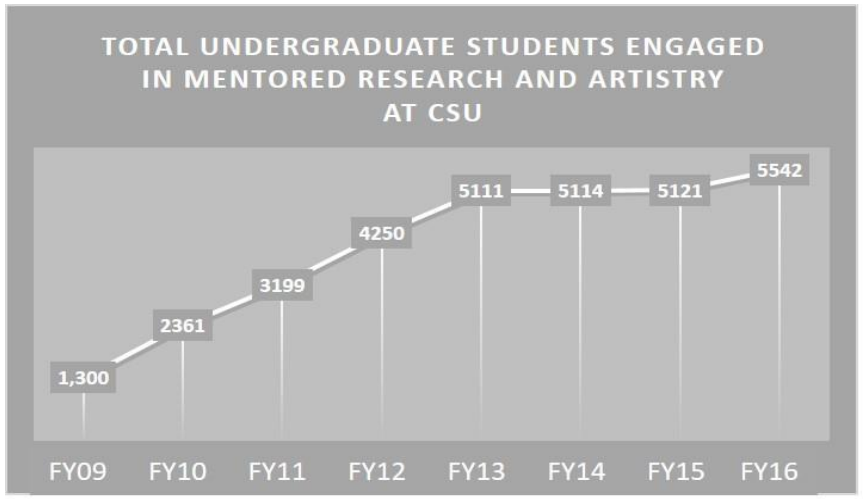
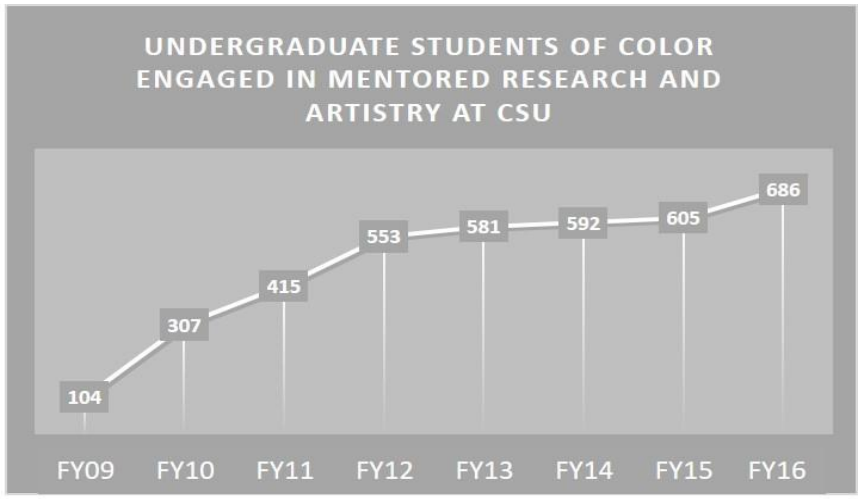
The **Office for Undergraduate Research and Artistry (OURA)** facilitates opportunities for students to apply the theory they are learning in the classroom through high-impact, real world experiences. This office serves as an interface among students and faculty to ensure that all undergraduates at CSU have access to opportunities to explore and engage in their interests in research, artistry, and other forms of creative work within their respective disciplines. We also coordinate over a dozen formal experiential learning programs.

Quick Facts: Educational Research indicates that undergraduates who are engaged in faculty mentored research achieve higher academic performance, higher rates of retention, higher rates of entry into graduate and professional programs, and more rapid rates of advancement in the work place.





OURA PROGRAMS

Mentored Research Programs

Undergraduate Research Opportunities Program (UROP)
Honors Undergraduate Research Scholars (HURS)

Research Academies, Cohorts, and Immersive Experiential Learning Programs

International Summer Research Program
International Genetically Modified Machines (iGEM) Competitive Research Program
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Academy of Historical Research Scholars
Academy of Photo Research Scholars

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Responsible Conduct of Research (RCR) Training
Mentored Research and Artistry Program (Transcript Designation and Learning Community)
Graduate Teaching Certificates – Research Mentor Track

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Celebrate Undergraduate Research and Creativity (CURC) Showcase
Multicultural Undergraduate Research Artistry and Leadership Showcase (MURALS)

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Rocky Mountain Scholars Program (RMSP)
Rocky Mountain Sustainability and Science Summer Research Academy
Global Women Scholars Network (GWSN)

Prestigious Scholars Programs

Boettcher Scholars Program
Anschutz Scholars Program
Monfort Scholars Program
Griffin Scholars Program

OUTREACH

Presentations and Workshops for Students
Presentations and Workshops for Faculty
Committees and Task Forces

AWARDS

2017 Innovative Program Award, Student Affairs Administrators in Higher Education (NASPA) IV-West
2016 Innovations in STEM Education, National Science Foundation I-Corps, Washington, DC
2015 Innovations in STEM Education, National Science Foundation I-Corps, Washington, DC
2012 SOAR Award: Outstanding Diversity Program, Colorado State University

2012 Of the Month Award for Diversity Program, National Residence Hall Honorary

Caption: Undergraduates participating in the Rocky Mountain Sustainability and Science Summer Academy conducting phenology research at the Shortgrass Steppe Long-term Ecological Research Station to monitor the impacts of climate change.

UNDERGRADUATE RESEARCH OPPORTUNITIES PROGRAM (UROP)

UROP is our general placement program for undergraduates seeking faculty mentored, experiential learning opportunities. At CSU, we guarantee a placement for every interested student.

How it works: Undergraduates meet with one of our placement coordinators to discuss: 1) their disciplinary interests; 2) their career aspirations; 3) what they hope to gain from this experience; 4) their working style and availability; 5) their preferred style of oversight/mentoring; and 6) their unique needs. The placement coordinator addresses realistic expectations for the student and develops a list of available faculty mentors who are suitable for the student. The list of prospective mentors and their websites are presented to the student who then orders the list according to their preference. The placement coordinator reaches out to prospective mentors, presents details about the student, and coordinates an opportunity for the prospective mentor to meet the mentee. The meeting is a two-way interview such that the student determines the suitability of the mentor and the mentor determines the suitability of the mentee. (The placement coordinator prepares the student for this interview during their initial meeting). Students are encouraged to participate in as many interviews with prospective faculty mentors as necessary for them to feel confident in their choice.

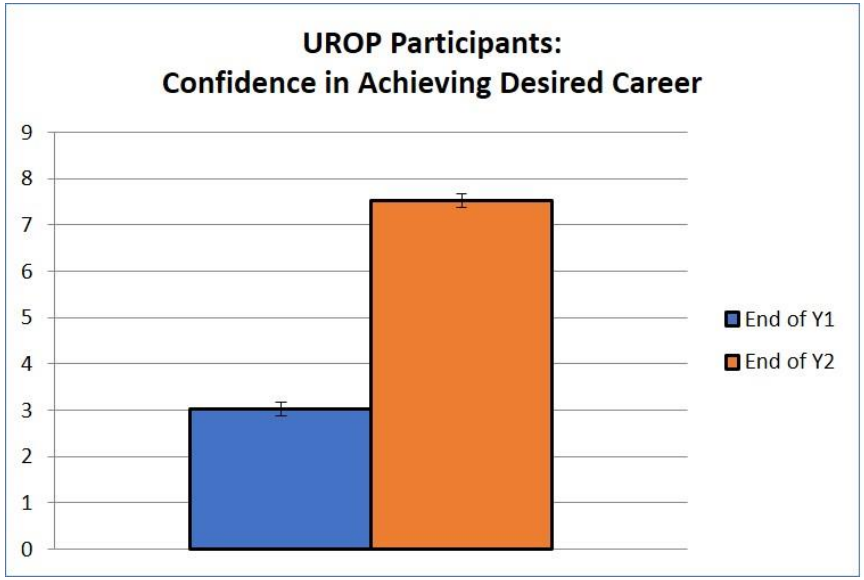
Students participating in UROP are required to complete a certificate in the Responsible Conduct of Research (RCR).

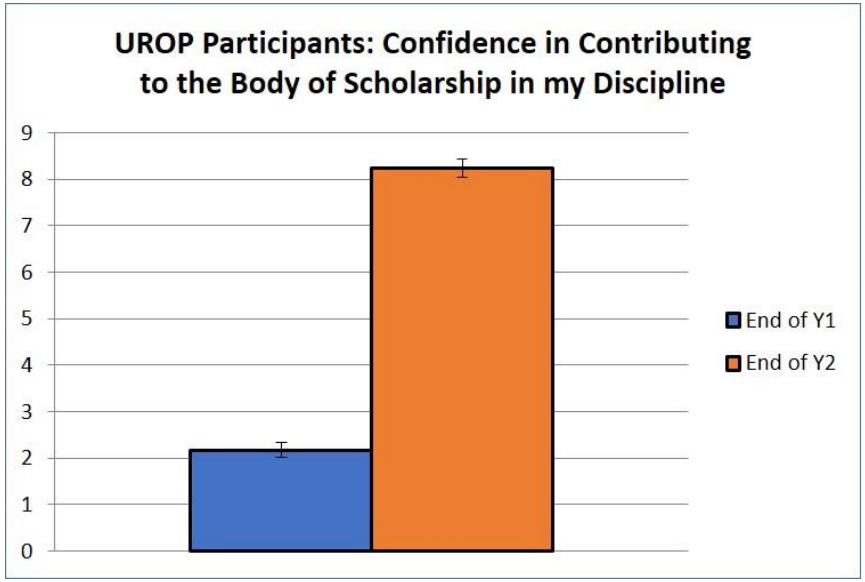
Quick Facts: On average, each student meets with three prospective faculty mentors before accepting a placement.

Quick Facts (Scroll-Over): Approximately 81% of students who obtain a research placement through UROP continue working with their mentor for the duration of their undergraduate degree program.

Program Outcomes: Between 2010 and 2017, OURA has averaged 720 new UROP participants/year. Self-efficacy surveys are administered to new UROP participants who are completing their first year of study at CSU. The same surveys are administered to those UROP participants at the conclusion of their 2nd year at CSU (which is the conclusion of their first year in UROP). The statements measure students' perceived ability and/or confidence related to a defined learning objective. The results of these self-efficacy analyses are presented below, side-by-side with the results for a control group of non-UROP participants.

Summary of Methods: Students were presented a total of 5 statements, and asked to rate the degree to which they believed they could accomplish the task presented in each statement. The rating system was on a scale of 1 to 10, with (1) representing "No belief" and (10) representing a "Very Strong Belief" in the individual's ability to complete the task.




UROP Participants: Confidence in Contributing to the Body of Scholarship in my Discipline
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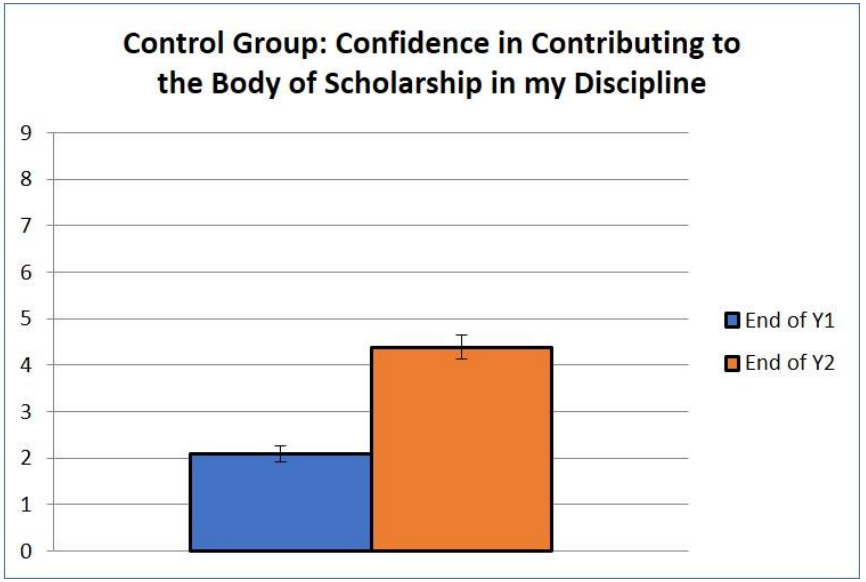
Control Group: Confidence in Contributing to the Body of Scholarship in my Discipline
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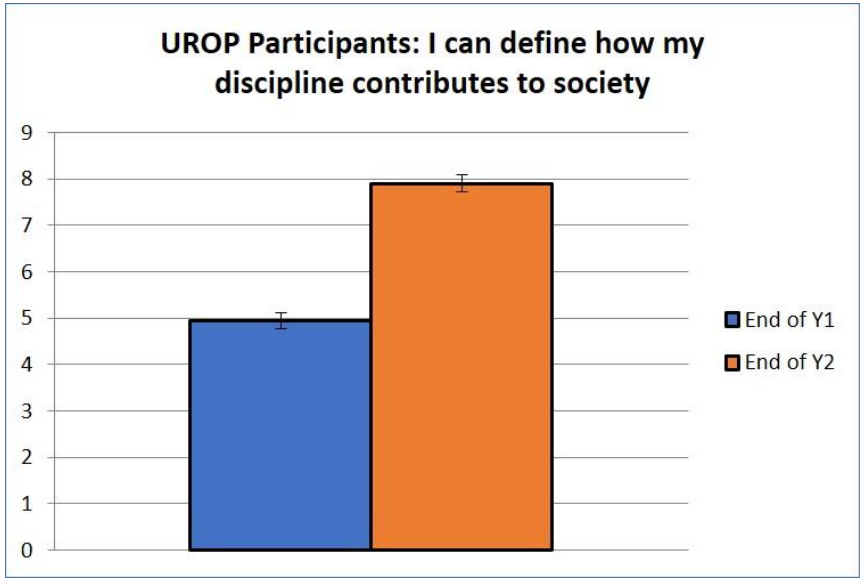
End of Y2


UROP Participants: I can define how my discipline contributes to society
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Control Group: I can define how my discipline contributes to society
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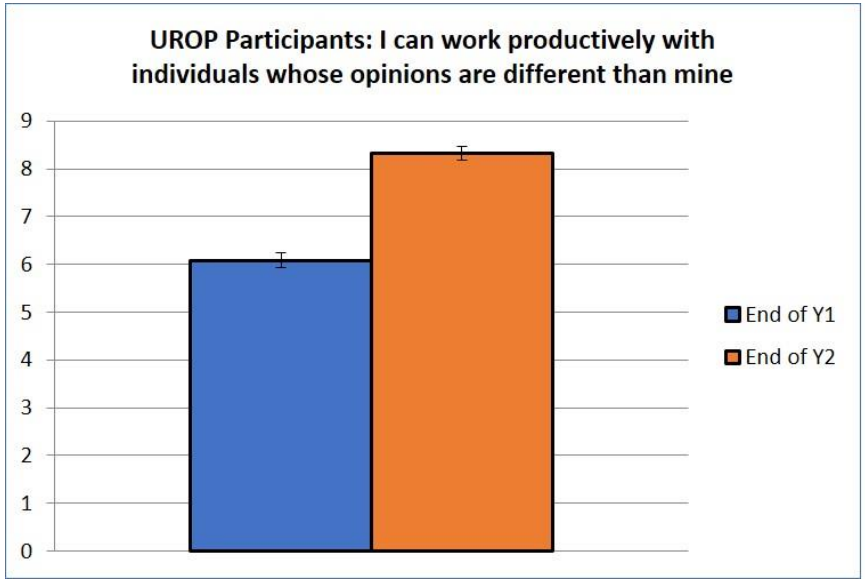
UROP Participants: I can work productively with individuals whose opinions are different than mine
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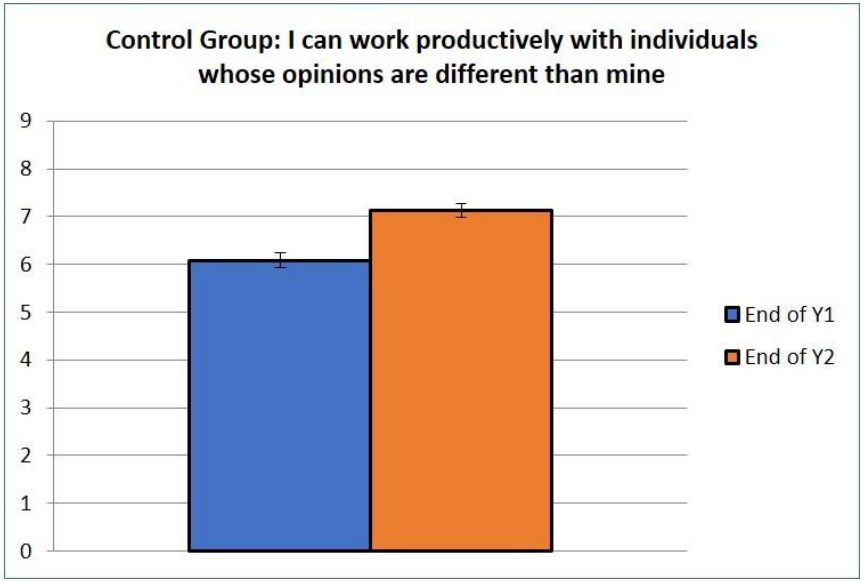
Control Group: I can work productively with individuals whose opinions are different than mine
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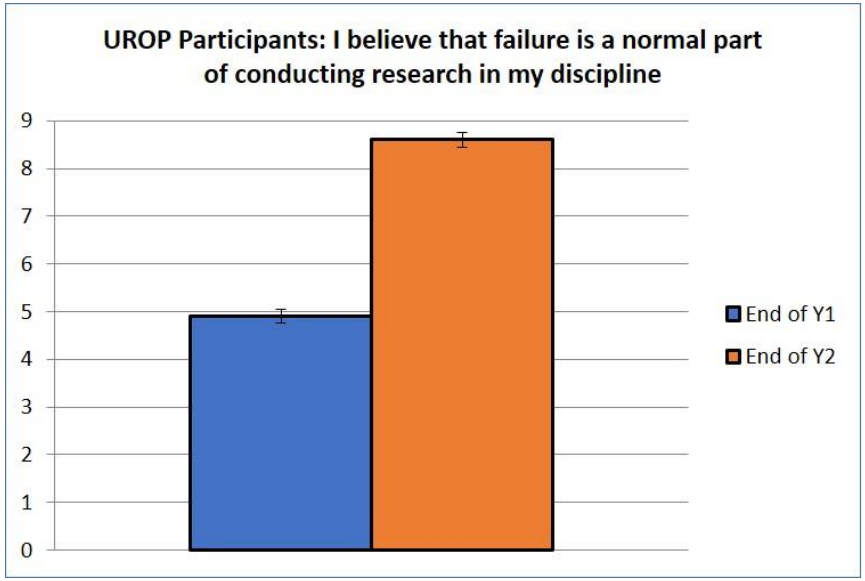
UROP Participants: I believe that failure is a normal part of conducting research in my discipline
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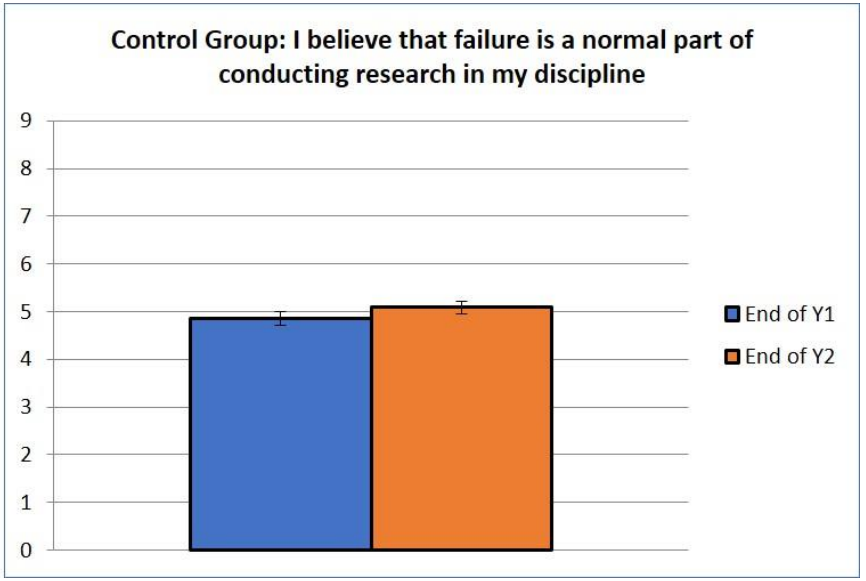
End of Y2


Control Group: I believe that failure is a normal part of conducting research in my discipline
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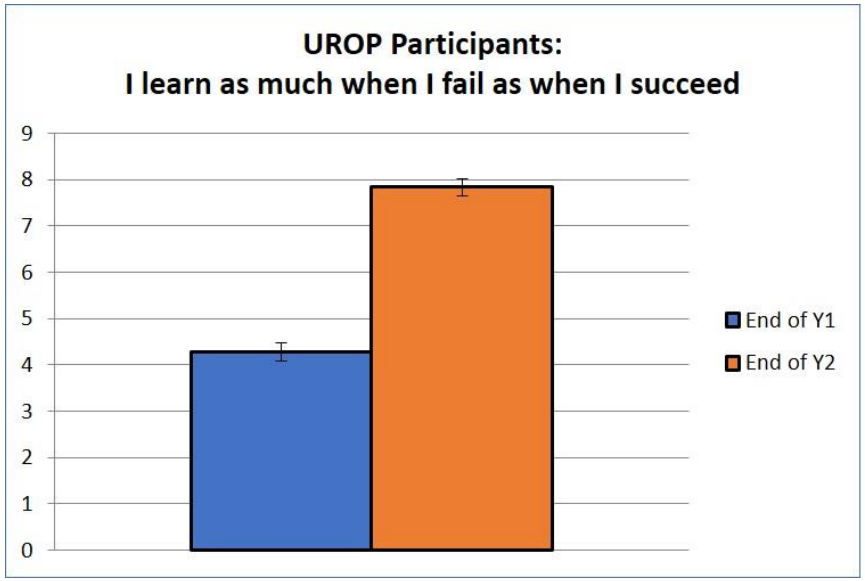
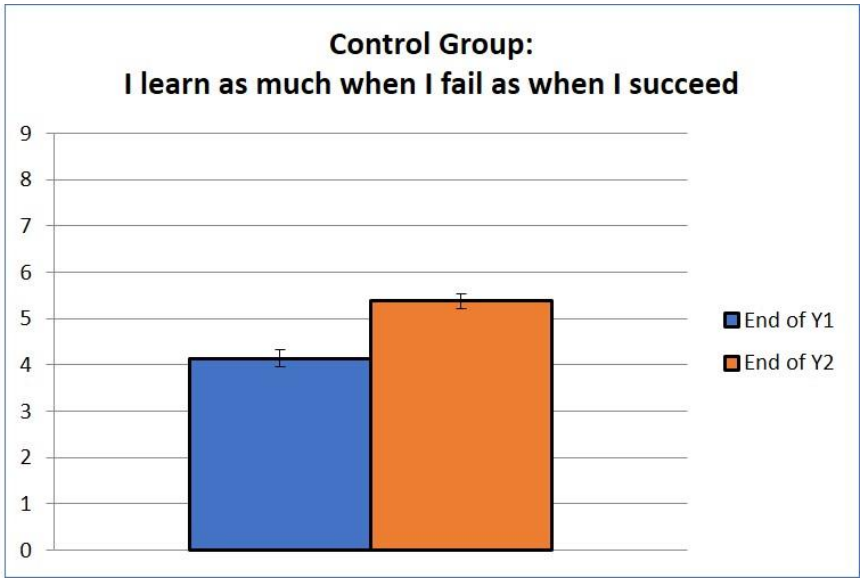
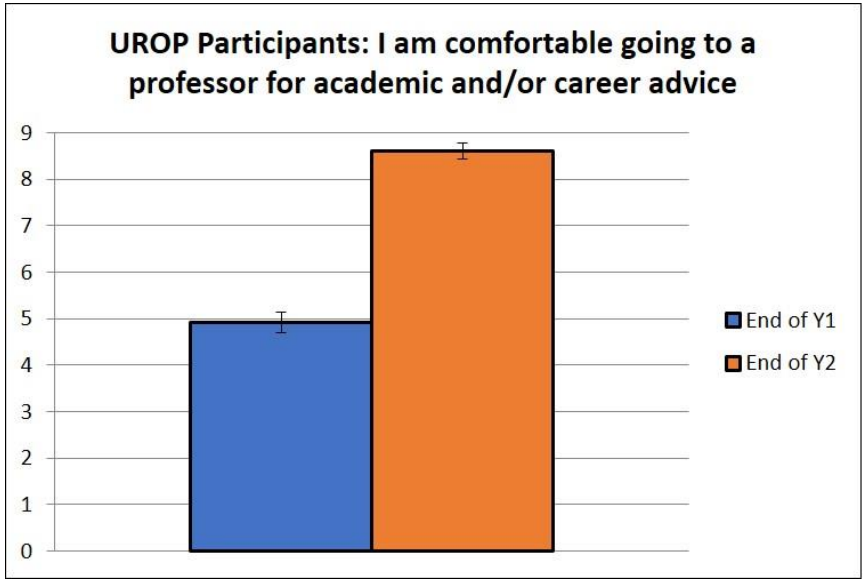
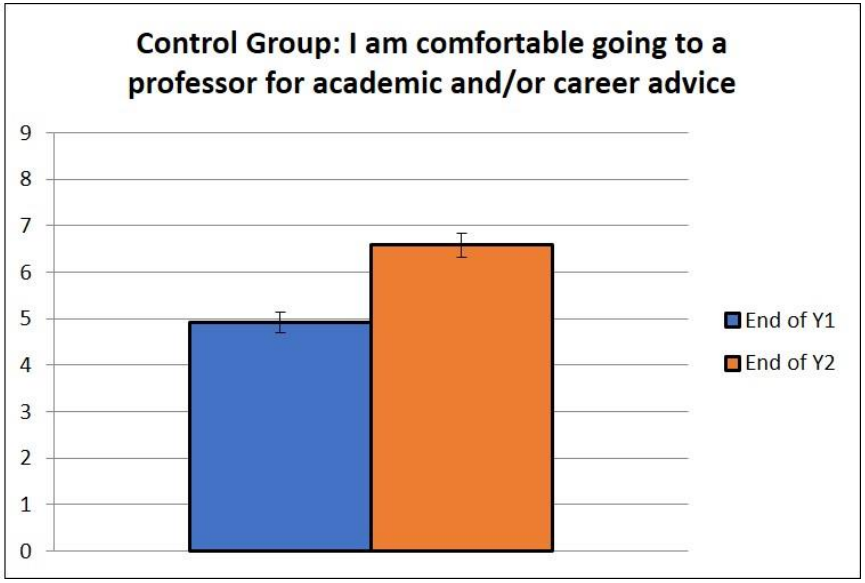








Representative Student Quotes:

"I was terrified of my professors before I took a research position. My faculty mentor showed me that professors really are here to help me navigate my academic career and to prepare for my professional career! We met regularly and he gave me lots of feedback that showed me my mistakes were to be expected. Honestly, if I hadn't failed in my experiments so many times, I don't think I would remember their significance and I don't think I'd be able to repeat them. Before this experience, I didn't think it was OK to mess up. Now I see that messing up is part of the experiment and that it's normal to mess up more than you are successful."

Animal Science Major, Fall 2016

"I used to have trouble working in groups for class projects. I just had so little patience for some people and I always felt that it was easier to just do things myself. Working in a lab taught me that, in the real world, you HAVE to work in groups and you HAVE to figure out a way to be productive even when you disagree. It was hard at first. I used to butt heads with several of the other students and one of the post-docs in the lab. But I started to notice that the post-doc was really good at redirecting conversations that had stalled in a way that made us all feel like we were being heard and respected. I can't say that I totally LIKED everyone in my lab but we definitely learned to get along and to get our jobs done. In the end, it turned out that we were all super-passionate about what we were doing in the lab and we were all working toward the same goal. Who knew!?!? I've learned to apply this to my class group projects and it has made a world of difference!"

Biochemistry Major, Spring 2017

"I had no idea how to stay organized until my mentor taught me to keep a laboratory notebook. It's such a simple tool but it works! My PI asked to see my lab notebook at each of our weekly meetings. It was cool to look back and see where I started and how productive I had been. Everyone told me that experiments fail more often than not. Looking back at my notebook, I can see that's definitely true. But when things go right, it's cause for celebration in the lab and it makes all the failed attempts way more than worth all of the challenges."

Biomedical Sciences Major, Spring 2017

"When I was new in the lab, I used to think that my PI couldn't possibly have time for me. But she checked in on me at least once a week to see how I was doing, to give me advice on how to improve, and to give me pep talks when things were going wrong."

Microbiology Major, Spring 2017

"Our research group was like a big family. We all helped one another and looked out for one another. If I was having a hard time, the other students, grad students, post-docs, and techs would encourage me to keep going. And when things went well, they were all there to congratulate me. Without their help and the help of my faculty mentor, I would have quit research a long time ago! Instead, I got hooked."

Biological and Biochemical Engineering Major, Spring 2017

"I was thinking about changing my major before I started doing research. I just didn't know what I was going to do with my degree. My mentor and my research project showed me how cool and useful history research can be. I'm not going to be changing my major now. And now the problem with my career is TOO MANY CHOICES. But I've got a couple more years of research to figure it out."

History Major, Spring 2017

HONORS UNDERGRADUATE RESEARCH SCHOLARS (HURS) PROGRAM

"Research opportunities" are the number one reason that CSU Honors Program students report having chosen CSU over their other options. Thus, HURS is designed to recruit high-achieving students to CSU by offering and coordinating research placements for prospective students before they matriculate. It involves a competitive selection process and, although it is not limited to honors students, the criteria for entering the program are more rigorous than those of the University Honors Program.

How it works: As high school students apply to CSU, OURA selects a subset of them (based on reported G.P.A. and standardized test scores) and sends formal invitations to apply for HURS. The HURS application allows students to express details of their interest in research and their ultimate career aspirations. Approximately 120 new HURS students matriculate each fall. By the time they arrive, prospective mentors have already been selected and HURS participants are given the opportunity to meet with each prospect and make their selection for a research mentor. As they make their selection, the HURS Program Coordinator provides advising and recommendations based on participants' reported: 1) disciplinary interests; 2) career aspirations; 3) what they hope to gain from this experience; 4) working style and availability; 5) preferred style of oversight/mentoring; and 6) unique needs.

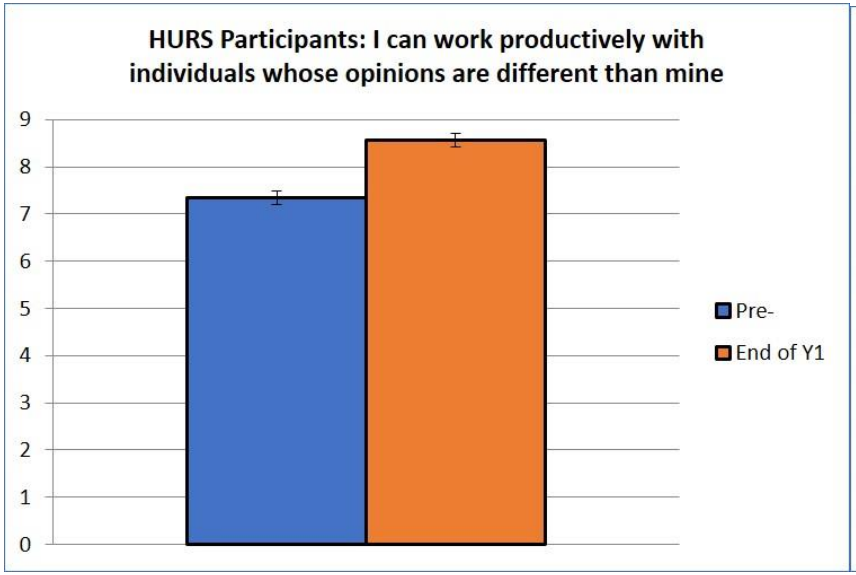
Students participating in HURS are required to participate in a 3-hour orientation session, complete a certificate in the Responsible Conduct of Research (RCR), and participate in the annual Celebrate Undergraduate Research and Creativity Showcase.

Quick Facts: On average, each student meets with three prospective faculty mentors before accepting a placement.

Quick Facts: Approximately 89% of students who obtain a research placement through HURS continue working with their mentor for the duration of their undergraduate degree program.

Program Outcomes: Between 2010 and 2017, OURA has averaged 120 new HURS participants/year. Self-efficacy surveys are administered to new HURS participants. The same surveys are administered to those HURS participants at the conclusion of their first full year in the program. The statements measure students' perceived ability and/or confidence related to a defined program objective.

Summary of Methods: Students were presented a total of 5 statements, and asked to rate the degree to which they believed they could accomplish the task presented in each statement. The rating system was on a scale of 1 to 10, with (1) representing "No belief" and (10) representing a "Very Strong Belief" in the individual's ability to complete the task.


HURS Participants: I can work productively with individuals whose opinions are different than mine
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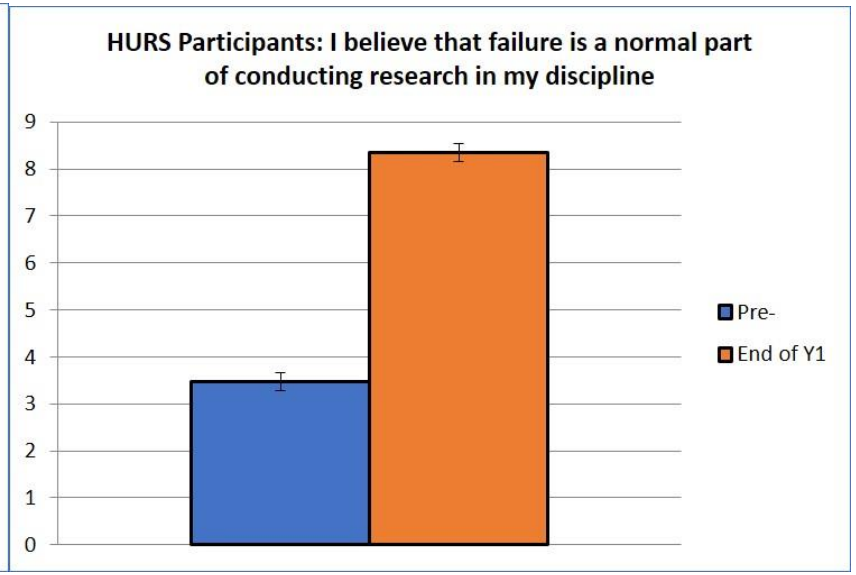
HURS Participants: I believe that failure is a normal part of conducting research in my discipline
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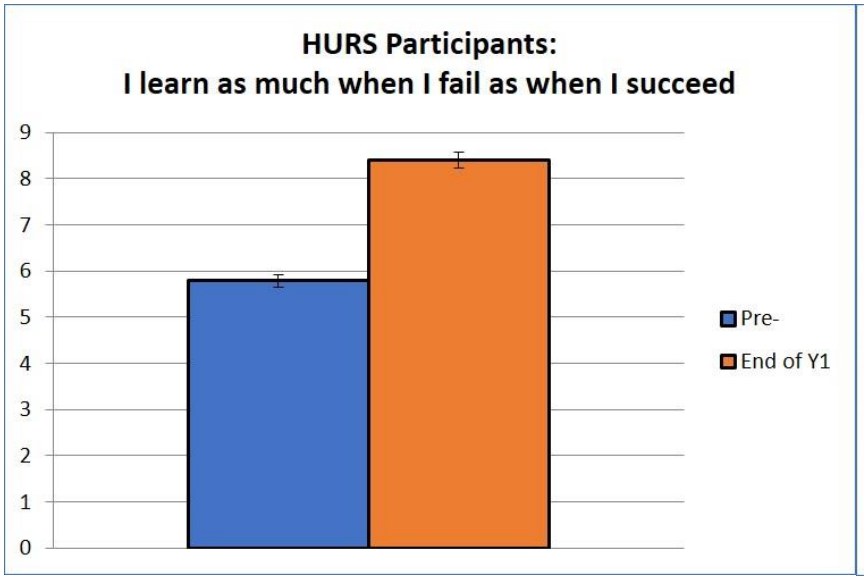
HURS Participants:
I learn as much when I fail as when I succeed
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HURS Participants: I am comfortable going to a professor for academic and/or career advice
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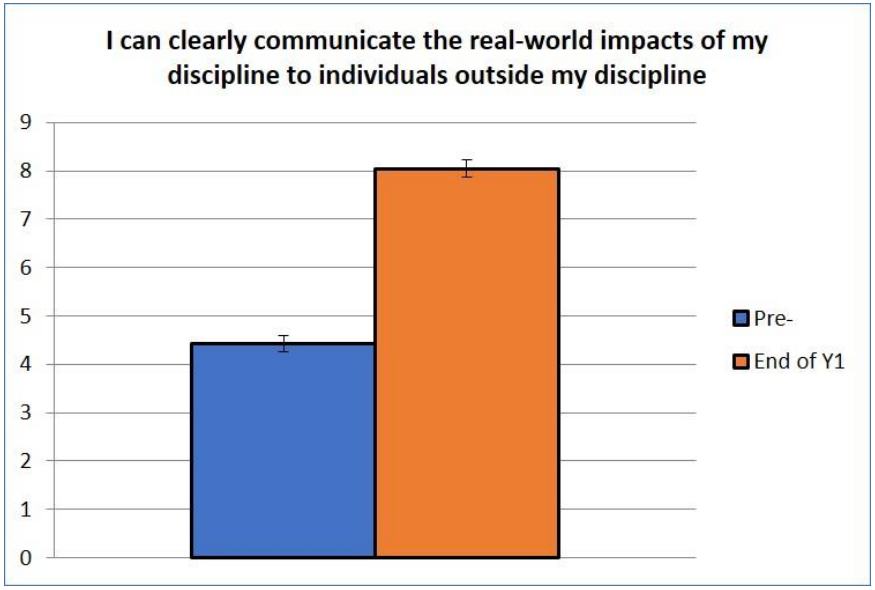


Representative Student Quotes:

"Getting accepted into the HURS Program is the reason I chose CSU."

Chemistry Major, Spring 2017

"I have never been comfortable presenting in front of an audience. When I found out I was required to present at CURC, I was pretty scared. But my mentor coached me through it, critiqued my presentation many times, and by the time I presented at CURC, I was pro and I felt really comfortable. I was even awarded college honors. One of my judges was an English professor and she complimented me on my ability to present my research in a way that she could understand why it was so important."

Biological and Biochemical Engineering Major, Spring 2017

Presentations and Workshops for Students (from page 2)

OURA regularly provides presentations and workshops for prospective, incoming, and current undergraduates related to undergraduate research and artistry. Many of these are in response to requests from other campus offices such as Orientation Programs, Office of Admissions, University Honors Program, Division of Student Affairs, etc.

FY17 OURA Presentations and Workshops

Type of Workshop	Number of Workshops	Total Number of Participants
Admissions Visits - Overview of Research Opportunities	8	240
New and Transfer Student Orientation – Getting Involved in Research and Artistry	30	334
Admissions – Out of State Presentations on Research and Artistry	3	96
Getting to Year 2 – Identifying a Faculty Mentor	2	65
How to Design and Present a Research Poster	10	210
MURALS Preparation Workshop	23	95
University Honors Recruitment Visit – Research Opportunities	2	53
First Year Seminars – Getting Involved in Research	8	159
Responsible Conduct of Research Training	6	171
Boettcher Scholars Recruitment – Overview of Research Opportunities	2	37
Access Center – Identifying a Research Project	2	47

Presentations and Workshops for Faculty (from page 2)

Type of Workshop	Number of Workshops	Total Number of Participants
College of Health and Human Sciences – Involving Undergraduates in your Research Enterprise	1	17
College of Veterinary Medicine & Biomedical Sciences - Involving Undergraduates in your Research Enterprise	1	19
Qualities of a Research Mentor	1	8
College of Liberal Arts – Involving Undergraduates in your Research Enterprise	1	15
Incorporating Research Experiences in the Classroom	2	11
Engaging Students of Color in Research	1	13

INTERNATIONAL SUMMER RESEARCH PROGRAM

The International Summer Research Program is funded by a grant from the National Science Foundation (PI: Mark Brown) that supports annual cohorts of 6-8 CSU undergraduates to conduct research with foreign collaborators in Mexico. Recognizing that U.S. researchers are often perceived as arrogant by international collaborators, students in this program are required to participate in a cultural immersion

experience that includes lessons in *Spanish Language*, *Cultural Cues in Mexico*, *Cultural Sites of the Yucatan*, and *How to Conduct Research Business in Mexico*. Cultural lessons and research training begin in the spring semester prior to the summer research experience (3 hours./week). Once onsite at the collaborating research facility, participants are required to speak Spanish. This aspect of our program will be disseminated (journals and presentations) as a broadly applicable method for training American scientists and engineers to conduct business throughout the world.

Quick Facts - What did our collaborators have to say about the cultural immersion experience? Our Mexican collaborators indicated that they were absolutely honored by the fact that our students spoke Spanish in the lab (imperfect, though it was) and presented their research findings in Spanish at the weekly research meetings. Our collaborators said that this was the ultimate sign of respect and that they greatly appreciated it. They also indicated that it is the first time they have ever spoken Spanish while working with American scientists. Previously, English was always assumed to be appropriate. Likewise, our participants were trained to interact according to the subtle cultural and social cues of our hosts. Thus, we trained the next generation of American scientists to be more effective in their conduct of business in foreign countries.

What opportunities for training and professional development has the project provided?

1. Responsible Conduct of Research Training and Certification
2. Training in advanced applications of biochemistry and molecular biology
3. Training in structural software and analysis of proteins
4. Spanish Language Lessons and Cultural Immersion
5. Preparation for- and participation in 3 regional research symposia and 1 international meeting
6. Drafting of reviews and a research manuscript for publication in peer-reviewed journals
7. Training in environmental surveillance field collection methods

How have the results been disseminated to communities of interest?

1. Participation in 3 regional research symposia and 1 international meeting
2. Drafting of reviews and a research manuscript for publication in peer-reviewed journals
3. PI drafting of program overview and Year 1 outcomes for upcoming submission to a STEM education journal
4. PI presentation of program and Year 1 outcomes at two national meetings and two regional diversity conferences

Outcomes for each year continued one tier down from page 15.

Program Outcomes

Year 1 Outcomes

In Year 1, we successfully established an international research partnership to support diverse cohorts of U.S. STEM undergraduates. The partnership was formed between researchers at Colorado State University (CSU), the Rocky Mountain Science and Sustainability Network (RMSSN), the Autonomous University of the Yucatan (UADY), the Autonomous University of the Baja (UABC), and the Northeast Center of Biological Research (CIBNOR). This research collaboration is based upon the investigation of a highly conserved family of lysine methyltransferases (SET and MYND domain-containing proteins) which impact developmental processes in organisms ranging from the native maize varieties of the Yucatan to humans.

Eleven CSU students participated in the Year 1 cohort. Based on a program objective to increase representation of historically populations that are historically underrepresented in STEM disciplines, an emphasis was placed on including an increased representation of women and students of color. Participant information, including discipline, gender, and race/ethnicity is provided in the table below. The Year 1 cohort presented their research findings at 3 regional research symposia and 1 international meeting. The cohort won first place at one regional symposium, high honors at another regional symposium, and were honored at the international meeting. Two peer reviewed papers were published by cohort 1 (listed below).

Discipline	Gender	Race/Ethnicity
Biochemistry	F	Black/African American
Biological Sciences	F	Black/African American
Biological Sciences	F	Black/African American
Biological Sciences	F	Hispanic
Biological Sciences	F	White
Chemistry	F	Hispanic
Chemical/Biological Engineering	F	Hispanic
Chemical/Biological Engineering	F	Hispanic
Chemical/Biological Engineering	M	White
Chemical/Biological Engineering	M	White
Chemical/Biological Engineering	F	White

Publications resulting from the Year 1 cohort:

1. Alshiraihi, I. M. A., Bennett, J., Hamrick, M., Good, M., Henderson, K., Sobolewski, C., Edwards, M. A., Brown, M. A. Targeting the

NS5 Protein of Zika Virus. *J Mult Eng Sci St*. 2016. *2*(12), 1237-1240.

2. Faulkner E Hamrick ME and Brown MA. Generics, Biosimilars, and the Ethics of Pricing Pharmaceuticals. *J Vet Sci Med*. 2016, 4(1): 2-3.

Year 2 Outcomes

In Year 2, we expanded our international research partnership. Based on regional research priorities of our partners at the Autonmous University of the Yucatan, our research has grown to include SET and MYND domain-containing proteins; inhibition of zika virus NS5; and environmental surveillance of the human pathogen, *T. gondii*. A cohort of 8 students were recruited to participate in the Year 2 cohort. The table below provides an overview of each participant by discipline, gender, and race/ethnicity.

Discipline	**Gender**	**Race/Ethnicity**
Biochemistry	F	Native American
Biochemistry	F	Hispanic
Molecular Biology	F	Black/African American
Chemistry	F	Hispanic
Biochemical Engineering	M	White
Biological Science	F	Native Hawaiian
Animal Science	F	Black/African American
Biochemical Engineering	M	White

Publications in progress from the Year 2 cohort:

1. Abeita-Sanchez B, Borrego K, Edwards MA, Flores C, Frickenstein A, Maeda L, Mendoza M, Rykhus R, Ricalde RV, Brown MA. Environmental Surveillance of *T. Gondii* on the Yucatan. *Diseases*, special issue on “Pediatric Diseases” 2018.

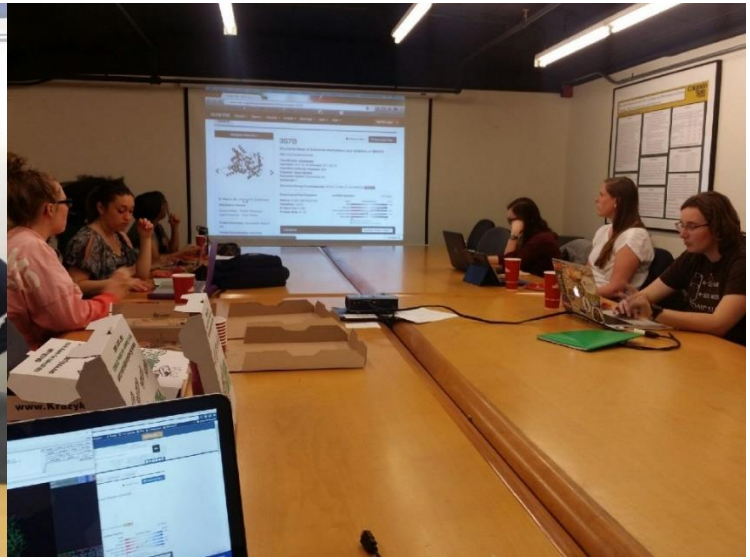
Year 3 Outcomes

Although recruitment for the Year 3 cohort has just begun, our Year 2 cohort has an exciting new opportunity to extend their summer research experience. Specifically, our research collaborators in Mexico were so impressed by the performance of our Year 2 cohort that they have requested for our team to return and help wrap-up the ongoing research in December 2017. This is quite an honor and it is a testament to the hard work, productivity, and contributions that our 2017 cohort provided. This opportunity provides a three-week research experience in Merida, MX to complete the project and submit the findings for publication.

We anticipate recruiting a new cohort of 8-10 participants for the Year 3 Summer Research Experience and the results of that experience, along with the results of the midyear experience for our Year 2 cohort, will be forthcoming.

The following photos are images of our participants conducting research, visiting cultural sites, and participating in social programming. The difference between each will be clearly evident in the photos. These photos can be strategically placed throughout this section of the report and any extras can be used as a photo highlight montage at the end of this section.

IMAGES FROM YEAR 1




CIB
CENTRO DE INVESTIGACIONES
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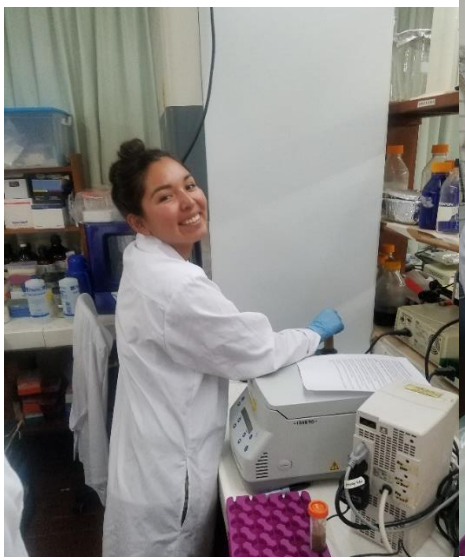
JORNADA
SOCIAL


Methods: Fluorescence-Activated Cell Sorting (FACS)
Inhibition of SMYD3 for the Clinical Management of Triple-Negative Breast Cancers
SET-MYND Family
SMALL MOLECULE INHIBITION OF SMYD2

IMAGES FROM YEAR 2





This last picture is a photo of our research collaborators in Mexico.

INTERNATIONAL GENETICALLY MODIFIED MACHINES (iGEM) COMPETITIVE RESEARCH PROGRAM

The iGEM program is dedicated to education related to synthetic biology and the development of an open research community of collaboration. Initially established at MIT, it is now an independent nonprofit organization with hundreds of participating cohorts throughout the world. CSU is the site of one of those cohorts. Our iGEM program was established in 2011 in the Office for Undergraduate Research and Artistry with support from the Office of the Vice President for Research. Each year, we recruit a cohort of five highly talented and motivated undergraduates to design and implement an iGEM project under the direction of a graduate student mentor and several faculty mentors. Thirty-five CSU students have participated in the program since 2011.

Quick Facts: The iGEM Steering Committee includes representatives from across CNS, CVMBS, and COE. The current faculty advisors for this program are Drs. Ashok Prasad and Christie Peebles.

Quick Facts: CSU's iGEM program has won two awards at national research competitions in Boston and one award at the international level in Toronto.

Photo of the 2013 iGEM research team at the International iGEM Jamboree.

Representative Student Quotes:

"Participating in the iGEM program at CSU was the difference that got me admitted to graduate school at Yale."

Chemical and Biological Engineering Major, Graduated 2016

"I landed my dream job in Boston doing what I love – bioengineering – and I owe it to my experience in the iGEM program. As soon as they saw I had won an award in iGEM, they hired me on the spot!"

Biology Major, Graduated 2015

ACADEMY OF CULTURAL RESEARCH SCHOLARS

The Academy of Cultural Research Scholars includes an interdisciplinary group of undergraduates who have a common passion for understanding and protecting our cultural heritage and resources. This academy is currently engaged in the Dearfield Dream Project. This project is a collaborative research initiative to conduct cultural, anthropological, historical, and environmental studies on the early 20th Century African-American colony site of Dearfield, Colorado. Because the breadth and significance of the Dearfield Project requires an interdisciplinary research team, a network of research collaborators has been assembled. This research network seeks to discover, preserve, and disseminate knowledge of the site and its surrounding farmsteads' economic, social, political, and environmental history for better understanding and interpretation of its contributions to Colorado and U.S. history.

Program Outcomes: Between 2010 and 2017, this has averaged 47 participants/year (331 total participants). CSU participants have presented their research related to Dearfield at 3 national conferences (resulting in one award for best in show) and 2 regional research symposia. The Academy of Cultural Research Scholars have hosted two Dearfield 5K events during which hundreds of participants were

guided on an historical-informative 5K route through Dearfield. CSU students served as volunteer interpreters along at key historic sites along the route. All proceeds were donated to the Black American West Museum to support ongoing Dearfield preservation efforts. The Academy recently hosted a national Dearfield Dream Conference at CSU during which hundreds of attendees from around the country presented research findings and initiatives related to Dearfield and other similar communities. Academy participants have participated in the following Dearfield research initiatives:

1) **Summer Archaeological Excavations**: These include 8 surface and subsurface excavations to identify, catalog and preserve Dearfield artifacts. All artifacts are deposited in the Dearfield Archives of the Black American West Museum.

2) **Textile Preservation Project**: This included the research, preservation, and presentation of several fragile Dearfield artifacts that were ultimately archived in the Dearfield Archives of the Black American West Museum. Participating students won “Best in Show” for the project at the annual Dearfield Dream Conference.

3) **Building Preservation Project:** CSU Construction Management students are tasked with researching, developing and interpreting building plans to be used in the stabilization and preservation of several buildings at the historic townsite.

4) **Digital Archives:** Students have been given access to a library of recorded interviews of former Dearfield residents. Students are tasked with transcribing the interviews and archiving the interviews for a digital archive to provide open access for researchers. Findings captured in these transcripts have contributed to several student papers and theses.

5) **Dryland Ecosystem Studies**: The Dearfield community practiced dryland farming in a part of Colorado that was, otherwise, well irrigated. That is, being a black community, they were not granted access to the canal systems of eastern Colorado. Yet, this community was known for high yield bumper crops of strawberries, corn, and other high water consumption crops. CSU agricultural science students are developing a model, using the Dearfield site as a dryland control, for agricultural water consumption needs in eastern Colorado.

6) **Virtual Dearfield:** Participants are using an original Dearfield town plot and historic photos to create a virtual tour of the historic town of Dearfield as it would have appeared in the 1930s.

7) **Dearfield Art Project:** To raise awareness and funding for the Dearfield Dream Project, several art students have created artistic renderings of historic Dearfield photos.

Awards resulting from this project:

SOAR Award: Outstanding Diversity Program, Colorado State University

Of the Month Award for Diversity Program, National Residence Hall Honorary

Publications resulting from this project:

1. Brunswig R, Junne G, Bowser G, Renfrew E, Dickmann E, Purnell A, and Brown M. Dearfield Dream Project: Developing an Interdisciplinary Historical/Cultural Research Network. *Social Sciences*, 2013, 2(3), 168-179.

Representative Student Quotes:

"As a biochemistry major, I never imagined myself doing cultural, historical research. But my skills and interests as a biochemist were integral for the completion of the Textile Preservation Project. My knowledge of environmental contaminants and reactive species helped us design a safe container for the archiving of these cultural gems. It was so meaningful for me to connect my cultural identity to my discipline! Before this, I was honestly thinking about changing my major to something outside the sciences. Now I'm hooked for life!"

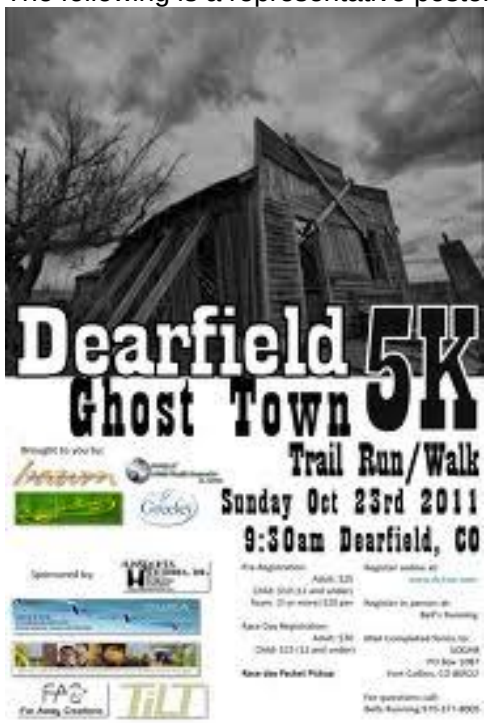
Biochemistry Major, 2016

"As a black person, this opportunity means the world to me! You want to get more black students to graduate from CSU? Give them opportunities to be a part of this project!"

Undeclared, 2016

IMAGES
The following images are works of CSU student art related to the Dearfield Art Project.

The following is a representative poster related to the 5Ks developed and sponsored by the Academy of Cultural Research Scholars:

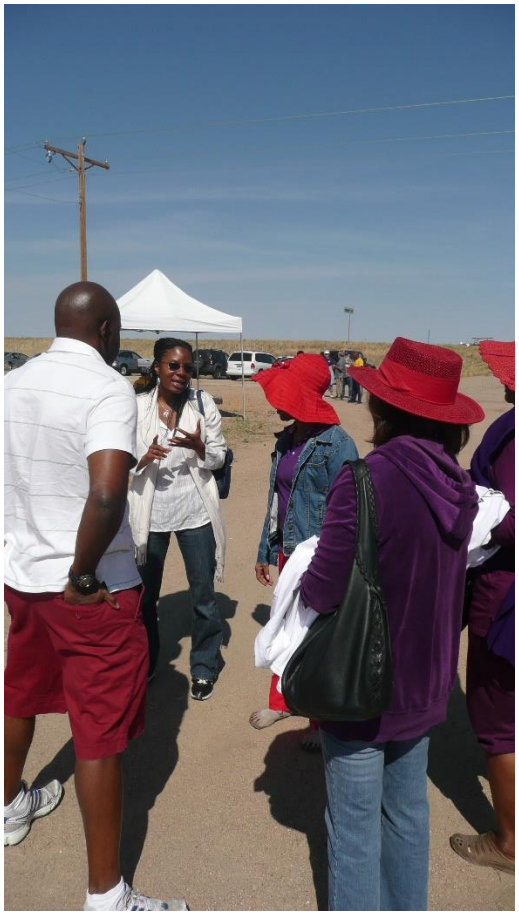


The following images highlight Dearfield 5Ks developed and sponsored by the Academy of Cultural Research Scholars. For each of these several hundred CSU students participated and volunteered for set-up, take-down, running the event, acting as interpreters at historic sites, preparation of the 5K breakfast, etc.

CSU participants arrive (it took two CSU buses to get them there!)

Student volunteers head to their designated sites.

Registration



Participants hear stories of “life in Dearfield” from descendants of former Dearfield residents.

The first wave of runners

The finish line!

The winner is recognized

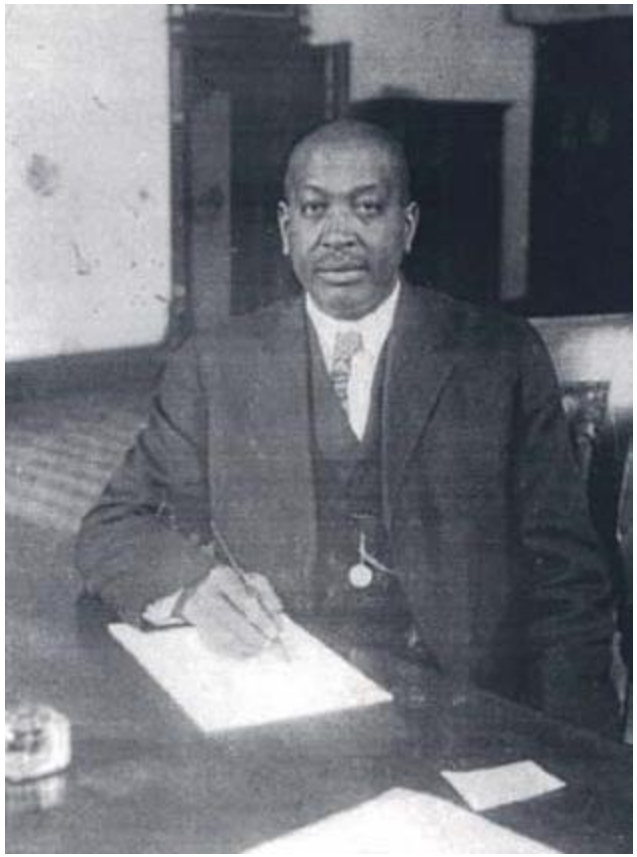
Dearfield Pancake Breakfast prepared by the Academy of Cultural Research Scholars

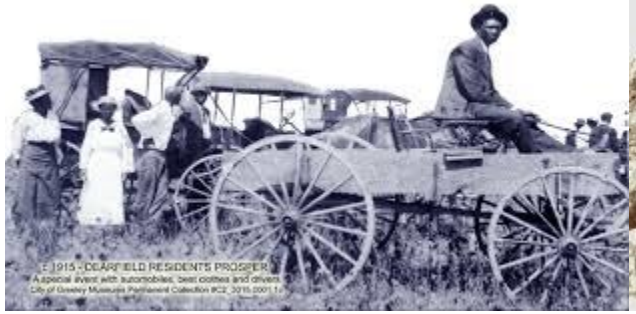
The following images are a combination of recent photos and original historic Dearfield photos. Notice the similarity between some of these photos and the artwork from above.

Historic Reenactment at the Dearfield townsite elf-efficacy surveys are administered to new

Recently restored home of the town’s founder, O.T. Jackson.


BRADFIELD
SERVICE STATION


Town founder, O.T. Jackson



The images below are from the Dearfield textile preservation project

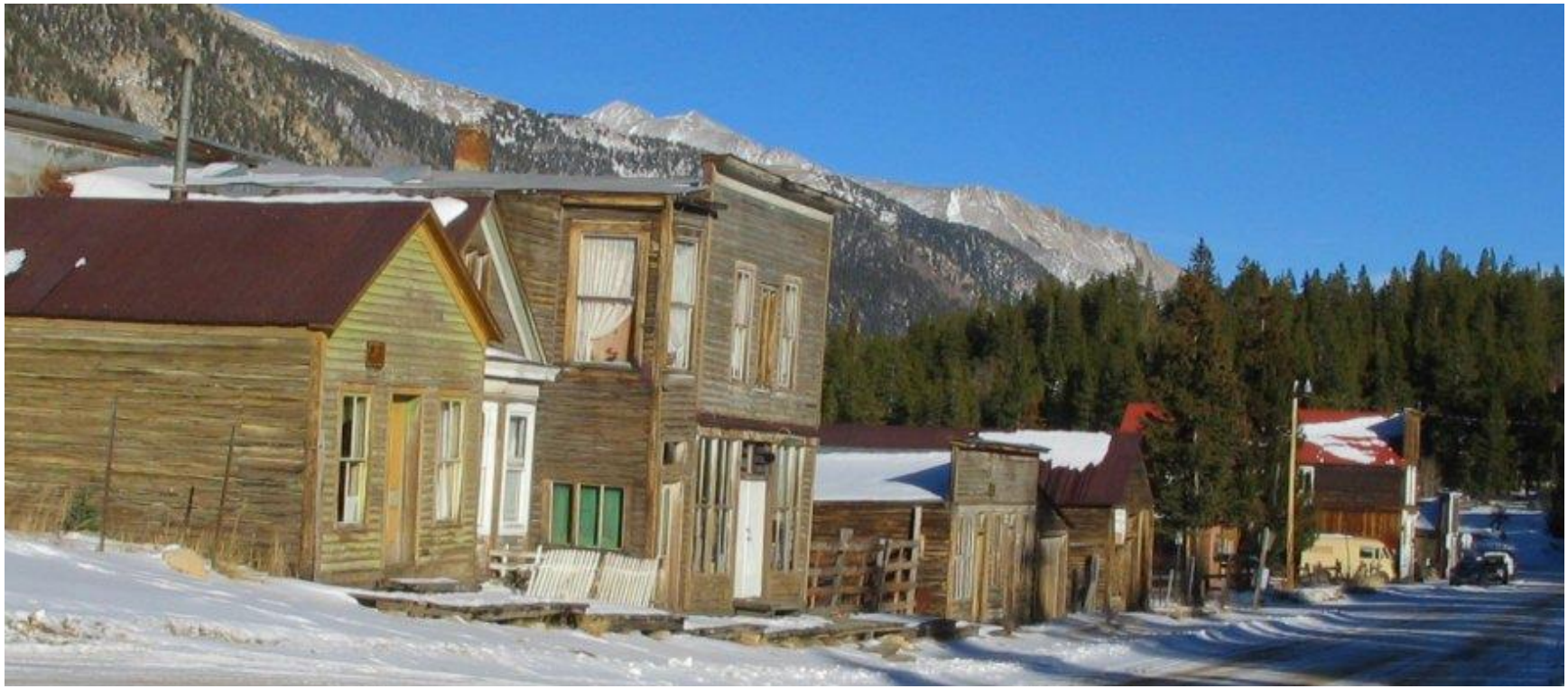
ACADEMY OF HISTORICAL RESEARCH SCHOLARS

The Academy of Historical Research Scholars includes an interdisciplinary group of undergraduates who have a common passion for exploring lesser known historical events from their unique disciplinary perspectives. The overarching goal among these scholars is to ensure that these lesser known events and locations are not lost to history.

Program Outcomes:

To date, this academy has engaged a total of 146 CSU undergraduates. Academy participants have participated in the following historical research initiatives:

1) **St. Elmo Mining History**: This project has included a thorough literature review and 2 interpretive site visits to the St. Elmo historic district.



2) **Iron City and the Mary Murphy Mine**: This project has included an analysis of the cause of deaths of over 100 miners of the Mary Murphy Mine, along with their families, over a 50-year period. Participants have placed a special emphasis on confirming proper diagnoses of infectious diseases based on medical records, newspaper accounts, and regional epidemiological records.

3) **Historic Dancehalls:** Many dancehalls hold a unique place in our culture and history. For example, dancehalls along the cotton belt were often strategically associated with cotton gins and served as an annual gathering place for regional farmers. The aim of this project is to document culturally significant dancehalls and their impacts on their communities before they are lost to history.

Representative Student Quotes:

"My major is microbiology but I have a passion for history. Dr. Brown's academy allows me to fulfill both of my interests by investigating historical deaths caused by infectious diseases. It sounds morbid but I love it. It allows me to apply what I'm learning in my micro classes through the lives of miners and their families who passed long ago."

Microbiology Major, 2015

ACADEMY OF PHOTO RESEARCH SCHOLARS

The Academy of Photo Research Scholars includes a group of primarily art students who have a passion for real-world applications associated with photography. They search for ways to use a combination of new and historic photos to solve both practical problems and historical mysteries.

Program Outcomes:

To date, this academy has engaged a total of 32 CSU undergraduates. Academy participants have focused on the following initiative.

Our office was approached by a District Attorney's Office (for political reasons, they have asked not to be identified) with an issue related to cases of domestic abuse being thrown out of the courtroom due to lack of adequate photo evidence. The District Attorney's Office speculated that a "younger generation of photographers would have a better command of state of the art photographic technology." They requested that we engage a group of student photographers to develop a manual for collecting photo evidence for first-responders. The manual was created and has been vetted by hundreds of first responders.

With the conclusion of the above project, this academy has no current projects. However, based on the feedback of the students who were involved, this was a life-changing, career-defining project. Therefore, we have maintained a shell for the academy should a new project be identified.

UNDERGRADUATE RESEARCH TRAINING LABORATORY

Beginning in 2011, the growing interest among undergraduate science students to engage in mentored research experiences created a capacity issue with regard to the number of mentors who were available to accommodate them. The Undergraduate Research Training Laboratory was developed in the Office for Undergraduate Research to respond to this capacity issue. This program provides training across a wide range of protocols that are common in bioscience and engineering research laboratories. By training the students before they are placed, we have stemmed the flood of students who are seeking to go directly into a laboratory. More importantly, feedback from faculty research mentors indicates that they are willing and able to accommodate more student researchers if they are trained prior to their placements. A key aspect of the program is that we train students on real-world projects so they gain applicable experience.

A pilot for this program was established in the laboratory of Mark Brown in 2011. The pilot has since accommodated and trained 111 undergraduate researchers. Given the success of the pilot, we are in the final stages of establishing a distinct training laboratory in the Office for Undergraduate Research and Artistry. Once it is operating a capacity, we anticipate training up to 400 students/year, thereby significantly increasing CSU's capacity to place undergraduates in mentored research positions. For example, if faculty are willing to accommodate 2 trained researchers for every 1 untrained researcher, we will be serving an additional 800 undergraduates/year (taking into account the 400 additional placements along with the 400 students in training).

We have conducted thorough self-efficacy assessments of all 111 participants to date. Although we are just beginning to analyze the data, the raw results indicate that our participants are lacking confidence across a wide range of laboratory protocols when they enter the program and they are highly confident in their abilities to conduct those protocols when they complete the program. At the conclusion of the program, 95% of the participants indicate that they are confident in their decision to enter research positions. We also conduct entrance/exit exams testing participants' knowledge and abilities across a range of bioscience research protocols. Participants average a score of 9% upon their entry to the program and 91% upon their exit from the program.

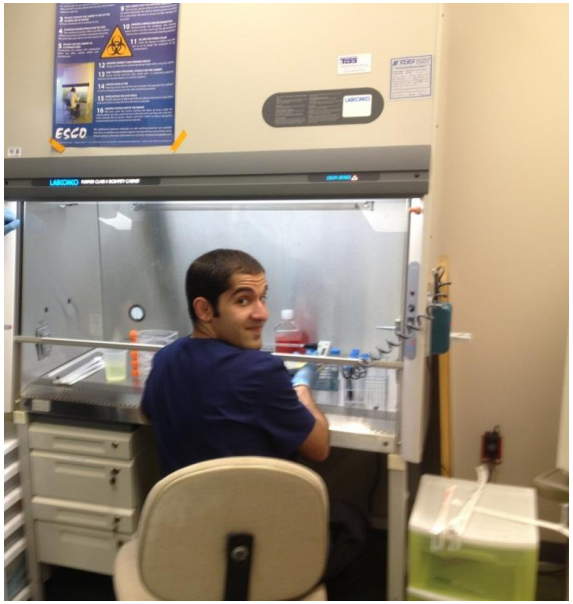
Representative Quotes:

"The students I received in my lab after completing the training lab were head and shoulders above any student I had accepted before. Training takes time and money. But if these students are indicative of what I can expect from the training lab, I'll take a dozen of them at a time."

Kiley Miller, Research Faculty, 2016

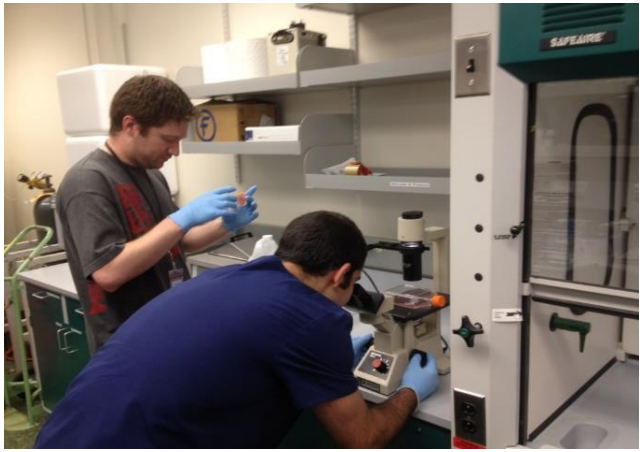
"I was so scared when I started in this program. I didn't feel like I knew anything. I was frustrated and completely lacked any confidence. Now I'm confident, excited, and thankful for this opportunity. I started my regular research placement a few months ago and it's going great!"

Biochemistry Major, 2016



Pasha Lookian, majoring in biology, learning to conduct cell cultural in the pilot training program.

Tysha Medeiros learning to analyze data from proliferation assays.



Applying methods of microscopy

RESPONSIBLE CONDUCT OF RESEARCH (RCR) TRAINING

We require all CSU undergraduates who are engaged in research to have training in the responsible conduct of research. Minimum training includes attending the introductory RCR workshop facilitated by OURA followed by the successful completion of the RCR training exam. Students who complete these requirements are issued a certificate in the responsible conduct of research. Students are instructed to provide these certificates to their faculty research mentors for inclusion in their personnel training files. This training satisfies federal requirements mandating RCR training for all participants of federally sponsored research.

Beyond the basics, OURA also facilitates: 1) discipline specific RCR workshops that provide additional depth; 2) workshops featuring case studies in RCR; and 3) ethics workshops.

OURA trains over 400 students/year in the responsible conduct of research. Hundreds more are certified in the online training system managed by the Research Integrity and Compliance Review Office.

Undergraduates participate in an OURA RCR Training Workshop

Undergraduates participate in a sustainability ethics workshop sponsored by OURA.

MENTORED RESEARCH AND ARTISTRY PROGRAM

The Mentored Research and Artistry Program is designed to enhance and recognize the learning experiences of undergraduates who are engaged in research, artistry, or other forms of creative work. The experience allows students to distinguish themselves as undergraduate scholars in their disciplines and includes a transcript designation to recognize this distinction. The criteria for completion are rigorous, ensuring that only the most dedicated students receive the distinction of Mentored Research and Artistry Program on their academic transcript.

Program Requirements:

1. Inquiry projects must be conducted under the guidance of a faculty, staff, or industry mentor for a minimum duration of two semesters. Upon completion of a project, participants must submit a final report including a summary of the projects, its outcomes, and a detailed reflection of the experience along with a letter from the mentor.
2. Attend Responsible Conduct of Research (RCR) Training and receive certification.
3. Be an active participant in a student organization related to their discipline and approved by the Office for Undergraduate Research & Artistry. Students will be required to submit a letter from the organization's Faculty/Graduate Advisor verifying the student's active involvement for at least two semesters.
4. Students must complete a research methods course with a grade of C or higher. The course must be approved by the Office for Undergraduate Research & Artistry (OURA).
5. Inquiry projects must be presented at the University's annual Celebrate Undergraduate Research & Creativity (CURC) Showcase or another venue approved by the Office for Undergraduate Research & Artistry (OURA), such as a regional or national conference. A program highlighting the participant's project or a letter of verification from the faculty mentor must be included with the final report.
6. Projects must be submitted for publication in the University's Journal of Undergraduate Research and Scholarly Excellence (JUR) or in another peer-reviewed journal, approved by the Office for Undergraduate Research & Artistry (OURA). A copy of the published manuscript or correspondence from an editor of the journal to which a manuscript has been submitted indicating the manuscript is under review should be included with the participant's final report.

Approximately 20 students complete the Mentored Research and Artistry Program each year.

JOURNAL OF UNDERGRADUATE RESEARCH AND SCHOLARLY EXCELLENCE

The Journal of Undergraduate Research and Scholarly Excellence (JUR) was established in OURA in 2010. JUR is a peer-reviewed, international, undergraduate journal registered with the U.S. Library of Congress that accepts submissions on any subject, from any undergraduate institution. The journal receives hundreds of submissions for publication every year, from institutions ranging from small liberal arts colleges to international institutions. The review process for publication includes peer, graduate, and faculty referees, ensuring that the Journal publishes competitive material that follows the Journal's standards for academic, creative, and passionate work.

JUR is staffed entirely by undergraduates. Each staff member is trained by OURA in a train-the-trainer program. The staff has grown to include satellite offices at Schreiner University, Autonomous University of the Yucatan, and University of San Francisco and also includes editorial board members from around the world. Over 200 undergraduates have trained in our Journal Editing, Peer Review, and Publication training program, almost 600 undergraduates have authored scholarly works in JUR, and over 3,000 undergraduates participate in the journal's network of peer reviewers.

The journal has undergone thorough assessments (data are currently being analyzed) and this initiative has been recognized as a "Best Practice" by the National Science Foundation.

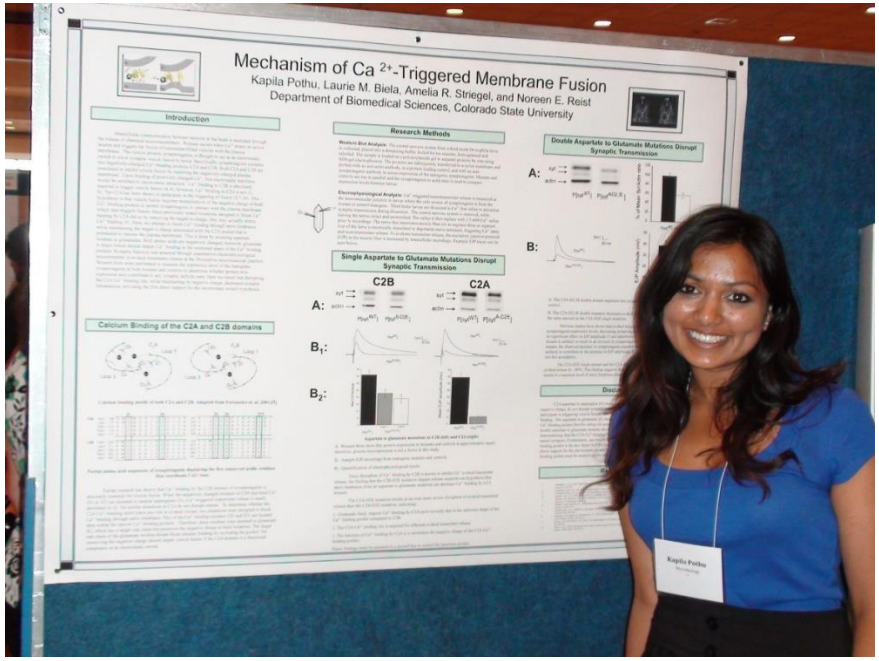
CELEBRATE UNDERGRADUATE RESEARCH AND CREATIVITY SHOWCASE

Throughout the year, students at CSU are invited to participate in a variety of events that recognize and honor their achievements and showcases what they have learned as a result of their scholarly research, scientific inquiry, and or creative endeavors. Among the most visible is ***CURC***, the annual ***Celebrate Undergraduate Research and Creativity Showcase*** held each April. Culminating in an awards ceremony that recognizes all participants and honors awards winners from events throughout the year, this juried showcase features outstanding performers from every discipline.

Categories at CURC include:

Research Posters
Oral Research Presentations
Writing Competition
Service Learning
Art

An average of 600 undergraduates participate in each year's showcase.

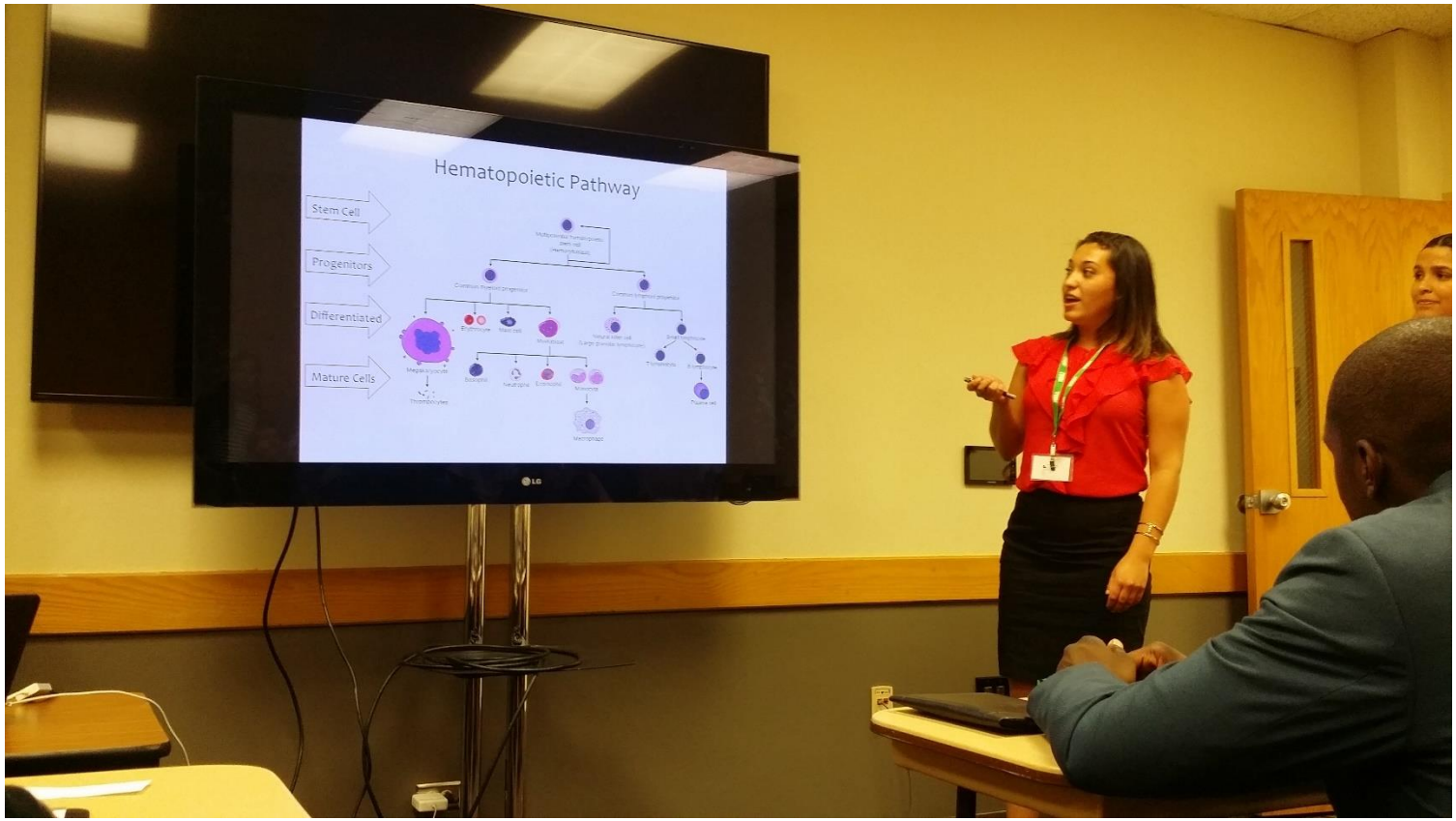


2016 CURC Poster Presentation

MULTICULTURAL UNDERGRADUATE RESEARCH, ARTISTRY, AND LEADERSHIP SHOWCASE (MURALS)

The Multicultural Undergraduate Research Art and Leadership Symposium, intentionally reaches out to students of color in various disciplines exposing them to a variety of undergraduate research opportunities. Mentoring, presenting research, networking, and learning about multicultural leadership are four main aspects of the program.

Over 130 students have participated in the program since 2015.



Student Oral Presentation at 2016 MURALS

ROCKY MOUNTAIN SCHOLARS PROGRAM (RMSP)

The RMSP is an NSF-funded (PI: Mark Brown), cohort-based, experiential learning program that places emphasis on the recruitment and success of underrepresented minorities in STEM disciplines. A total of 86 students have participated in this program. Participants have had a 100% rate of retention in higher education and a 98.84% rate of persistence in STEM programs. Among the graduates of our program, 93% have either elected to pursue a STEM graduate degree or have entered the STEM workforce. Products include the reporting of this program in journal articles, the presentation of the program at several national conferences and at two high-impact practices workshops, and the acknowledgment of participant support in over 2 dozen journal articles.

RMSP participants receive cohort-based research placements in addition to a wide range of workshops and enrichment activities. The table below provides information about each participant based on discipline, degree level, and race/ethnicity.

Discipline	Level	Race/Ethnicity
Environmental Sciences	Undergraduate	Hispanic/Latino
Environmental Sciences	Undergraduate	White
Environmental Sciences	Undergraduate	White
Environmental Sciences	Undergraduate	White
Environmental Sciences	Masters	American Indian/Alaskan Native
Environmental Sciences	Masters	Hispanic/Latino
Environmental Sciences	Doctorate	Hispanic/Latino
Environmental Sciences	Doctorate	Hispanic/Latino
Environmental Sciences	Doctorate	Black/African American
Physics	Undergraduate	White
Engineering	Undergraduate	Black/African American
Engineering	Undergraduate	Hispanic/Latino
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Engineering	Undergraduate	White
Natural Sciences	Masters	White
Natural Sciences	Doctorate	Black/African American
Biological Sciences	Undergraduate	Asian
Biological Sciences	Undergraduate	Asian
Biological Sciences	Undergraduate	Asian
Biological Sciences	Undergraduate	American Indian/Alaskan Native
Biological Sciences	Undergraduate	American Indian/Alaskan Native
Biological Sciences	Undergraduate	American Indian/Alaskan Native

Biological Sciences	Undergraduate	Black/African American
Biological Sciences	Undergraduate	Black/African American
Biological Sciences	Undergraduate	Black/African American
Biological Sciences	Undergraduate	Hispanic/Latino
Biological Sciences	Undergraduate	Hispanic/Latino
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Biological Sciences	Undergraduate	White
Biological Sciences	Masters	Black/African American
Biological Sciences	Doctorate	American Indian/Alaskan Native
Biological Sciences	Doctorate	Black/African American
Biological Sciences	Doctorate	Black/African American
Biological Sciences	Doctorate	Hispanic/Latino
Biological Sciences	Doctorate	Hispanic/Latino
Chemistry	Undergraduate	White
Chemistry	Undergraduate	White
Chemistry	Undergraduate	Hispanic/Latino
Chemistry	Undergraduate	Hispanic/Latino
Chemistry	Undergraduate	Hispanic/Latino
Computer Science	Undergraduate	Hispanic/Latino
Mathematics	Undergraduate	Hispanic/Latino
Mathematics	Undergraduate	White

What opportunities for training and professional development has the project provided?

1) Over the past five years, 75 of the RMSP participants have presented their research findings at regional, national, and/or international research symposia.
2) All 86 RMSP participants received training in scientific technical writing as part of the program.
3) All 86 RMSP participants participated in laboratory research within their respective disciplines.
4) 31 of the RMSP participants participated in one or more of our GRE workshops.
5) 33 of the RMSP participants participated in one or more of our Graduate School Application Workshops.
6) All 86 of the RMSP participants participated in one or more of our STEM Career workshops.
7) All 86 of RMSP participants participated in our Introductory and Advanced Training on the responsible conduct of research.
8) 21 RMSP undergraduate participants received RMSP peer mentor training.

How have the results been disseminated to communities of interest?

1) A series of webpages have been developed to highlight the RMSP: http://tilt.colostate.edu/oura/formalResearch/rmsp/index.cfm
2) This program has been acknowledged on research publications involving RMSP participants.
3) The RMSP was featured at: the 2011 RMSSN Faculty Diversity Meeting in Jackson WY; the 2012 Schreiner Research Conference in Kerrville, TX; the 2012 DOI Consortium in Washington, DC; the 2012 Annual Global Women Scholars Conference in Washington, DC; the 2013 Dearfield Dream Conference in Greeley, CO; the 2014 Northern Colorado Diversity Conference in Fort Collins, CO; the 2015 STEM Corps Faculty Meeting in New York, NY; and the 2016 Diversity Conference in Fort Collins, CO.
4) The RMSP has been featured at 15 academic workshops.
5) The RMSP has been featured on 18 recruiting visits (both in-state and out of state) and 13 on-campus recruiting days.
6) The RMSP was recognized at the Dearfield Conference for contributions made to the Black Community of Northern Colorado.
7) This program has been published in journal publications related to engaging underrepresented students in the sciences and experiential learning.

Program Outcomes

Goal 1 – Improve Educational Opportunities for STEM Students

Metric	Y1-5
Recruitment	86
Survey Response: Recruitment to RMSP opened an opportunity for me to pursue a four-year degree that I would have otherwise terminated	10/86
Undergraduate participants who graduate and go on to pursue STEM graduate/professional programs	21/41
Masters level participants who graduate and go on to pursue STEM PhD	2/4
Graduate participants who have obtained Graduate Teaching Certificate	8/13

Goal 2 – Increased Retention of Students to Degree Achievement

Metric	Y1-5
Number of RMSP students who persist in their STEM degree program from Year 1 to Year 2 of their cohort	76/76

Number of RMSP students who graduate with a 4 year STEM degree	41
Percent Retention	100
Percent Persistence in STEM disciplines	98.84
Number of RMSP students who graduate with STEM MS	4
Number of RMSP students who graduate with STEM PhD	2

Goal 3 – Improve Student Support Programs

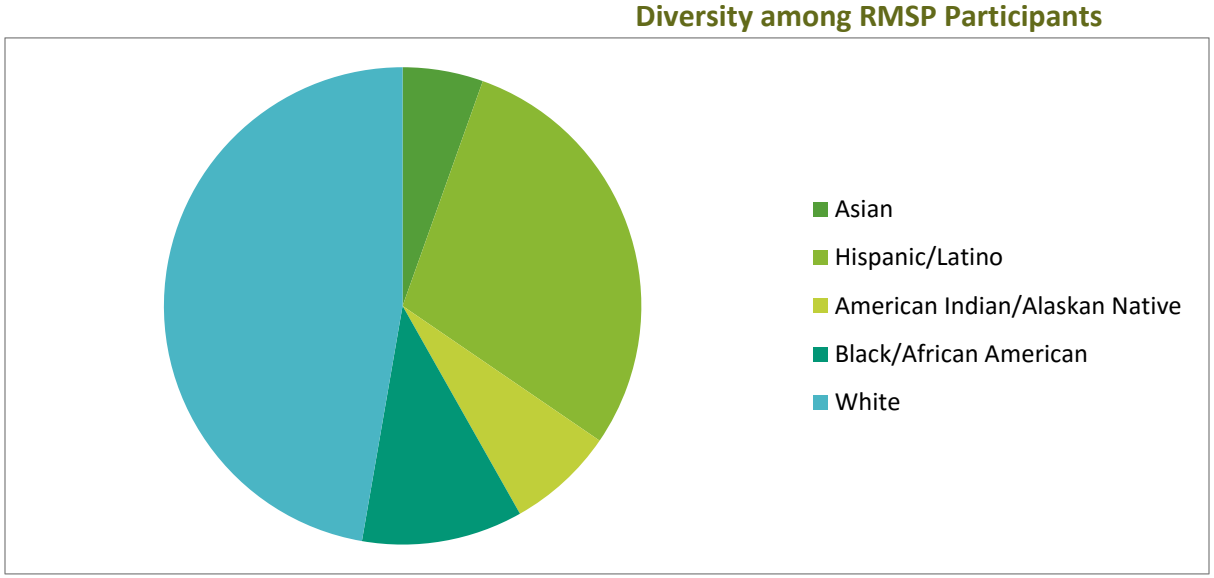
Metric	**Y1-5**
Cumulative grade point average	3.69
Survey Response: RMSP Ambassador positively impacted my choice to pursue a 4-year degree	63/72
Number of conference presentations produced by the PIs based on outcomes of the RMSP	8
Number of publications disseminating lessons learned by RMSP	2

Goal 4 - Increased numbers of well-educated and skilled employees in technical areas of national need

Metric	**Y1-5**
Undergraduate participants who graduate and go on to pursue STEM graduate/professional programs	21/41
Undergraduate participants who have graduated and immediately entered the STEM workforce	19/41
Graduate participants who have graduated and immediately entered the STEM workforce	2/4
Number of participants who engage in RMSP-STEM research/experiential learning opportunities	86/86

Supplemental Goal - Increasing the number of underrepresented students who enter and graduate from STEM disciplines

Metric	**Y1-5**
Percent Retention among underrepresented participants	100
Percent Persistence in STEM disciplines among underrepresented participants	100



IMAGES

RMSP participant banding a bird as part of her ornithological research study

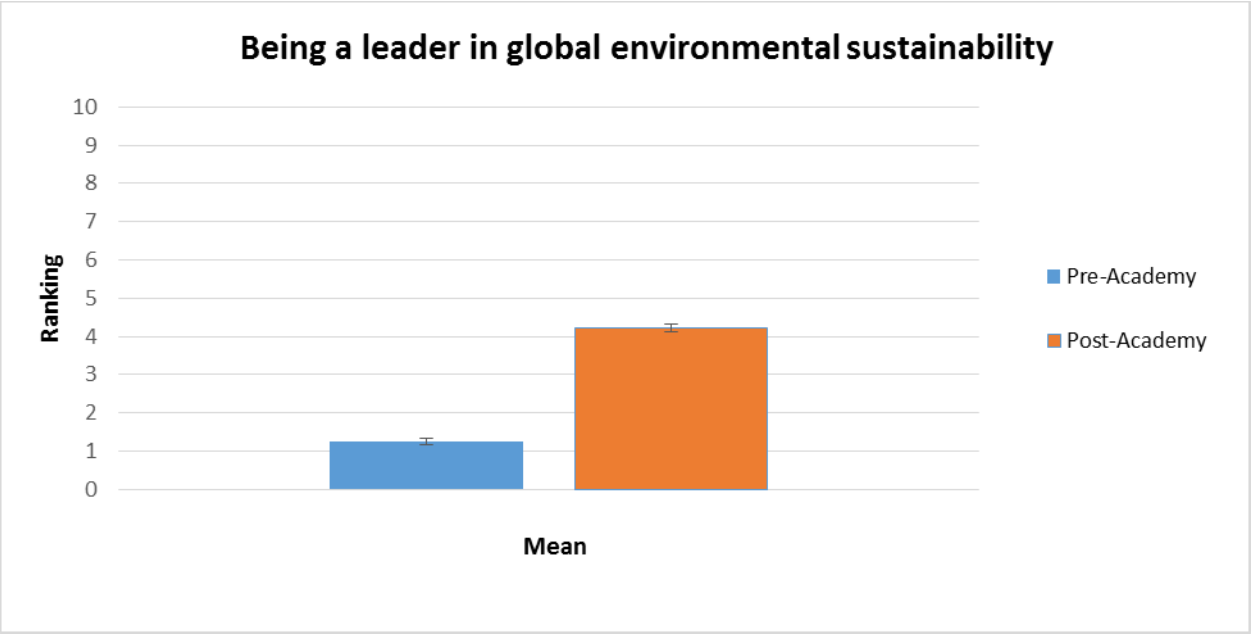
ROCKY MOUNTAIN SUSTAINABILITY AND SCIENCE SUMMER RESEARCH ACADEMY

The Rocky Mountain Sustainability and Science Network (RMSSN) is a partnership of over two dozen universities, federal agencies and other institutions designed to help train the next diverse generation of interdisciplinary leaders who are prepared to address issues related to global climate change, environmental sustainability, and the management of public lands and resources using the Rocky Mountains as a laboratory and classroom. The program was established with funding from the National Science Foundation (PIs G Bowser and M Brown) and housed in OURA.

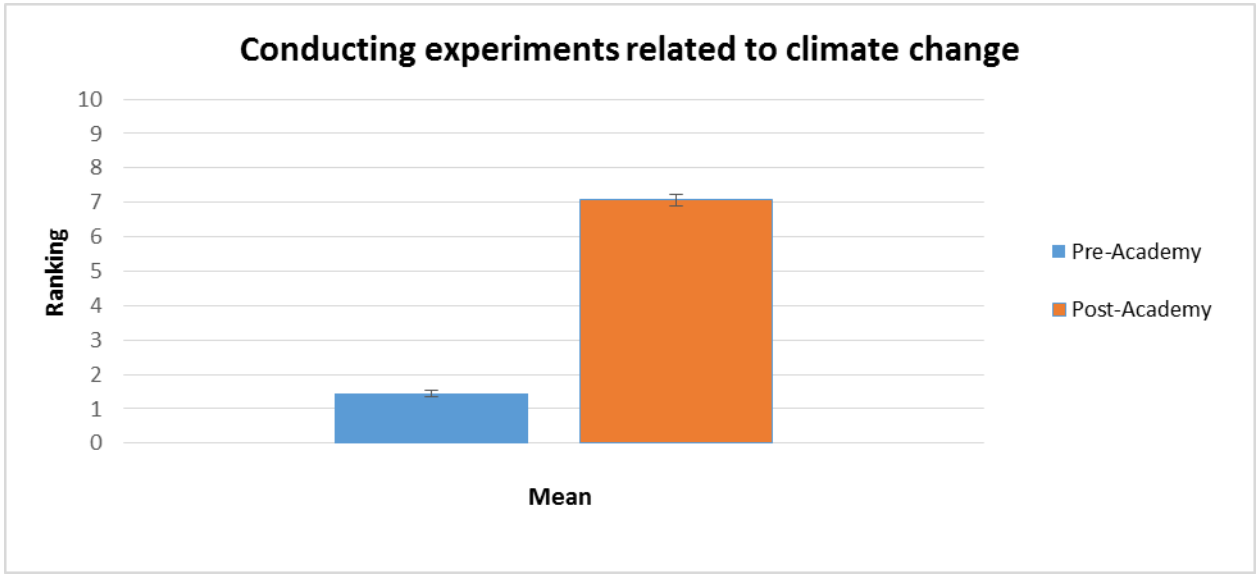
Each year, the Rocky Mountain Sustainability and Science Summer Research Academy (Summer Academy) supports interdisciplinary, place-based learning experiences in the form of environmental internships for 25-35 undergraduate students. Prior to these experiences, participants attend the cohort-based, Summer Academy during which they obtain: 1) training in biological field protocols and data analysis; 2) introduction to climate literacy; 3) training on communication in the sciences; 4) introduction to global leadership in the sciences; 5) case studies and problem-based learning related to environmental sustainability; 6) introduction to the interdisciplinary nature of collaboration in the environmental sciences; 7) introduction to the study and preservation of cultural resources on public lands; and 8) introduction to careers related to environmental sustainability, climate change, and preservation of cultural resources. Over the course of 7 years, these summer academies have been held either at the Shortgrass Steppe Long-term Ecological Research Station adjacent to the Pawnee National Grasslands in eastern Colorado or at Grand Teton National Park. Students who complete the academy along with the associated environmental internship are awarded a Certificate in Global Leadership and Environmental Sustainability from the Rocky Mountain Sustainability and Science Network.

Program Outcomes

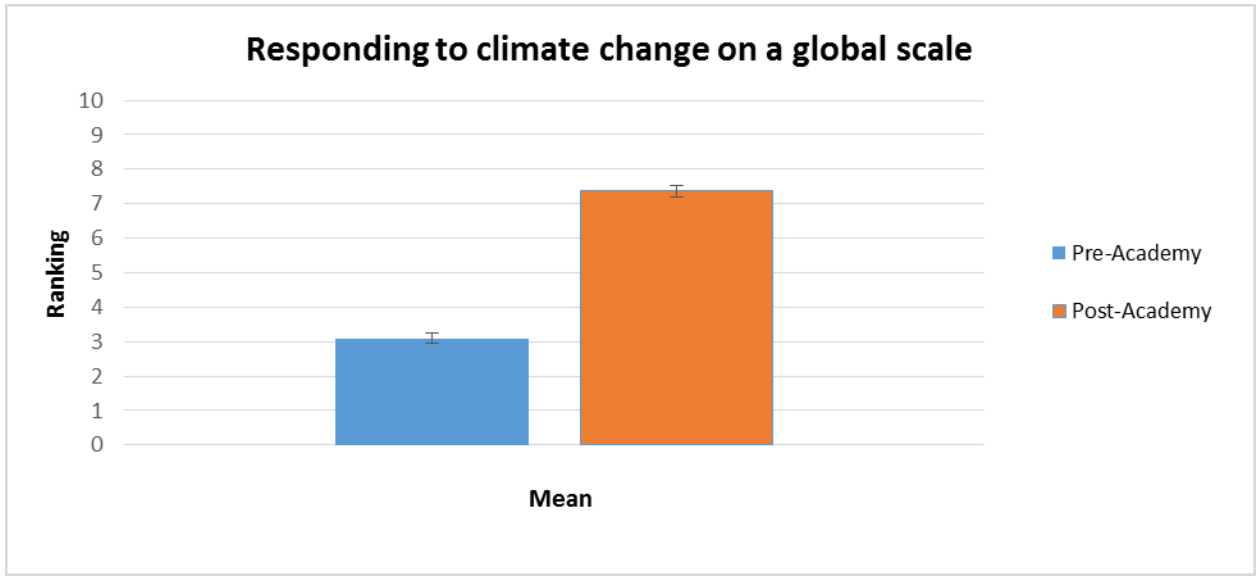
Each year, students complete pre-/post-self-efficacy analyses related to a wide range of learning objectives. The results of those assessments are below.



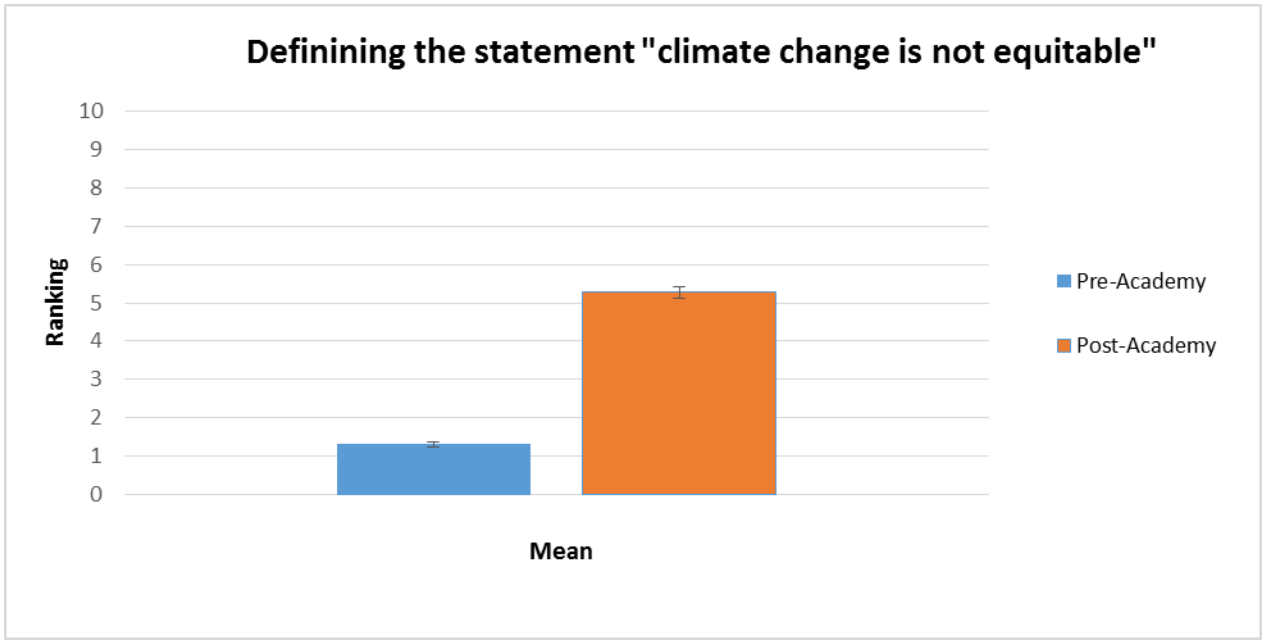
Average ranking of students' perceived ability be a leader in global environmental sustainability before (blue) and after (red) the Summer Academy.



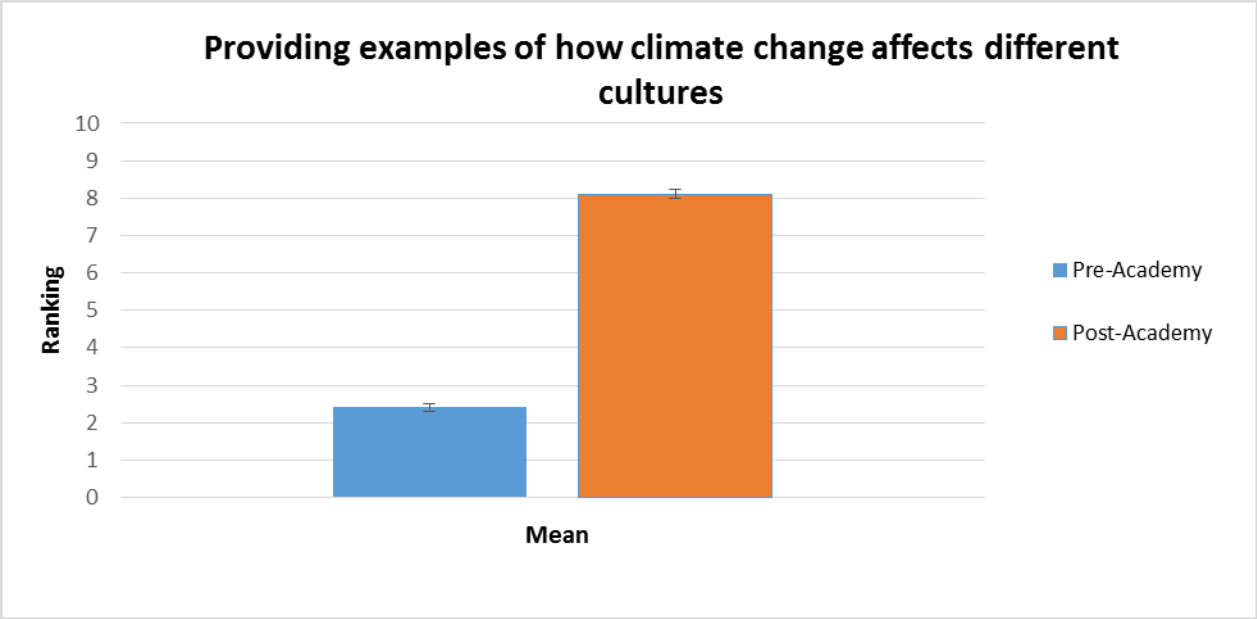
Average ranking of students' perceived ability to conduct experiments related to climate change before (blue) and after (red) the Summer Academy.



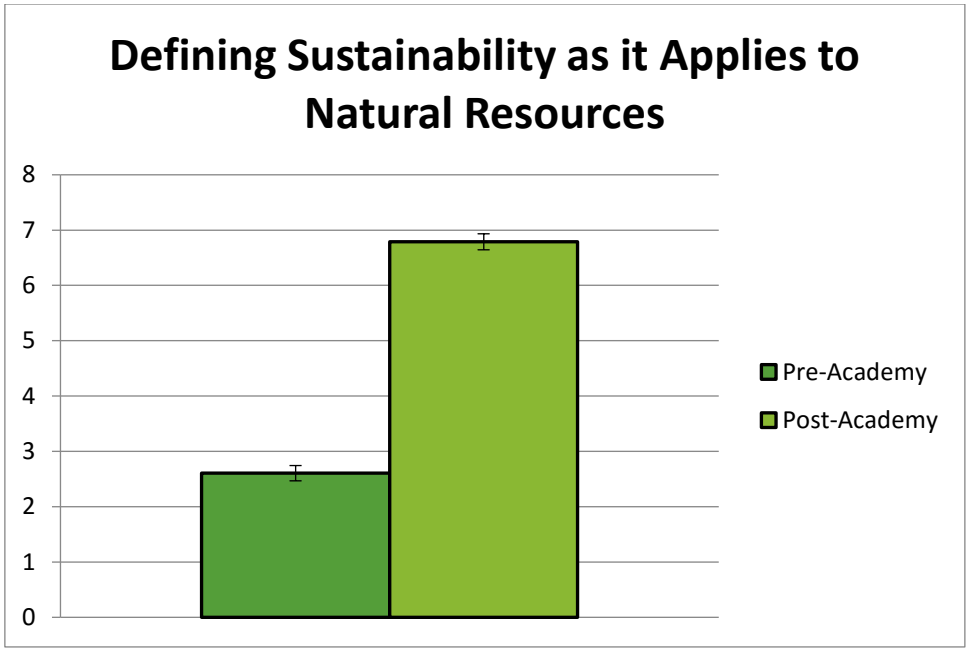
Average ranking of students' perceived ability to respond to climate change on a global scale before (blue) and after (red) the Summer Academy.



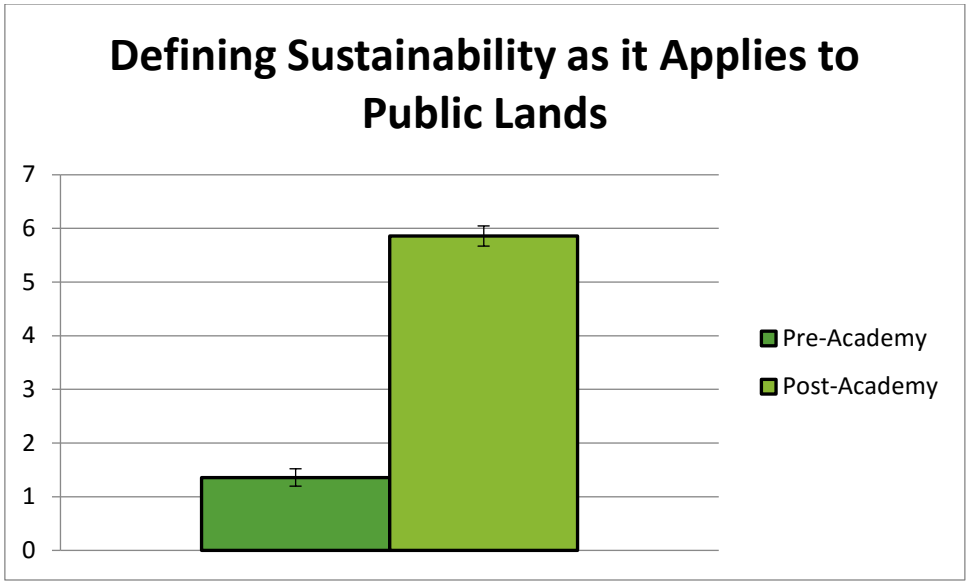
Average ranking of students' perceived ability to define the statement "climate change is not equitable" before (blue) and after (red) the Summer Academy.



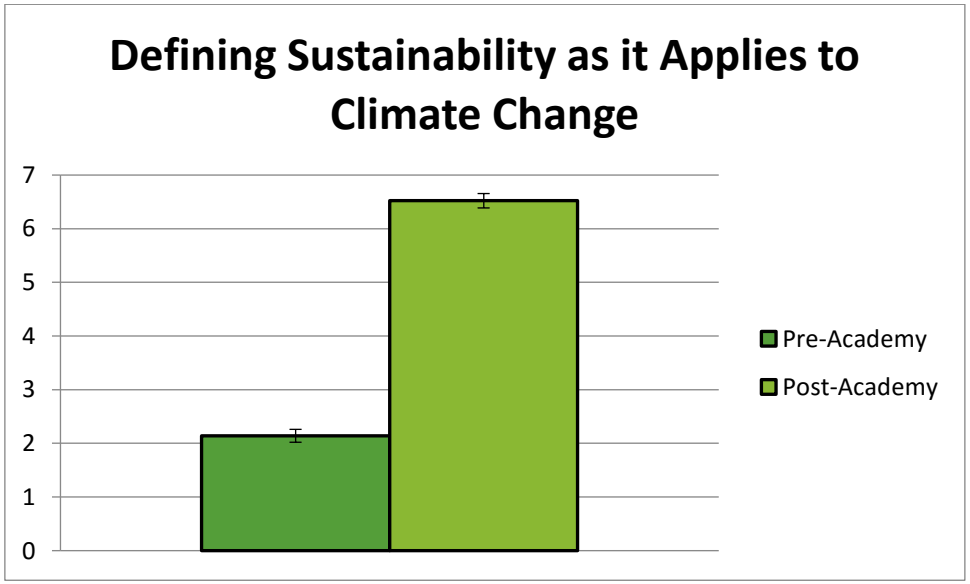
Average ranking of students' perceived ability to provide examples of how climate change affects different cultures before (blue) and after (red) the Summer Academy.



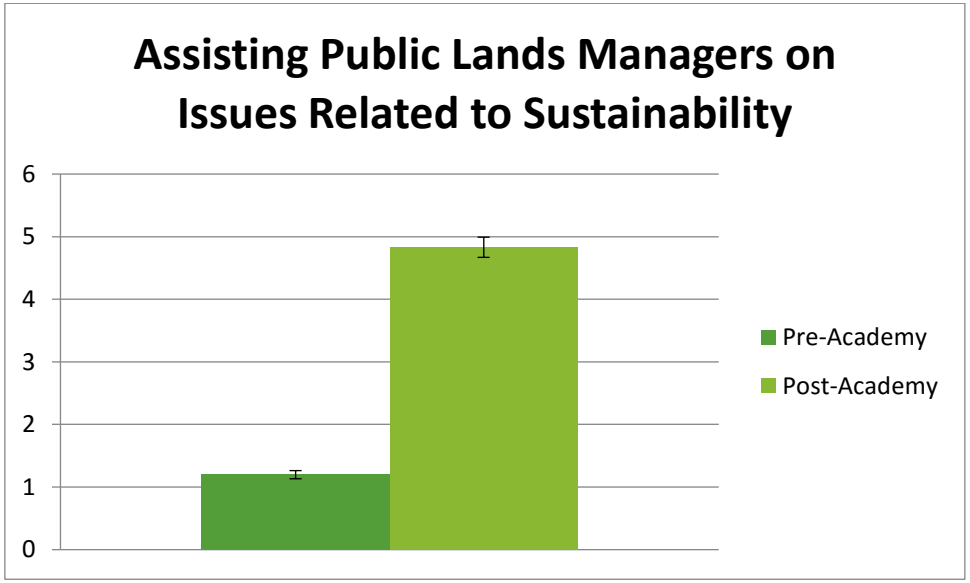
Average ranking of students' perceived ability to define sustainability as it applies to natural resources before (blue) and after (red) the Summer Academy.



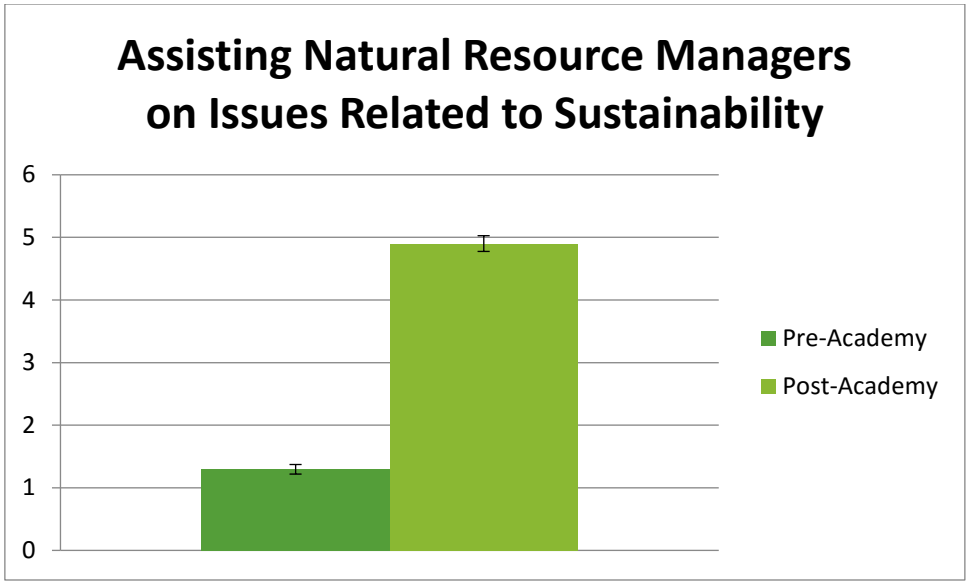
Average ranking of students' perceived ability to define sustainability as it applies to public lands before (blue) and after (red) the Summer Academy.



Average ranking of students' perceived ability to define sustainability as it applies to climate change before (blue) and after (red) the Summer Academy.



Average ranking of students' perceived ability to assist public lands managers on issues related to sustainability before (blue) and after (red) the Summer Academy.



Average ranking of students' perceived ability to assist natural resource managers on issues related to sustainability before (blue) and after (red) the Summer Academy.

Publications resulting from this project

1. Bowser G, Gretzel U, Davis EB and Brown MA. Educating the Future of Sustainability. *Sustainability*. 2014, 6(2): 692-701.

2. Davis E, Bowser G, and Brown MA: Creating the Global Leader and Global Mindset: Engaging Multicultural Students in Multidimensional Learning. In *Environmental Leadership.* SAGE Publishers, Thousand Oaks, CA. 2011.

3. Gretzel U, Davis EB, Bowser G, Jiang J and Brown MA. Creating Global Leaders with Sustainability Mindsets. *Journal of Teaching in Travel and Tourism*, special issue on 'Tourism Education for Global Citizenship: Educating for Lives of Consequences, 2014, 14(2): 164-183.

4. Bowser G, Quick Bear EN, Purnell A, Dickmann EM, and Brown MA. Experiential Learning: Engaging the Next Diverse Generation of Scientists. *Int J Sci.* 2013, 2(1), 40-45.

Students learn to collect field samples

Students examine specimens at Shortgrass Steppe Long-term Ecological Research Station

Students participate in a “communicating science lesson” facilitated by Senator Udall’s Communications Director

Students participate in a “communicating to a disbelieving audience” lesson with the State Climate Change Advisor.

Leadership Training Exercise on the Ropes Course

Students learn to college phenological data to predict climate change

Observing wolves at Yellowstone National Park

Daily Lesson at the Murie Center with the Grand Teton National Park Interpreter

Annual cohort of the Summer Research Academy at the Murie Center in Grand Teton National Park


nature's notebook
A project of the USA-NPN

GLOBAL WOMEN SCHOLARS NETWORK (GWSN)

Established in 2011, the GWSN is a NSF funded (PIs: G Bowser and M Brown) research coordination network in science, engineering and education with the goal of increasing the number and impact of women in the sciences. GWSN generates collaborative research with gender perspectives while also creating a supportive network of women scholars.

Since 2011, over 180 undergraduate women have participated in the network.

Representative Quotes:

"I was lost. I was literally lost. And mad…. And frustrated. As a woman, I didn't feel like I belonged in engineering. Then I met my mentor in the network. And now I'm a confident, successful engineer."
Chemical and Biological Engineering Major, 2016

Publications resulting from this work

1. Bowser G, Wilkins K, Gretzel U, Davis E and Brown MA. Developing Research Networks to Enhance Cross-Mentoring and Representation of Women in Clinical and Experimental Oncology. *Journal of Clinical and Experimental Oncology*. 2015, (4:3): 1-3.

BOETTCHER SCHOLARS PROGRAM

Annual award given to 40 high school seniors. Students can select any in-state school to attend. Its mission, in part, is to keep CO talent in CO. Covers total cost of attendance (Foundation provides stipend and covers part of tuition; CSU covers the rest).

OURA provides mentoring, coordination, and enrichment activities to support the program. 40 students have participated in the last 5 years.

Boettcher Scholar Activities and Support Programs

Community Building

1. Recognition gifts for incoming Boettcher Scholars that were given to first years at the New Boettcher Scholars Orientation held at Denver Botanic Gardens. The gifts included lanyards, mugs, and stuffed rams.
2. September 14, 2016 – Welcome Back Dinner – Coopersmith's

Scholars gathered to eat and mingle and to share their summer adventures as well as their school year goals.

3. October 5, 2016 – Cooking Competition – The Cooking Studio

Scholars were assigned to either the black or red team and each was given the same menu of items to prepare, including a secret ingredient that must be incorporated into one of the three dishes. Each team worked together to prep, execute, and integrate the secret ingredient in creative ways. The staff consisted of the judging panel whose criteria included presentation, taste, and best use of the secret ingredient. After the winning team was announced, everyone was able to eat and taste the fares from both teams.

4. November 16, 2016 – Winter Social with Cookies and Cocoa – Lory Student Center

Scholars, along with Monfort and Anschutz scholars, assembled for an evening of food, fun, and games. Catering included pizza and seasonal beverages such as hot chocolate, tea, and apple cider accompanied by cookie and snacks. Students engaged in group board and table games and drawings for fun ornaments were done throughout the night.

5. January 23, 2017 – Spring Semester Dinner – Rodizio Grill

Scholars returned from break to start the Spring semester with a dinner to catch up on winter break activities and to share upcoming excitements for Spring.

6. February 20, 2017 – Painting Class – Pinot's Palette

Scholars, joined by Monfort and Anschutz scholars, were sat in groups of 6, each group was given six small panels and tasked with painting their panels so that they would be stand-alone pieces but also that when aligned, the 6 panels recreated an image of a cohesive cherry blossom tree. In this enriching teambuilding exercise, scholars learned acrylic painting basics while have to communicate with their adjoining artists.

7. May 5, 2017 – Carnival Game Social – Lory Student Center

Scholars enjoyed a BBQ dinner and a room full of carnival themed games, prizes, and candy. Towards the end, Melissa and Mary gifted the graduating scholars with a maroon painted wooden “B” decorated with gold lettering saying ”Grad 2017” to remind them of their experiences being a Boettcher Scholar.

Intellectual Development

1. December 10, 2016 – A Colorado Christmas – Colorado Symphony

Scholars first enjoyed a pizza lunch at Panhandlers pizza before shuttling down to Denver. There, along with a few Monfort and Anschutz scholars, they attended an orchestral and vocal performance in the Boettcher Concert Hall at the Colorado Symphony. Seasonal music and a children’s chorale set a nice tone for the holiday season.

2. April 30, 2017 – Glass Blowing – Daggett Glass Studio

Scholars were able to choose to craft either a blown glass ornament or a shaped glass paperweight. While manipulation molten glass, each scholar colored and crafted their own personalized piece of glass artwork under the direction of a skilled glass worker.

Service

1. October 22, 2016 – Homeless Gear – Sam’s Club Fort Collins

Scholars joined the Monfort and Anschutz scholars in supporting Homeless Gear, a local organization that provides aid to homeless family’s right here in Colorado. With a table and carts set up outside of Sam’s Club, scholars distributed lists of needed goods to Saturday patrons as they entered to shop and collected the donated items throughout the day. Afterwards, all goods and monetary donations were delivered to the Murphy center for storage and later distribution.

2. May 14, 2017 – The Spring Plant Sale – The Gardens of Spring Creek

Scholars had the opportunity to support the Gardens of Spring Creek by staffing their annual plant sale fundraiser which benefits the horticulture programs at CSU and Front Range Community College.

ANSCHUTZ SCHOLARS PROGRAM

This is CSU’s most prestigious merit and needs based award given to 5 incoming students annually. It is funded by the Anschutz Foundation and covers the full cost of tuition.

OURA provides mentoring, coordination, and enrichment activities to support the program. 25 students have participated the last 5 years.

See Boettcher Scholars Program for example of annual activities and support programs.

MONFORT SCHOLARS PROGRAM

This is CSU's most prestigious merit based award given to 3 incoming students annually. It is funded by the Monfort Family Foundation and covers the total cost of attendance.

15 students have participated the last 5 years.

See Boettcher Scholars Program for example of annual activities and support programs.

GRIFFIN SCHOLARS PROGRAM

This is an award given to students in WY and CO who have completed two years at a community college and wish to attend CSU, UNC, or UW.

21 students have participated in the last 5 years.

See Boettcher Scholars Program for example of annual activities and support programs.

Committees and Task Forces (from page 2)

OURA's staff have served on the following committees and task forces over the past five years:

- Provost Academy for Instructional Innovation (Participated as Faculty Resource Expert)
- PROPEL (Optimizing Performance and Excellence in Research Personnel) Committee, Office of the Vice President for Research
- Council of Research Associate Deans, Office of the Vice President for Research
- Steering Committee (Chair), Celebrate Undergraduate Research and Creativity (CURC) Showcase
- Steering Committee, Graduate Student Research Showcase
- CSU Discovery Committee, Office of the Vice President for Research
- Steering Committee: Multicultural Research, Artistry and Leadership Showcase (MURALS)
- GTA Training Task Force, Institute for Learning and Teaching
- Joint Leadership Team for Instructional Innovation, Office of the Associate Provost for Instructional Innovation
- Faculty Committee on Research and Ethics
- Anschutz Scholars Selection Committee

- Monfort Scholars Selection Committee
- One Health Education Task Force
- Education Section, Department of Clinical Sciences
- Ethnic Studies Mentor Committee
- Committee for Assessment & Development of Effective Teaching, Department of Clinical Sciences
- Admissions Committee, Cell and Molecular Biology Graduate Degree Program
- Graduate Assistance in Areas of National Need (GAANN) Teaching Fellowship Advisory Committee
- Innovative Teaching Task Force
- Executive Committee, Colorado School of Public Health
- Curriculum Committee, Colorado School of Public Health
- Admissions Committee, Colorado School of Public Health
- TILT Performance Evaluation Special Committee
- Participated in the CSU Principles of Community Workshop
- TILT Career Pathways Special Committee
- Faculty Senate, Colorado School of Public Health