



University of Colorado  
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2022-  
2023

# The Center for Student Research Report



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2022-2023

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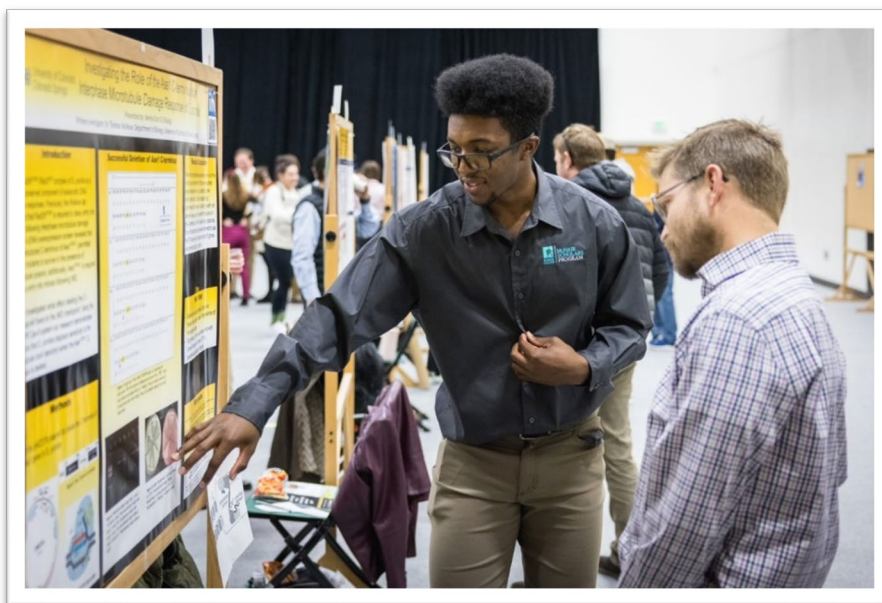
## Center for Student Research Annual Report 2022-2023

### Introduction

We had another exciting year at the Center for Student Research expanding our member base and recognition on campus as well as cultivating new relationships with other units. The opportunities and experiences our campus provides students in research and creative works set us apart as lively hub of activity in the Southern Colorado higher education scene which serves as an important attraction for potential students. We are thrilled to share more about ongoing and newly created programs in our center and the positive outcomes we are tracking for our students engaging in mentored experiences at UCCS.

### Student Research on Campus

This year we increased our student membership in the CSR to 371 with 81 faculty affiliates. These members are personally invited to programming hosted by both the CSR and the Office of Research including Responsible Conduct of Research training and workshops such as “The Healthy Researcher”.



We continue to track student involvement in research and creative works through a number of avenues. While no metric is perfect, we currently lean on sourcing data from CU-SIS which provides student enrollment numbers for courses in undergraduate research, especially course

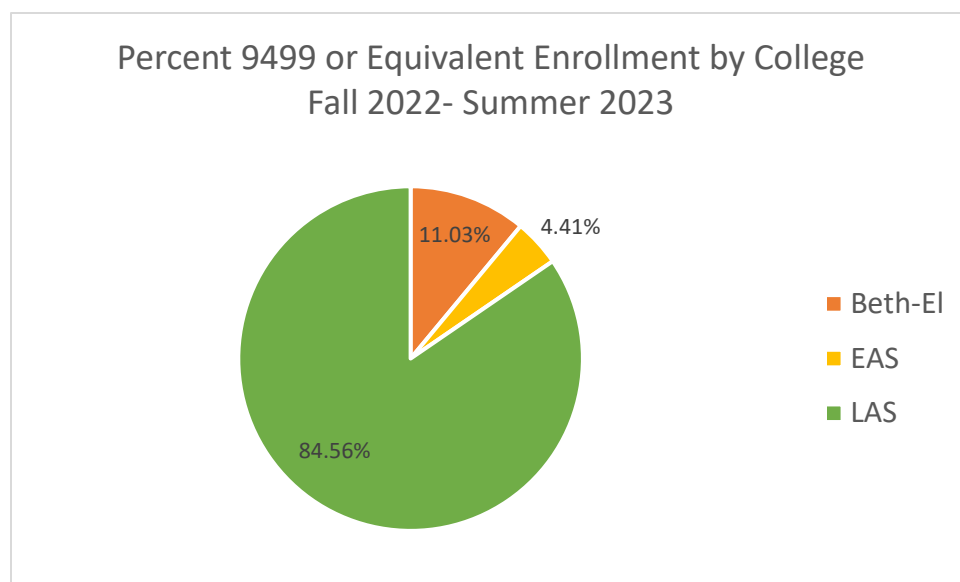


Figure 1: 9499 enrollments by college 22-23

number 9499 and its equivalents (e.g., CHEM 4904, CS 9300, etc.). We also gather information on students paid as research assistants from the Student Employment office

based on listed code and/or funding source. Of course, our data may not reflect all students participating in research or creative works outside of the classroom, but the data we can collect suggests robust engagement in these experiences. Between fall 2022 and summer 2023, the research course enrollment showed 137 students were earning credit for their work on mentored projects with faculty. Between July 2022 and June 2023, there were 44 students working as paid research assistants and another 146 students working on a sponsored project.

We are excited about exploring these new ways of measuring the student research activity on campus. Not only does this aid us in being able to connect with the students to provide support, but we are also better able to track improvements or declines in student participation in research activities.

## Workshops and Partnerships

The CSR director has worked to develop a variety of trainings and workshops for undergraduate and graduate students related to research and creative works. However, designing, scheduling, advertising, and hosting these events was challenging with the director's limited FTE for this

position at just one day per week. Much of the director's time is dedicated to the Undergraduate Research Academy in the spring and summer so connecting with other campus entities for support with events is an important priority as the CSR grows. This year, the CSR intentionally cultivated a partnership with the Graduate School to hold workshops tailored for graduate students. This included a professional development workshop on **Individual Development Plans** presented to the Graduate Student Association as well as a virtual session on **Finding Funding** specifically for graduate students (e.g., fellowships, dissertation grants). The partnership allowed for better allocation of advertising efforts and resulted in better attendance at both events compared to previous meetings.

In an effort to build community across disciplines among our student researchers, the CSR hosted the first **Student Researcher Social** where all campus student researchers were invited to Clyde's Pub to enjoy light refreshments and meet with other students engaged in scholarly work from a variety of departments. This was a well-attended event with over 40 students joining over the 2-hour social. Based in part on the success of this social, the CSR partnered with the Graduate School Recruiter

Deanna Johnson for a similar social session on research opportunities in graduate school in the spring of 2023. Current undergraduate students were invited to a social event where they had the opportunity to meet with



graduate students that are currently attending UCCS which included four of our Aspirational Graduate Peer Mentors. These informal conversations allowed students to learn about what life is like as a graduate student at UCCS and the types of projects they are working on. Again, this was a well-attended event and we plan to co-host another of these in the fall of 2023 with faculty invited to attend as well.

## **Travel Awards**

The CSR awarded 10 Undergraduate Research Travel awards to help offset the cost for travel, accommodations, or registration for conferences. These ten undergraduate students utilized their awards for a variety of opportunities including one student conducting field research in West Virginia to collect samples and meet with collaborators. Another student used their award to travel to the International Mars Conference in Arizona where they gave a symposium talk on their research. A student from the Philosophy department was selected for the highly competitive Colorado Summer Seminar in Philosophy in Boulder, CO for which they used their funding to offset boarding costs. While this award is just a small amount (\$400), it has helped students participate in opportunities they might not otherwise be able to attend. We hope to stress to campus the importance of this funding to the professional development of a wide variety of researchers at UCCS.

## Mountain Lion Research Day

The 14<sup>th</sup> annual Mountain Lion Research Day (MLRD) was held on December 2<sup>nd</sup> and organized by the CSR director in partnership with the Office of Research. The half day event included **78 student**

**presenters**, 20 of whom were 2022 Undergraduate Research Academy members. The event was attended by well over **150 campus and community members** coming to view the poster presentations. Mountain Lion Research Day includes a judging component to award the Top



Top Undergraduate Scholar Aja Zamundu with Dr. Heather Littleton and Clyde at the 2022 MLRD.

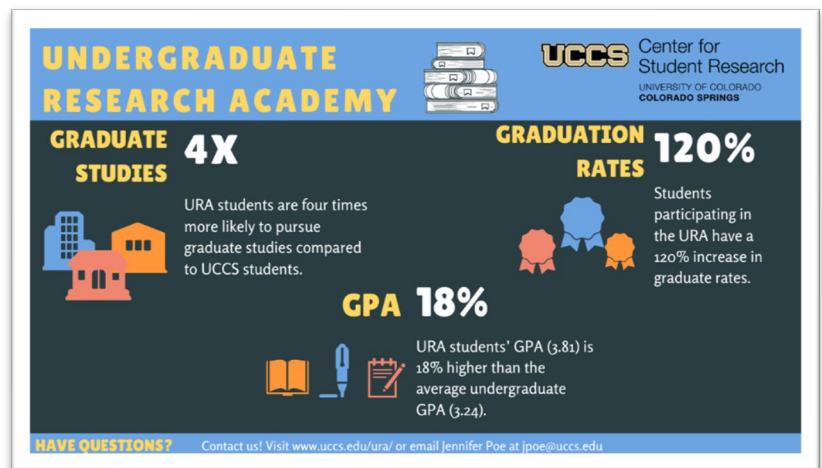
Undergraduate and Top Graduate student scholars based on their “excellence in scholarship, clarity in visual and oral presentation, and demonstrated knowledge in a discussion with the judges”. This year’s Top Undergraduate Scholar Award was awarded to Aja Zamundu for her work with Dr. Littleton on perceptions of campus responses to the murder of George Floyd. Ms. Zamundu’s work on this project was supported by her Undergraduate Research Academy award in 2022 – a testament to the exceptional student works this award supports. During MLRD, campus celebrates faculty achievements in sponsored project funding through the

\$1 million and \$5 million Club Inductions as well as the presentation of the Outstanding Mentorship Award. MLRD provides an excellent opportunity for our campus to come together to learn and celebrate ongoing research from our students and faculty. We hope to continue to grow the event, especially with regard to attendees from the larger Colorado Springs community and businesses.

## Undergraduate Research Academy

### URA Outcome Tracking

In early 2023, the new Director of Institutional Research began their role. The CSR director reached out in June to inquire about developing student tracking practices that we can count on each year to help understand outcomes



from our research-participating students. In the past, this partnership with IR did not result in adequate data retrieval so we are excited about the new leadership in this office. Results from the previous six URA cohorts (2016-2022) reveal that these students have an **18% higher GPA, a 120% higher graduation rate**, and are **4 times more likely to enroll in graduate school** than their non-URA peers. Of those pursuing graduate school in the previous 6 URA cohorts, **58% chose to enroll in a graduate program right here at UCCS**. The high impact practice of mentored experiences with faculty is clearly evident from our data on the URA students. We hope these data serve as a motivating factor for campus' continued support of the URA program, as student retention and graduate school matriculation at UCCS is of such great importance.

## 2022 Cohort

The 2022 URA cohort was the largest in the awards history with 32 awardees. All members successfully presented their projects at either Mountain Lion Research Day, Colorado Springs Undergraduate Research Forum, or at another local, regional, national, or international conference. All the students reported substantial gains in their researcher confidence and feelings of belonging in science/academia based on an exit survey which are important metrics of program assessment. However, what I wish to highlight from these students is how the undergraduate research experience in the URA helped crystallize their intentions to pursue graduate studies in their disciplines. As mentioned earlier, nearly 60% of URA members over the previous six cohorts stay at UCCS for graduate school. Undergraduate research remains an important factor in student retention not just through undergraduate careers but perhaps also for the pursuit of graduate studies at our institution as well.

### Statements from 2022 URA Cohort Members on how the URA influenced their perceptions about graduate school.

*“Getting hands on experience doing research really confirmed for me that I would like to be doing more of it and I’m cut out for grad school. Because of my research experience, I feel much more prepared to apply for graduate programs.”*

*“My research has shown me what I enjoy doing in the lab. It has shown me how I enjoy working in the biochemistry field, especially when it comes to viruses. Being able to have so much hands on experience in the lab solidified my decision to attend graduate school at UCCS.”*

*“My experience gave me invaluable confidence in my ability to conduct and comprehend research at a graduate level. This allowed me to apply and accept a graduate offer without any concerns of my ability to succeed.”*

*“The ability to get paid while doing research I was really interested in was an incredible feeling. It really solidified my desire to do more research in the future and pursue a career in academia.”*

## 2023 Cohort

The newest URA cohort is comprised of 24 students across 10 departments. Once again, this year we waived the minimum GPA requirement which allowed 9 students to join the URA. To encourage more engagement from the Graduate Peer Mentors, four of them hosted invited talks at three of the URA workshops during the summer. This included interactive discussions on authorship best practices, navigating college as a first-generation student, seeking out professional development opportunities, public speaking, and taking care of one's mental and physical health as a student researcher. New this year, all URA students will also were required to attend the summer Responsible Conduct of Research “mini conference” in August.

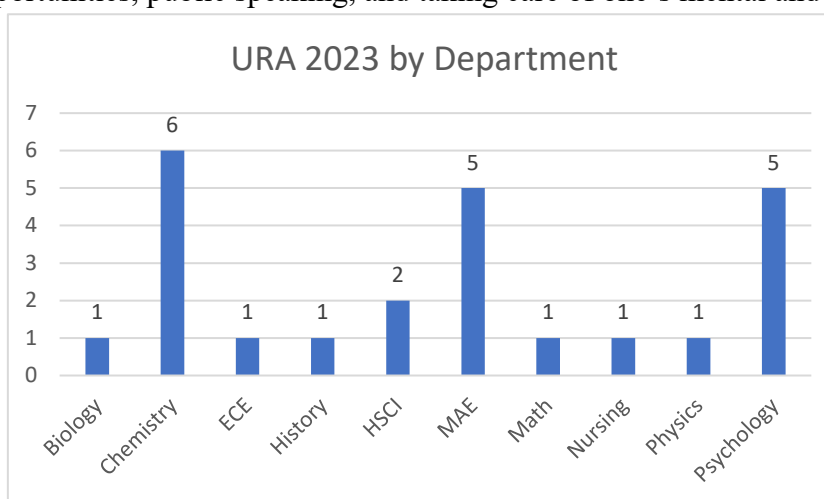


Figure 2: URA 2023 members by department

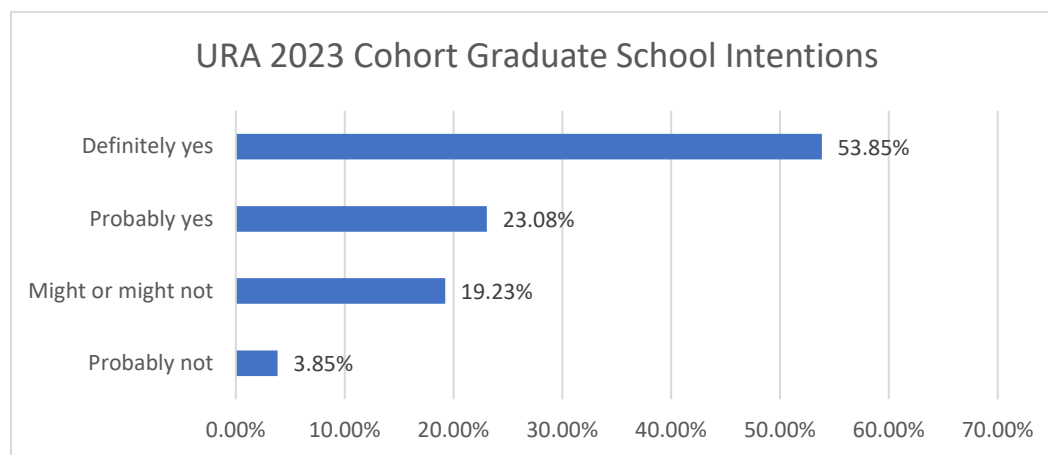


Figure 3: URA 2023 graduate school intentions

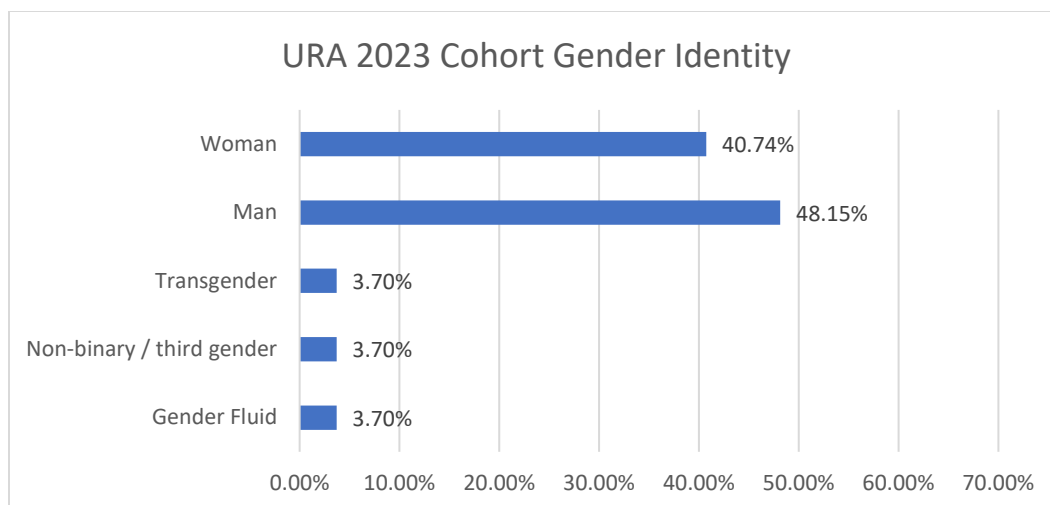


Figure 4: URA 2023 gender identity

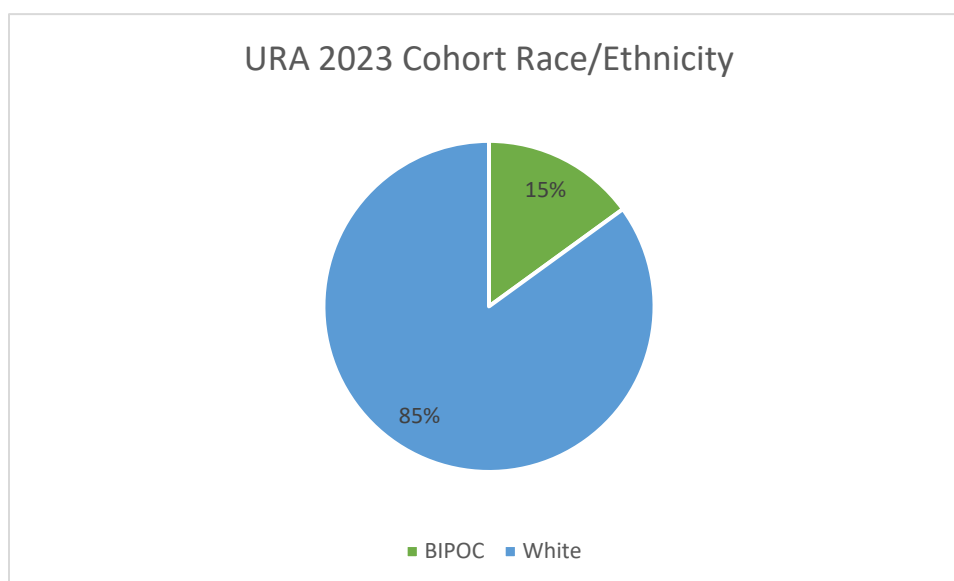


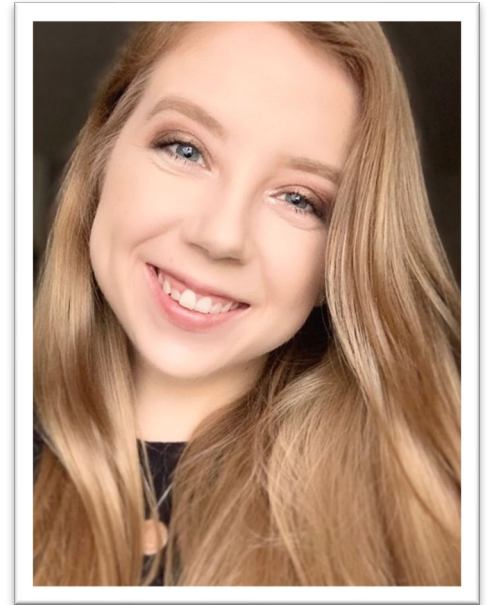
Figure 5: URA 2023 race/ethnicity

## Graduate Peer Mentor Program

Under the leadership of our Graduate Student Peer Branden Schaff, we launched the Graduate Peer Mentor Program in the fall of 2022 with 12 graduate students from nine departments serving as informal near-peer mentors to UCCS undergraduates interested in graduate school and/or research. The intent of this program is to offer undergraduate and first year graduate students with a supportive peer mentor who can offer advice and serve as an aspirational role model for pursuing research in graduate school. As of June 2023, 29 students have requested a

meeting with a mentor (53% are Black, Indigenous, or Person of Color, 36% are first-generation). As mentioned earlier, we embedded the graduate peers into the Undergraduate Research Academy meetings as a way to keep them involved, though we hope to increase the number of students requesting meetings to the peer mentors in the coming academic year as well.

Beginning this fall, we plan to approach individual faculty teaching large introductory and research-based courses to ask them to advertise the program to their students. Additionally, we will again partner with the graduate school recruiter



New Graduate Peer Leader Colleen Mock

Deanna Johnson to hold a student researcher social where students and faculty will be invited to mingle and discuss research activities and opportunities. The graduate peer mentors will be involved in this as well, offering advice on graduate school and insight into what graduate life looks like.

Branden Schaff graduated with his MA in Clinical Psychology in the Spring of 2023. Before he left, he helped recruit and onboard the new Peer Mentor Leader, Colleen Mock. Colleen is a Clinical Psychology PhD student working with Dan Segal. As a first-generation college student, Colleen has a wealth of relevant, meaningful knowledge to share with undergraduate students regarding navigating the college experience. She will work to update the Graduate Peer Mentor Handbook, recruit additional peer mentors to fill vacancies from spring graduations, and spread word about the program to key campus units. We look forward to partnering with the CSR Executive Committee on sharing this opportunity with their colleges as well.

## Write On! Graduate Writing Circles

In March of 2023, the Office of the Provost provided funding for a graduate writing circle to encourage good writing habits as well as foster community among graduate students.

To accommodate different schedules, we held a Monday afternoon and Friday morning session weekly for five weeks with each meeting being for a 2-hour block. Students were encouraged to join for the entire time if

possible but at least for a minimum of 45-minutes. Between the two meeting times, 8-10 graduate students continually attended for all five sessions and snacks and drinks were provided from funding provided by the Provost's office during each meeting. We loosely structured these sessions as "write together" groups where the students wrote together quietly with a check-in taking place at the beginning, middle, and end to set and track progress on their writing goals.

As a result of the spring writing circle, one PhD student completed and submitted a manuscript for publication, another made substantial progress on their Fulbright Fellowship application to study in Norway, one student was able to gain access to an opensource dataset with support from the CSR which allowed them to complete analyses for their dissertation.

Due to student requests, the CSR organized a summer writing circle as well which took place from mid-June through the end of July, again meeting for two-hour blocks of time. Members from the URA were also invited to these sessions. Outcomes from this summer writing circle



included a student completing a near-final draft of their dissertation and a URA student completing the materials needed to successfully submit their project to the IRB for review.

In the future, we may encourage the graduate peer mentors to organize writing circles for their own department, though this may increase the siloed feeling many graduate students report feeling. Overall, the Write On! writing circle appears to be a low-cost means of building

*“I really work so much better with other people around. I don’t get as distracted and I don’t feel alone.” – Summer 2023 Write On! attendee*

community and productivity among graduate students. With continued support from campus, the CSR plans to organize this group in the fall of 2023.

## **What is Next?**

Responsible Conduct of Research training is important ongoing curriculum for university researchers and a requirement for graduate students funded through the National Institutes of Health and strongly encouraged for those supported by the National Science Foundation. UCCS was excited to welcome two new RCR faculty fellows this fall who hosted a “mini conference” in August providing an interactive half-day training experience for faculty and students. This event differs from past RCR trainings which were virtual 1-hour sessions. This year, over 80 participants engaged in four separate sessions led by faculty and staff with expertise in the areas of effective collaborative research teams, navigating successful mentor and mentee relationships, inclusion and anti-racism and the social impacts of research, and ethical and effective use of AI bots in research. At the end of the sessions, participants were presented with a certificate of completion for the four hours. The CSR helped support this event by co-hosting a session on mentoring relationships with Dr. Jessi Smith.

## **Peer mentors**

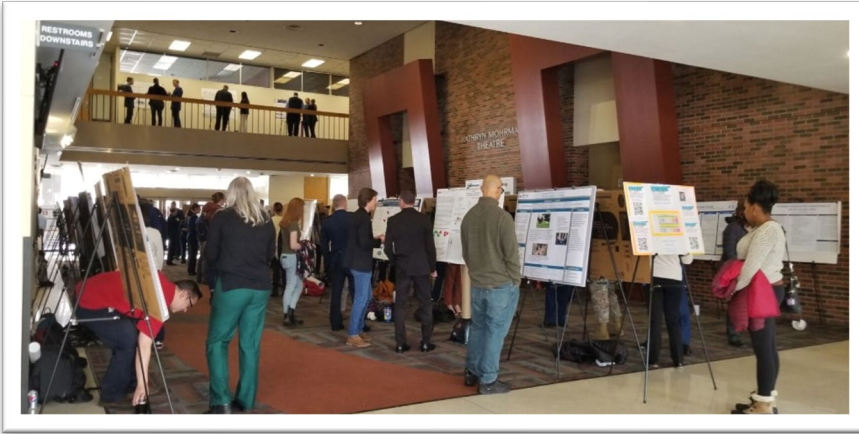
A primary goal for the CSR in the upcoming year is to increase participation in students meeting with the Aspirational Graduate Peer Mentors and to track demographics of these participants.

Under the leadership of Colleen Mock, we will proactively reach out to faculty teaching research-based capstones courses with information about the program and request they share this with their students. Information about the program will also be shared with Academic Advising and the director of the Honors Program. One additional plan for increasing participation will be to market the Aspirational Graduate Peer Mentor Program to fall sections of the Gateway Program Seminar (GPS) for first year students. The CSR director will teach a GPS section this fall (more on that below) and requires students to meet with a peer mentor. We feel the program could fit well with GPS learning outcomes for many course sections and could help inspire students early on to consider graduate education. We believe this program has great potential to benefit not just our undergraduate students, but the peer mentors themselves as we build community among this team from across disciplines.

## **GPS Course**

In the fall of 2022, the CSR director taught a new GPS section related to exploring undergraduate research opportunities. This fall, the director is partnering with Graduate School recruiter Deanna Johnson to co-teach this course again with the new title: Laboratory Retrievers: Fetching New Knowledge. Students will have the opportunity to visit with faculty and students currently conducting research on campus to learn the fundamentals of how new knowledge is generated in the university context. We will leverage the Aspirational Graduate Peer Mentors by having them meet individually with each of the students share their path to graduate school. The

intention of this course is to build foundational college (and life) skills as well as to inspire the next generation of undergraduate researchers.



## **CSURF 20<sup>th</sup> Anniversary**

UCCS will serve as the host campus for the Colorado Springs Undergraduate Research Forum's 20<sup>th</sup> anniversary. The CSR director serves on the planning committee, working closely with

Margie Oldham in LAS and with our other campus CSURF Committee Members. This milestone anniversary will be a great opportunity to widely celebrate undergraduate research with the UCCS community and the three area college partners the United States Air Force Academy, Pikes Peak State College, and Colorado College.

## **New Executive Committee Members**

Per the CSR bylaws, we will select or reappoint the Executive Committee members representing each college in the upcoming academic year. Presently, the members from the Graduate School, LAS, College of Education, and Beth-El College of Nursing will have new members selected or reappointed. We will accept nominations from the current Executive Committee members in these colleges and confirm with their department chairs that they encourage the faculty member's service and leadership on the Executive Committee.

## **Final Thoughts**

It was a fulfilling year for the CSR as we finally launched the long-awaited Aspirational Graduate Peer Mentor Program, funded student travel opportunities, collaborated with campus

units, and built community among our campus researchers. Continuing to track outcomes for student researchers will be paramount in the coming years and the high-quality data being provided by IR will make this far easier to accomplish. Supporting our student research community and fostering engagement in this high impact practice is incredibly rewarding and our center looks forward to continuing our mission to catalyze scholarly careers for students.

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Student researchers begin an early morning ascent to the Gilpin Peak Rock Glacier near Ouray, CO to survey rock glacier movement.