



**Idaho State  
University**

**Office for  
Research**

November 19, 2025

Idaho Higher Education Research Council

Report for year 2025, Projects Funded, Undergraduate Research Report Outcomes, and Student Accomplishments.

### **Summary**

At Idaho State University (ISU), we are dedicated to fostering undergraduate research excellence by providing robust access to research opportunities, cultivating mentor–mentee relationships, facilitating participation in research conference presentations, and offering travel support for national conference presentations. We recognize that faculty-led research experiences significantly impact student career development by deepening their understanding of academic concepts and honing the professional skills necessary for success in high-demand industries. Moreover, research plays a vital role in driving Idaho's economy by fostering innovation, attracting investment, and creating a skilled workforce that meets the needs of emerging industries. In this context, the importance of research and innovation cannot be overstated; they are critical to Idaho's continued growth and the adaptability of its industries in a rapidly changing economic landscape. Consequently, undergraduate research is integral to ISU's mission. We extend our gratitude to the Higher Education Research Council for their unwavering support, which enables us to empower students and enrich their academic journeys, solidifying ISU's commitment to developing the next generation of innovative leaders.

To ensure students are aware of paid research opportunities, the Office for Research continued to improve student communication to reach all students more effectively. Building on our commitment to accessibility, the Office enhanced the Undergraduate Research website to include links to opportunities at other institutions, industry internships, and an expanded overview of research experiences available specifically through ISU. This site now serves as a centralized resource where students can identify research opportunities during both the academic year and the summer months, connecting them with the information essential to advancing their educational and professional goals.

Building on these communication improvements, this year's award enabled us to support more students with paid internship opportunities across 10 research areas, funding 14 students from eight STEM departments. In addition to student support, the funding covered essential supplies, travel to national conferences, and research travel for the 2024–2025 TRIO McNair cohort. These students also participated in the Undergraduate Research and Creative Works Symposium at Idaho State University, where they had the opportunity to present their work and compete for prize awards. The Symposium continues to serve as an important platform for students to refine their presentation skills, engage with the broader research community, and build professional networks.

In continuation of these hands-on learning opportunities, the student research experience culminated in July at the Idaho Conference on Undergraduate Research (ICUR), hosted by Boise State University—a statewide forum that highlights undergraduate scholarship across disciplines. By mid-summer, awareness of ICUR had grown substantially on the ISU campus, generating strong interest among students and other summer scholars, including students from regional community colleges. To maintain equitable access, particularly for rural students, ISU coordinated transportation to ensure participation was free of barriers. This effort included a scheduled stop in route to Boise to pick up a student from the College of Southern Idaho. Ultimately, forty-two ISU students attended ICUR, representing forty research submissions. As part of our expanding K–12 research pathways initiative, four high school students from southeast Idaho also joined the cohort and presented their summer research projects.

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Once at the conference, ISU students engaged in the full breadth of ICUR activities, including poster sessions, lightning talks, and graduate student panels designed to strengthen communication skills and introduce future academic and career pathways. Many students were accompanied by family members who traveled long distances to support their work and expressed deep appreciation to conference organizers for providing such a meaningful platform to showcase undergraduate research from across the state.

#### Chart of Projects funded:

Research Area	Department	Faculty Mentor	Undergraduate Student
AGN-201 Shielding Analysis and Mockups for Educational Purposes.	Nuclear Engineering	Dr. Ali Amir	Several Students
Bacteria in Untreated Waste Water	Biological Science	Dr. Chakraborty	Brinley Smith, Lydia Stevens
Glucose effects on aging	Biological Science	Dr. Lizbeth De LaCruz	Carlos Serna, Brook Wheeler, and Daniel Whisman
Developmental Genetics	Biological Sciences	Dr. Heather Ray	Shaun Stosich
Domestic Terrorism	Political Science	Dr. James Stoutenborough	Ashley Helm
Sustainable Concrete	Civil Engineering	Dr. Mustafa Mashall	Joe Shurtleff
Compounds of interest and biological activity	Chemistry	Dr. Kenneth Olejar	Jillian Keninger, Elizabeth Hodges
Secrets of Aging	Biomedical/chemistry	Dr. Kavita Sharma	Sanaly Nava
Compressed Air Energy Storage	Civil Engineering	Dr. Ebrahimpour	Hannah Baker, Daniel Larkin
Analyzing threats and defense tactics, virtual environments	Chemistry	Dr. John Kalivas	Hyrum Redd
Travel to Field School	TRIO McNair	Dr. James Pascali	Various, Ontaria Ariwite

To complement this summary, a file containing detailed reports of the research activities supported during this grant cycle—and the experiences our students gained throughout the academic year—is attached. If you have any questions, please get in touch with the Office for Research.