

Undergraduate Research Day - Students Shine at the Student Showcase

March 31, 2009

Student Showcase, a celebration of undergraduate research, scholarship and creative activity, was the highlight of USU's Undergraduate Research Day, held Tuesday, March 31, in the Taggart Student Center. Students gave oral presentations and displayed posters throughout the day, offering audience members the opportunity to ask questions and learn more about each student's individual research topic.

"Undergraduate Research Day is about giving students an opportunity to share their research results," said Joyce Kinhead, associate vice president for research. "It encourages the development of communication and analytical skills among researchers. Dissemination of information is a key part of research, and I am happy to see so many students taking advantage of this opportunity." The event originated in 1986 through the Honors Program.

Undergraduate researchers from all disciplines presented their research at the Student Showcase and gave one-on-one information to interested observers passing through the TSC International Lounge. In all, 107 students participated in the Student Showcase with oral and poster presentations. Faculty judges selected top awards for posters in four categories:

Engineering Poster: Justin Koeln's "Microgravity Experiments for the ISS"

Humanities, Arts, and Social Sciences Poster: Aubree Nielsen's "Correlates of Teacher Practices Influencing Student Outcomes"

Life Sciences Poster: Alison Taylor's "Is Calmodulin Necessary for Skeletal Muscle EC Coupling"

Physical Sciences Poster: Justin Dekany's "Time Dependent Conductivity of Spacecraft Materials"

The judges noted that selecting only one poster in each category was a Solomon's task, as the student work was uniformly stellar.

"The undergraduate research program at USU supports students in gaining essential hands-on learning in their fields of study," said Brent Miller, vice president for research. "It fulfills the mission of the University by offering an opportunity to enhance students' learning, discovery, and engagement."

Part of Undergraduate Research Day is the awards ceremony for outstanding undergraduate researchers. Student researchers of the year were honored with the "Peak Prize," an endowment established in honor of Dr. David Peak, professor of physics, and Dr. Terry Peak, associate professor of social work.

The Peak Prize was presented to one student from each of the seven academic colleges at Utah State University, as well as one student from a regional campus.

“Both David and Terry Peak currently mentor Undergraduate Research Fellows, and their dedication to undergraduate research has been unflagging,” said Brent Miller, vice president for research.

“Learning about and honoring these students’ research is absolutely inspirational, and it would not have happened had it not been for the Peaks’ generous contribution to the undergraduate research program,” said Kinkead.

Katie Brown, a dietetic major in the College of Agriculture, has been heavily involved in undergraduate research, focusing mainly on freshman health. She began working with Dr. Heidi Wengreen during her first semester at USU assisting with the Freshman Health Study. During her sophomore year, Brown used these findings to make a positive difference at USU by spearheading the design, implementation, and teaching of a basic nutrition workshop, Healthy Food Choices 101, to incoming freshman as part of the orientation course, Connections.

“The research I have done at USU has changed my mindset and opened up the way I look at problems,” said Brown of her experience as a researcher at USU.

Natali Naegle, the undergraduate researcher of the year in the Jon M. Hunstman School of Business is a marketing and economics major and has been involved in undergraduate research since 2006. Naegle has focused primarily on business pedagogy issues and has completed separate projects on student evaluation salience and student procrastination behaviors.

“Research is the reason I came to USU,” said Naegle. “I was set on another institution until I came to USU for Scholars Day, and that first on-campus visit changed my perception of USU.”

Tanja Jensen, a communicative disorders and deaf education major, focuses on assessment and intervention issues for children with language impairments. She has played a valuable role in research projects involving assessment and intervention with English language learners.

“Doing this research really opened up my view; I had misperceptions about what research was,” said Jensen. “I thought all the research had already been done, but I learned by working with faculty mentors, that different approaches can be effective.” Her work was recently highlighted as part of the Research on Capitol Hill event in January 2009. In April, she will travel to Wisconsin to present her paper on narrative intervention with English learners at the National Conference on Undergraduate Research.

Ashleigh Restad is a junior in the environmental engineering program in the College of Engineering and is involved in the USU chapter of Engineers Without Borders. Ashleigh is currently in charge of a project investigating the effectiveness of deep installation septic systems; specifically, she is collecting field data for a two-year project to determine if septic systems in Utah homes are treating wastewater effectively. As a founding member of the civil and environmental engineering Engineers Without Borders in Mexico, she helped with research and design technology for a septic system to benefit an orphanage.

“My goal is to facilitate a research experience for others and to help other students have global experience,” said Restad. “What a student gains through research extends miles and miles.”

Trenton Olsen, the undergraduate researcher of the year for the College of Humanities, Arts, and Social Sciences, is an English major. His research has included comparing the poetry of the contemporary Irish poet Seamus Heaney to the writings of Romantic writer William Wordsworth.

“In literary studies we seek to understand the way we function in the world,” said Olsen. “Language itself shapes our perception. Even studying one word in a poem gives us critical analysis and understanding, and this can extend to all fields.” Olsen has also studied Henry James’s Daisy Miller and the treatment of death in the poetry of Alfred Lord Tennyson and Henry W. Longfellow.

Natural resources student Richie Gardner has been involved in undergraduate research since he was a sophomore. Initially, his research involved freshwater mussels in several states. He has also been involved in studying Phragmites, an invasive reed, where he was responsible for setting up an extensive greenhouse experiment comparing the growth of native and invasive strains of the reed in Utah. Recently, Gardner has been involved in several projects related to aspen population genetics, and during the summer of 2008 he supervised a crew of other students sampling aspen leaves in a remote part of Utah.

“[Research has] been hugely important,” said Gardner. “I’ve put the research together from beginning to end by writing grants and collaborating with others, including graduate students and faculty at the University of Wisconsin.” Gardner’s research all earned him a third-place poster at the Wildlife Society’s 44th annual Western Student Conclave, held March 6-9.

Sydney Chamberlin, the undergraduate researcher of the year for the College of Science, is pursuing a double major in physics and mathematics. “The undergraduate research experience has shaped my time at USU,” said Chamberlin. “I tried a lot of different things because of my varied interests, but each one has been very good. There are tangible things I’ve learned, such as computer skills, but also intangible things, such as communication.”

Chamberlin’s research has involved chemical approaches in storing hydrogen, the design and construction of a device to model human brain capillaries during imaging tests in Magnetic Resonance Imaging (MRI) devices, the amorphization of lunar dust grains by solar wind ion radiation, and computational tools for general relativity.

Dustin Jones is a senior majoring in psychology and is the undergraduate researcher of the year for Regional Campuses and Distance Education. Jones has worked in the neural coding laboratory on the main USU campus. His main two areas of focus are neurology and pediatrics.

“I feel extremely fortunate to have the opportunity to share my research,” said Jones. “It is rewarding to know that I can make a contribution to this field of study, my school, and my community.”

The eight college undergraduate researchers of the year make up the pool from which the USU Undergraduate Researcher of the Year will be selected. That person will be announced at USU's Robins Awards on April 18.

Undergraduate research mentors—faculty recognized for their efforts in working with students—were also selected from each college and received an award and cash prize during the awards ceremony. The award winners are:

College of Agriculture: Megan Bunch (Nutrition and Food Sciences)

Jon M. Huntsman School of Business: Kenneth Bartkus (Management & Human Resources)

Emma Eccles Jones College of Education and Human Services: Sandra Gillam (Communicative Disorders and Deaf Education)

College of Engineering: Ryan Dupont (Civil and Environmental Engineering)

College of Humanities, Arts, and Social Sciences: Bonnie Pitblado (Sociology, Social Work and Anthropology)

College of Natural Resources: Gene Schupp (Wildland Resources)

College of Science: JR Dennison (Physics)

Regional Campuses and Distance Education: Christopher Johnson (Psychology)

Undergraduate Research Day is part of USU's Research Week. Now in its fifth year, Research Week highlights and honors the accomplishments of faculty, undergraduates, and graduate students. For more information about the week's events, visit <http://researchweek.usu.edu>.

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