Students share ideas at NDSU EXPLORE

Plan for a potential urban park for downtown Fargo, identify and stop bugs that can decimate crops, conduct historical research to create costumes for the production Little Shop of Horrors—these and other projects were shared by more than 70 NDSU undergraduate students at NDSU EXPLORE. The event held Nov. 4, 2014 at the Memorial Union recognized research and scholarly activity.

Students represented a multitude of disciplines. They included English, engineering, chemistry, entomology, theater, biology, history, communications, animal sciences, architecture, landscape architecture, physics, pharmacy, and many more.

For example, students Andrew Dalman, Justin Paulson and Felicia Marquez are working to develop artificial bone, with potential medical applications. Jacob Parrow’s undergraduate engineering research focuses on effects of radio frequency on DNA, which may lead to new treatments for common diseases.

Levi Lystrom’s poster presentation gave him an opportunity to test his abilities. He will be presenting his research at an American Chemical Society meeting in 2015. “This is a great way to get your foot in the door and practice before I give my presentation at a meeting of 15,000 chemists.”

Students Kaleb Hutchens, Vanessa O’Gara, Mitch Muske and Eric Haverluk are perfecting their invention called the Snowmenator, designed to help people with physical challenges with remote-controlled snow removal equipment. After building their prototype, they will compete in a snow removal competition at the Winter Carnival in St. Paul, Minnesota, in early 2015.

Performing arts students Ali Wu, Brian Lynch, Clare Geinert, Chelsea Brown, Austin Koenig, Kami Sim and Lexi Zawatze displayed their 7/11 project where students had seven days to complete and perform an original 11 minute show based on one set design.

“I think NDSU EXPLORE is a phenomenal opportunity to showcase things that you’re proud of and have worked really hard on. I would recommend it to any group of students who want to let others know about their projects,” said Wu.

Provost Beth Ingram commended students who participated in the event, highlighting what undergraduate education means at a research university. “There was a moment you moved from not knowing to knowing, and from not understanding, to understanding,” said Ingram.

Keynote speaker Susan Larson said events such as NDSU EXPLORE engage students and enhance learning. Larson, a psychology professor at Concordia College, Moorhead, Minnesota, serves as a councilor on the national Council on Undergraduate Research.

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Larson cited studies which show that undergraduate research produces results that include: high student grade point averages; greater student retention; willingness to pursue graduate education; increased student satisfaction with their undergraduate experience; and enhanced leadership and communication skills. Students engaged in research also show a better understanding of science, heightened ability to think creatively, a tolerance for obstacles and the ability to work independently.

Faculty benefit too, said Larson, “You can develop new questions, things you might never have thought of. Students are willing to challenge things we take for granted. Ask something different and that can lead you to new areas of study,” said Larson.

Research shows there are institutional gains from undergraduate research as well, according to Larson. These include building a community of scholars, recruitment of highly-sought-after students and student retention.

“We are providing students with skills employers want, including problem-solving, innovation, communication, critical thinking, analytical reasoning and collaboration,” she said.

“We greatly appreciate the participation of students and their faculty advisors in the inaugural year of NDSU EXPLORE and encourage students to think about what achievements they might want to present for 2015-16 NDSU EXPLORE,” said Sheri Anderson, associate vice president for Research Development at NDSU.

NDSU EXPLORE was sponsored by the Office for Research and Creative Activity, with support from PPG Industries, CCW Energy Systems, Marvel LLC, and Mutchler Bartram Architects PC.

The annual event provides a mechanism for undergraduate students to present their research to the community, gaining valuable experience as they build their careers.