

Vandals in Focus

2018 UNDERGRADUATE RESEARCH



University
of Idaho

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At the University of Idaho, students take their educations into their own hands. A hallmark of our national research university experience includes high-impact learning through participation in research, scholarship and creative work. We ask our students to go beyond the simple acquisition of knowledge and to participate in groundbreaking work that drives innovation and discovery. With curiosity and confidence, our Vandals rise to the challenge.

Across the range of disciplines found at our comprehensive institution, Vandals are exploring and engaging with ideas that matter for our world. As they add their contributions to evolving fields of knowledge — sometimes realizing for the first time just how exciting and changeable those disciplines may be — they sharpen essential skills and gain confidence. They gain new understandings, practice collaboration and enjoy mentorship from leaders in their fields. With fresh perspectives and interesting questions, students can take research and scholarship in new directions.

This report showcases some of the exciting work in which our undergraduates are engaged. They're studying animal bones to learn more about life at Chinese mining camps in Idaho. They're analyzing vegetation data to understand group movement and behavior in elk. They're exploring how to develop diversity competence in rural teacher education. Each project offers compelling challenges that I hope students have found personally rewarding as they gain skills and experience to propel them further in scholarship, in careers, or in future study.

I'm proud of the work they've put in to chronicle their experiences in this report. The pages that follow highlight the best of the University of Idaho — our brave and bold Vandal students.

Go Vandals!

Chuck Staben
Chuck Staben

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UNDERGRADUATE
RESEARCH AT U OF I



Simulating Slime Molds with Virtual Technology

Louise Magbunduku, a 21-year-old virtual technology and design student at the University of Idaho, combines virtual technology with biology to study slime molds and their patterns of growth.

The senior became intrigued by virtual technology after taking an “Artificial Life” course in fall 2017 from Assistant Professor Kyle Harrington in the College of Art and Architecture. She joined his research team as one of his assistants.

“I was a big science fan in high school, but I never saw myself becoming a researcher,” Magbunduku said. “I didn’t know if I could do it, but I was planning to do a minor in computer science, so I had the inclination to become involved in science.”

Slime molds are a group of organisms that can live as single cells but can also work in tandem to be a multicellular structure. Her research documents the movement and behavioral strategies of these organisms, while advancing predictions of what slime molds can or will do.

To visualize the growth of slime molds, Magbunduku takes repeated scans of dishes of slime mold to record the slime mold’s growth at different stages. An associated computer program compiles the images of each slime mold and tracks how the slime mold grows, even where the slime mold avoids growing.

Using computer analyses, Magbunduku and her fellow researchers compiled all the information gathered from the scans and then fed the data through predictive computer models.

The accuracy of the simulations relies heavily on the amount and precision of the information fed into the simulation, which means the more scans Harrington’s team takes, the better the

growth models. As the models improve, scientists will be better able to predict the growth habits of slime molds. Magbunduku thinks the simulations produced by her research will advance researchers’ knowledge of slime molds, and the slime mold community will grow in conjunction with the increased availability of slime mold data.

“Running the data we gather virtually through image analysis allows us to use predictive software, which can help us better interpret and anticipate behaviors present in the experiment,” Mabunduku said. “Solid models can help save time and research costs when used alongside physical experiments.”

Although slime mold growth patterns are not a new topic, technological advancements such as scanners and compiling programs allow slime mold scientists to gather and process previously unattainable data about these hard-to-study organisms.

“Another major bonus is that image analysis makes it easier to design future experiments,” Magbunduku said.

Magbunduku thinks that, by participating in undergraduate research, she has gained unique experiences and skills in a collegiate lab environment.

“A key reason I picked virtual technology and design as a major was due to its balance between art and science,” Magbunduku said. “This research is very cross-discipline; having the capability to collect data, putting said data into a digital environment, and running simulations on that data could apply to many biological subjects, like conservation, or ecosystem predictions.”

WRITER/ PHOTOGRAPHER:

Remington Jensen, a junior from Boise, Idaho, is majoring in journalism.

**“A key reason I
picked virtual
technology and
design as a major
was due to its
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art and science.”**

A portrait of Jean Parrella, a young woman with long dark hair, smiling, wearing a black top with colorful patterned sleeves. She is positioned in front of a red brick wall.

Exploring Consumer Perspectives on Animal Welfare

WRITER:

Danny Bugingo is a junior from Portland, Oregon, double majoring in math and French.

PHOTOGRAPHER:

Madelen Johansson is a senior from Tibro, Sweden, studying interior design.



OUR Grant:
OUR Undergraduate
Research Grant
award recipient

Animals have feelings and deserve proper treatment. This statement was 1 of 40 about animal welfare that Jean Parrella asked study participants to agree or disagree with. For her study on how people's views on animal welfare affect their buying practices, the senior from Davis, California, set up focus groups with organizations ranging from the Student Idaho Cattle Association to Local Herbivores, a Moscow-area vegan and vegetarian group.

"The goal is to get as many perspectives as possible," said Parrella, 23, who is majoring in public relations in the College of Letters, Arts and Social Sciences and minoring in agricultural extension education in the College of Agricultural and Life Sciences.

Parrella grew up on a 3-acre farm with sheep, goats, chickens and horses. After transferring from Sacramento City College to the University of Idaho as a junior, she found herself drawn to how the public views agriculture and how those views impact the industry.

"I am very interested in people's perceptions of agriculture, and animal welfare is a very heated, very misunderstood topic," said Parrella, who worked with Assistant Professor Kasee Smith from the Department of Agricultural and Extension Education in the College of Agricultural and Life Sciences. "There's not a ton done on animal welfare and how it relates to how people purchase food items."

In her research, Parrella presents each focus group participant with a chart containing 40 statements regarding animal welfare and meat-buying habits. Participants then mark which statements represent their views, and which do not. Afterward, Parrella conducts exit interviews in order for participants to explain the reasoning behind their views.

Parrella spent two months reading hundreds of scholarly articles, containing a cross-section of perspectives on agriculture, to develop the 40 statements.

"I've grown up around agriculture, so I thought I knew about animals and animal welfare, but reading all these articles and learning about how people perceive the industry has been interesting," Parrella said.

Once she has finished collecting responses, Parrella will quantify which statements most resonate with people. In addition, she will analyze the qualitative information from the exit interviews to learn why particular statements resonate more than others.

Parrella graduated in May 2018. She said doing research as an undergraduate made her competitive when she applied to graduate school.

"Pursuing graduate school, it's all about research, and it was a really good idea to have experience prior to going," Parrella said.

In fall 2018, she will be attending Texas A&M University to pursue a master's degree in agricultural communications and hopes to continue the research she began at U of I.

Dustin Cheney and Patrick McElligatt want to know what governments can do to grow economies. To narrow down this vast topic, they are investigating how governments in Eastern European countries promote or prevent economic growth.

Cheney and McElligatt love talking about money. Cheney worked as a page for the revenue and taxation committee in the Idaho House of Representatives during high school. At U of I, the 21-year-old junior from Weiser, Idaho, is a double major in business economics and accounting. McElligatt, a 20-year-old senior from Upland, California, enjoyed his business courses enough to double major in business economics and finance.

For their project, Cheney and McElligatt are working with Assistant Professor Akira Sasahara in the College of Business and Economics. Cheney said they were interested in former Soviet countries in Eastern Europe. Researchers and policymakers usually focus on high growth Asian countries, Sub-Saharan African nations, and rich Western countries, Cheney said.

"The countries we're researching are not poor enough to be of interest to a lot of people," Cheney said. "They're not growing quickly enough to invest in, and they're not developed enough to be on the world stage."

What Eastern European countries do offer is a variety of what Cheney and McElligatt refer to as "political

institutions." They said institutions can be thought of as the rules of the economic game.

"These are the underlying principles that affect how you live your life: how you get contracts enforced, how the government treats you, how you find a job, and what laws, culture and history are in the background of how your country grows," Cheney said.

Cheney and McElligatt used a mathematical model to isolate the impact of institutions on economies.

"We want to show quantitatively how the underlying political system you have is related to your economic growth," McElligatt said.

Cheney gives the example of Serbia. Before the 1980s, Albanians living in Serbia were relatively free. Then in 1987, the Serbian president took away Albanians' right to work, move about the country freely and go to school. Their model shows how these political restrictions negatively affected the economy.

Cheney and McElligatt hope the backbone of their mathematical model can be applied beyond Eastern Europe.

"The underlying methodology we have can be used everywhere — you just need to change your data," Cheney said. "We're going to be able to inform policymakers and invested parties of the things they can do to make their countries better."

WRITER:

Danny Buggingo is a junior from Portland, Oregon, double majoring in math and French.

PHOTOGRAPHER:

Madelen Johansson is a senior from Tibro, Sweden, studying interior design.

"We want to show quantitatively how the underlying political system you have is related to your economic growth."

Modeling Eastern European Economics





Teaching in

Diverse Classrooms

WRITER/ PHOTOGRAPHER:

Diamond Koloski is a senior from Boise, Idaho, studying broadcasting and digital media with an emphasis in multimedia communications.

Breeanna Gibson believes teaching is the career that starts every other career, and that's what makes her group's research on diversity in education so important.

The goal of the research is to understand how changes to course content, field experiences and exposure to new conversations about diversity impact perceptions of equity among pre-service teachers and teacher education. Gibson has worked on this research for two years, with three other College of Education, Health and Human Sciences students and Vanessa Anthony-Stevens, an assistant professor in the Department of Curriculum and Instruction.

"You need to know your students, because they're not all going to be like you," said Gibson, who is from Joseph, Oregon. "The thought of how this is going to help me become a better teacher and help me accommodate all my students is something that has driven me to continue with this group."

Anthony-Stevens, who taught all four students in her "Teaching Culturally Diverse Learners" course, helped the women connect, and the students started their research in fall 2015. In fact, it was Anthony-Stevens' class where the students realized the deficits in diversity training for teachers.

TURNING THE MIRROR ON THEMSELVES

Alex Lasure from Meridian, Idaho, said the women started a cohort where they reflected on their experiences with diversity in the classroom up to that point. Lasure realized that she didn't understand what underrepresented people deal with in education systems, despite having friends of different backgrounds in high school.

"I started feeling the importance of this topic because if my friends didn't tell me about issues that they were having, then, of course, they didn't tell their teachers that they were feeling underrepresented or not communicated with appropriately," Lasure said.

Chelsea Jones, from Okinawa, Japan, said that Anthony-Stevens' course was the first time she had been taught to reflect on personal bias. Jones admits that self-reflection was hard for her to do. The students found themselves needing to acknowledge their own unintentional bias.

For Jaya Gundy, from Idaho City, Idaho, joining in the research was a way to connect with other students and learn from each other's experiences.

"I really like surrounding myself with like-minded people, and this was a way to be in a group where you could talk about these topics," Gundy said. "We all had a like-minded vision."



OUR Grant:

OUR Travel Grant
award recipients:

Breeanna Gibson

Chelsea Jones

Jaya Gundy

Chelsea Jones, 22 (opposite page): Graduated in December with a degree in Elementary Education. Currently teaching at Riverstone International School in Boise, Idaho.

Breeanna Gibson, 22 (top left): Majoring in elementary education. Student teaching at West Park Elementary in Moscow, Idaho.

Jaya Gundy, 23 (top right): Majoring in math and secondary education. Student teaching at Idaho City High School in Idaho City, Idaho. Gundy plans to teach mathematics in Liberia through the Peace Corps.

Alex Lasure, 22 (bottom left): Secondary education degree with endorsements in English and mathematics. Student taught at Pathways Middle School during fall 2017. Currently teaches full time at Heritage Middle School in Meridian, Idaho.

Jones and Gibson said that an example for why they believe their research is necessary came as Anthony-Stevens' class prepared to conduct classroom observations during a visit to Lapwai, a town on the Nez Perce Indian Reservation. One of their teachers had given out a list of Native American stereotypes, such as "they won't make eye contact" and "they don't like physical touch." The two women felt that it wasn't appropriate for the professor to hand out a list like that to the class.

"Who knows how many of the students in our class would believe that list? We were given no context for the stereotypes on the list," Jones said. "You're going to keep those fake stereotypes in your mind."

GATHERING DATA ON TEACHING DIVERSITY

Their experiences in the classroom helped lead the women to develop their qualitative research focus. They started to question how classroom diversity is taught to pre-service teachers, including their exposure to diversity, experiences that shape their understanding of classroom diversity, and how teacher preparation can alter their views of diversity in the classroom.

Currently, the four students are using professional development field experiences, audio recorded reflections

and interviews, field notes from educational interactions, and personal reflections to explore answers to their questions.

The women plan to leave their research setup for future students to add their experiences and continue the conversation about classroom diversity.

Teaching in the same district where she grew up, Lasure says that she has now come full circle. She said she sees a lot of the diversity issues she discussed in college come up in her classrooms. The difference, she said, is now she has diversity training and can advocate effectively for her students.

The students would like to get their research published so people can see they are passionate about their work and are taking action.

"There's four of us, really, but we're going to impact hundreds of students during our careers, so I want people to see that it's an important topic in education that kind of gets overlooked right now," Gibson said.

"There's four of us, really, but we're going to impact hundreds of students during our careers."



Examining the Health of Lake Coeur d'Alene

WRITER/ PHOTOGRAPHER:

Corinna Carney is a senior from Parker, Colorado, majoring in international studies.



OUR Grant:
OUR Summer
Undergraduate Research
Fellowship
award recipient

Kasey Peach, a chemical engineering major, spent summer 2017 boating across Lake Coeur d'Alene, but he wasn't sunbathing and water skiing. Instead, he was intent on investigating the health of the lake.

"These findings can affect how the public interacts with the lake systems," said Peach, a 20-year-old junior who is originally from Coeur d'Alene. "Based on the sheer amount of revenue and involvement that goes into Lake Coeur d'Alene, anything that can harm the lake is definitely what the public should care about."

In 2017, Peach met with James Moberly, an associate professor in the College of Engineering. Peach was intrigued by Moberly's research project examining the effects of the Silver Valley mining era on the lake's sediment conditions. Previous research has shown that heavy metals from the mine have settled at the bottom of Lake Coeur d'Alene.

Peach was eager to learn about the lake's potential for induced anoxia, or lack of oxygen. Specifically, Peach and the team were concerned about whether toxic heavy metals originating from the soil from the Silver Valley mining area could be unearthed as a result of anoxia. Currently, the lake bottom does not lack oxygen.

"We are curious if an algal bloom, which is a quick surge in algal growth that uses a lot of oxygen, could induce anoxic conditions and lead to the movement of bacteria up to the top of the lake bottom where they could potentially release metals into the water," Peach said.

Peach gathered sediment samples to measure the microbial activity on the lake floor. The project was funded by a grant from the Summer Undergraduate Research Fellowship program, a student-faculty research fellowship.

"My biological background knowledge was pretty limited coming into it," Peach said. "After getting my hands dirty, I saw how impactful experiences can be in stretching yourself."

Peach is still analyzing his data, but his preliminary findings indicate that there may be a flux of metals into the water and that the concentration of metals vary depending on lake depth. Although the additional metal in the lake water is not a devastating development for Lake Coeur d'Alene, the findings could be used to guide lake management, Peach said. He presented his work at a conference earlier this summer.

"It was really special to find something that was relevant to what I care about: sustainability," Peach said. "I saw how important it is to pay attention to what is around you."

Emmanuel Ijezie came to college to become a physician. However, after the senior from Anambra State, Nigeria, completed his first research project in the summer of 2017, his plans shifted slightly.

Ijezie, who is double majoring in molecular biology and biotechnology, still intends to go to medical school after graduating from University of Idaho in 2018 and taking a gap year, but he plans to become a clinical virologist.

"I want to play a part in providing the research data that is necessary to develop vaccines for diseases in underdeveloped nations," Ijezie said.

The 22-year-old said he specifically chose to attend U of I because of the cutting-edge research projects being conducted at the school.

Ijezie joined the lab of Tanya Miura, an associate professor in the Department of Biological Sciences in the College of Science, where he was assigned to the histology station, which specializes in growing and studying cell tissues.

Ijezie's current project focuses on how one viral infection can help or inhibit other viral diseases from forming. He analyzes diseased mouse lungs infected with either a single virus strain or multiple virus strains simultaneously, referred to as a co-infection.

Specifically, he observed the differences in disease severity between a mouse lung infected with influenza and one infected with rhinovirus — the common cold — and influenza.

Ijezie, a self-proclaimed "virtuoso" in preparing the mouse lung tissue for analysis, said he first had to embed the lung samples into waxy blocks. He then mounted the wax blocks onto microscope slides.

"No one else knew how to make the slides," Ijezie said. "I had to suffer a lot of unsuccessful attempts, but once I got my first slides right, I never looked back."

Ijezie said his research team discovered that the co-infected mice showed fewer signs of disease and had lower lung inflammation than mice infected with only influenza.

He thinks mice with two infections become less sick because the rhinovirus triggers an immune response in the mouse, and since the immune system is already activated, it is prepared and able to fight off the secondary infection.

"Understanding the mechanisms involved during viral co-infections will provide scientists better tools to cure and prevent diseases," Ijezie said.

Ijezie's findings could lead to scientists creating more effective vaccines and better protect people against diseases. He hopes to continue working with viruses and eventually partner with the World Health Organization.

"I am passionate about bringing affordable medication to regions of the globe that have been neglected in the past," Ijezie said.



Researching Viral Infections in Mice

WRITER:

Olivia Heersink is a junior from Fruitland, Idaho, majoring in journalism with a minor in justice studies.

PHOTOGRAPHER:

Madelen Johansson is a senior from Tibro, Sweden, studying interior design.



OUR Grant:
OUR Undergraduate
Research Grant
& OUR Travel Grant
award recipient





WRITER/ PHOTOGRAPHER:

Tess Fox, a senior from East Wenatchee, Washington, is majoring in journalism with minors in art and music.

Chelsea Codling spent the spring of 2016 in Graz, Austria, practicing her German and taking linguistic and cultural classes. When she returned, she knew she wanted to dive into researching the cultures of the world.

"That experience helped me realize how important culture is in the context of archaeology and for discovering what life was like for people before us," said Codling, who is a senior in the College of Letters, Arts and Social Sciences.

Codling sought out Professor Mark Warner in the Department of Sociology and Anthropology to learn about potential research projects.

"I went to my professor and said, 'I'm interested in archaeology, what can I do?'" said Codling, a 22-year-old from St. Anthony, Idaho. "He showed me a few different projects and then he showed me the comparative bone lab. The bones stuck out to me. I was open to doing anything, but I decided I wanted to work with the bones."

TELLING A STORY THROUGH BONES

The comparative bone lab is a collection of animal bones that can be used to identify bone samples found in excavations. For example, if Codling has determined that a bone was from a leg, she will compare that leg bone to leg bones from other animals in the comparative collection. She can use the comparison to determine what animal the leg bone came from.

After completing an introductory project in spring 2017 with animal bones found at an excavation of Fort Boise, Codling jumped into cataloging animal bones found during an excavation of a Chinese mining camp in Idaho City, where gold was discovered in 1862. By 1870, the region's population was nearly half Chinese. Generally, the Chinese miners worked on mines that had been previously claimed but abandoned.

The bones tell Codling what kind of meat the miners ate. Using the comparative bone lab, Codling found pork to be the miners' preference. This makes sense, she said, because pork is a traditional food in China.

"There was also a lot of beef, and that's probably an adaptation to their diet that occurred in America," Codling said. "Because these were Chinese people in America, we can try



Uncovering Chinese Mining History in Idaho

to draw conclusions between their culture and the adaptations they made while they were here.”

Codling also found bison bones in the samples collected from the excavation. Because bison has not been previously documented as a source of food in the mining camps, Codling said she has to find how that fits into the history of the mining camps.

Once Codling identified all the bones, she examined scans of meat market ledgers, which are archived in Idaho City, to find the prices for pork and beef.

“It’s significant that we found primarily pork bones, because the ledgers say pork was more expensive,” she said. “They were making enough money to afford their preferred meat more often than not.”

PRESERVING HISTORY

Codling said her initial lack of knowledge about the mining camp highlights the importance of the research into Chinese mining camps.

“I’ve lived in Idaho my whole life and I had never heard of these camps,” she said. “It’s part of our state’s history and studying bones and artifacts gives us a better understanding of what life was like in Idaho.”

Codling’s project is just one study stemming from the excavation. Renae Campbell, a doctoral student in the Department of History, is leading the sorting and analysis of items found in the excavation of the mining site. For her portion, Codling wrote an honors thesis and presented her research as a paper at a conference in March 2018.

Warner said Codling has grown as a researcher throughout the project.

“She doesn’t just finish a task and wait for what comes next. She is proactively conducting additional research based on what she has done,” he said. “She is now driving the research on her Chinese foodways project as much as I am.”

The research project helped Codling solidify her career choice. After graduating in May 2018, Codling is going on an archaeological excavation in Nauvoo, Illinois, a small town in western Illinois on the Mississippi River.

“And then it’s right back to working in the comparative bone lab before starting grad school at U of I in the fall,” she said. “I like the idea of getting a job eventually in collections management for a museum, to help preserve the artifacts and history people find.”

“It’s part of our state’s history and studying bones and artifacts gives us a better understanding of what life was like in Idaho.”



Tracking Elk Movements

WRITER/ PHOTOGRAPHER:

Remington Jensen, a junior from Boise, Idaho, is majoring in journalism.



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award recipient

College of Natural Resources senior Katie Anderson came to appreciate elk through hunting. Now, she tracks elk and their movements across Idaho forests for her research. The findings from her study could influence management efforts to preserve elk populations and healthy herds for future generations of hunters.

“How elk behave within their environment is kind of important. People want to know about this,” said Anderson, 21, from Frenchtown, Montana. “I didn’t know it would be so big a deal.”

Researchers know that elk eating habits influence the types of plants commonly found in the forests of the Northwest. In turn, the location of the elk’s favored plants can dictate the movement of elk, and elk growth and survival will fluctuate with changes in plant availability. In addition, predators like wolves and coyotes depend on elk as a food source.

But the intricacies of elk movements across the landscape require further research. Anderson, who is majoring in ecology, wanted to understand how and why elk identify a specific safe location for their herd to graze, play and rest.

Anderson, under the supervision of Ryan Long, an assistant professor in the Department of Fish and Wildlife Sciences, monitored herd movements in the Sawtooth Mountain Range outside of Stanley, Idaho, and Diamond Creek in southeastern Idaho. She used her long-range telescope to study their patterns of vigilance, feeding and behavior.

Previous research suggests that an elk herd’s perception of its own safety is linked to the amount of vigilance displayed throughout the herd. As the number of herd members acting vigilantly increases, the herd feels less safe, and the less likely the adults are to allow the young to roam freely. Anderson documented how vigilance varied by location and environment.

In terms of safety for the young, the foliage or grassland plays a role in protecting them. Anderson used a pole to measure whether the shrubbery was tall enough to hide young elk, and if it was, then that would mean a “safe” calving ground for a herd. Elk were usually less vigilant in “safe” calving grounds.

In addition to her field work, Anderson tracked elk using GPS collars attached to the elk by Idaho Fish and Game. This allowed Anderson to identify trends in elk movements as well as the elk’s land preferences.

Anderson said that human activity has led to the depletion of elk, which could lead to changes in the rest of the ecosystem. In the end, Anderson hopes to map out habitual elk locations so that, in the future, human development can stay away from these habitats and avoid disrupting the elk.

“It would be nice to have a map that shows where the elk think they are safe and where elk can raise a calf, so that humans, regardless of if you are a hunter, can avoid those locations,” Anderson said.

Entering its third year, Vandals in Focus is an annual display of the undergraduate research at the University of Idaho. Alongside the cast of student researchers featured in the publication, another group of undergraduates works behind the scenes at the magazine. Undergraduate students contribute the vast majority of the content and photographs that grace the magazine's pages.

"Vandals in Focus offers undergraduate writers and photographers a chance to publish their work in a professional magazine," said David Pfeiffer, the director of the Office of Undergraduate Research and a professor in the Department of Biological Sciences. "In addition, many of the students on the Vandals in Focus project team have not written articles about research or shot photos in a research setting. Participating in Vandals in Focus offers them a chance to expand their portfolios."

The research topics in this edition of Vandals in Focus range from ecological water hazards to the economics of Eastern Europe. Given this wide range of subject matter, writers and photographers needed to research their subject, as well as adapt their writing and photography styles.

"As a journalism major, I need to be able to write about any topic under the sun," said Tess Fox, a senior journalism major from East Wenatchee, Washington. "Participating in Vandals in Focus gave me a chance to practice complex science writing under the tutelage of professional science writers."

Other Vandals in Focus writers and photographers joined the team for more exposure to U of I's community of undergraduate researchers.

"I was inspired by my friend Carly Scott. In her research, she builds mathematical models of how glaciers off the coast of Iceland affect ocean currents," said Danny Bugingo, who is a junior from Portland, Oregon. "Carly's excitement toward her research is contagious so I was happy when an opportunity to talk to other people about their research came up."

Bugingo, a writer on the team, said that another reason for joining the Vandals in Focus staff was the chance to figuratively put pen to paper.

"Most of my classes are math or computer science courses," said Bugingo, a math and French double major. "I don't get the chance to express myself with words very often."

WRITER:

Corinna Carney is a senior from Parker, Colorado, majoring in international studies.

Undergraduate students contribute the vast majority of the content and photographs that grace the magazine's pages.

Writers and Photographers

of Vandals in Focus

Left to right:
Remington Jensen,
Danny Bugingo,
Diamond Koloski,
Tess Fox, Corinna Carney





THE NUMBERS

Undergraduate Research at the University of Idaho

66

Percent of U of I undergraduates engaged in research activities while earning their degree

>175

Number of research-oriented courses offered at U of I

11

Number of Goldwater Scholars at U of I over the past 10 years

196

Number of student grants awarded by the Office of Undergraduate Research since 2016

>135

Number of student presenters at the U of I Undergraduate Research Symposium each year

1

Number of institutions in Idaho with an Office of Undergraduate Research

From the OUR Director



ABOUT THE OFFICE OF UNDERGRADUATE RESEARCH

The Office of Undergraduate Research (OUR) supports student engagement in out-of-class research and scholarly activities in all fields of study at the University of Idaho. OUR raises the visibility of undergraduate research, facilitates opportunities and helps students showcase their work.

OUR offers grants, information sessions and guidance for undergraduates, hosts the Undergraduate Research Symposium and works with faculty interested in mentoring undergraduate researchers.

Contact OUR at our@uidaho.edu or 208-885-4109.

Learn more at uidaho.edu/undergradresearch.

VANDALS IN FOCUS PRODUCTION TEAM

Editor - Leigh Cooper, Science and Content Writer
Designer - Beth Case, Art Director

As the premier research university in our state, the University of Idaho cultivates a faculty that pushes the boundaries of human knowledge. Not only do our faculty members strive to generate products that invigorate the region and the world, they also endeavor to share these creative and inventive investigations with undergraduates.

Two-thirds of U of I undergraduates engage in hands-on research, scholarly work or creative activities. Our faculty mentors seek out opportunities to incorporate undergraduate participation on projects ranging from the hard sciences to the creative arts. They often go even further, helping their undergraduates write research reports, present at conferences and publish in research journals.

Vandals in Focus is a student-driven publication produced by the Office of Undergraduate Research and University Communications and Marketing. The magazine provides examples of student projects from each of U of I's colleges. Our team of undergraduate writers and photographers focus not only on original research projects, but also on the enterprising undergraduates dedicating their time to research. We offer readers a peek into the opportunities for research and creative initiatives available to U of I undergraduates.

I urge any current and future U of I undergraduates who are interested in becoming involved in faculty-mentored projects to visit the Office of Undergraduate Research. Completing undergraduate research will enhance your academic experience, broaden your understanding of the world, and help you succeed in the future. Get involved!

David Pfeiffer

Director, Office of Undergraduate Research



University of Idaho

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