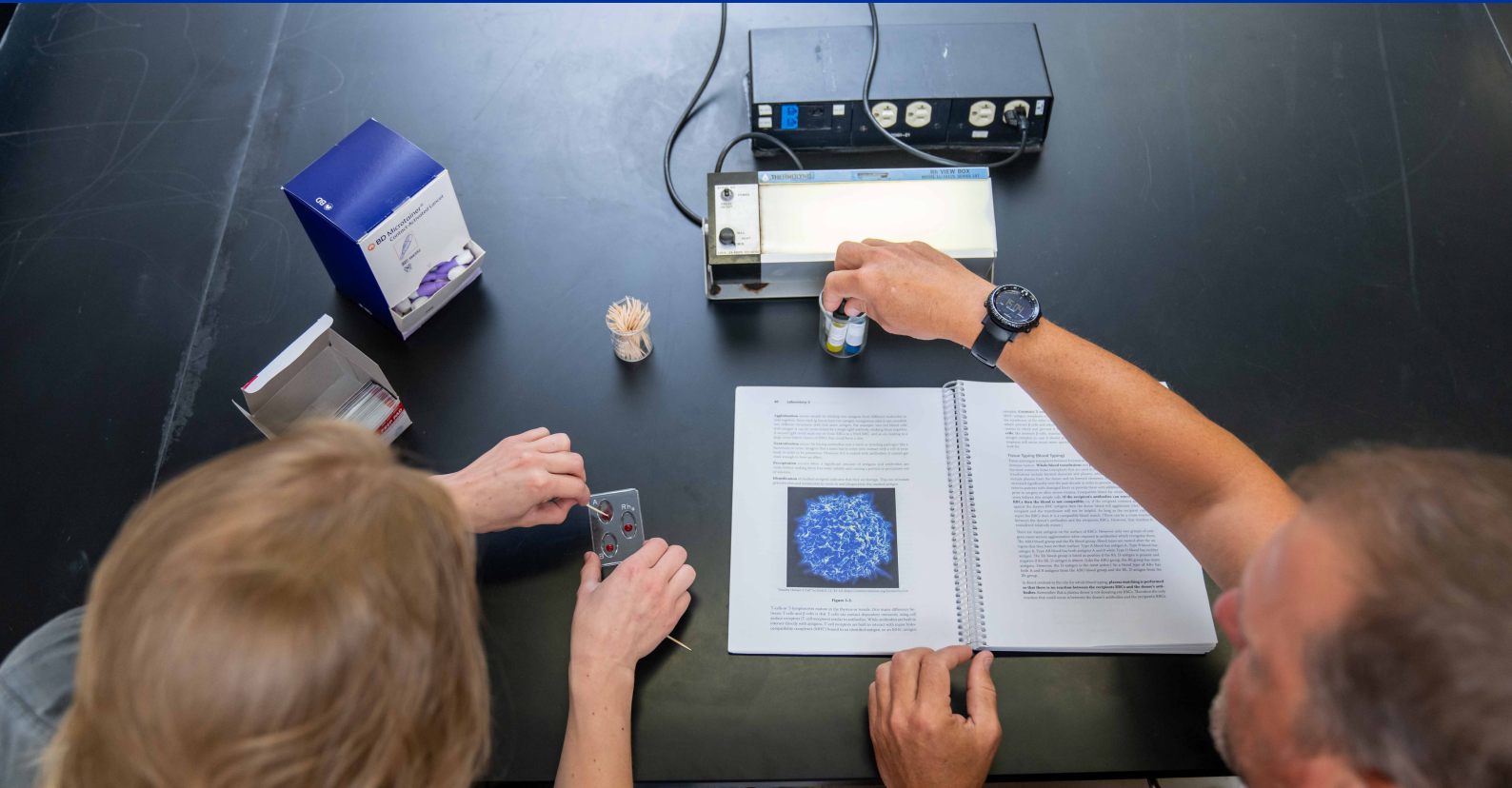


# NEWSLETTER



## Dean's Message

DR. CHARLENE WOLF-HALL

What a beautiful time with the colorful fall foliage this year. Be sure to walk around our picturesque campus if you are able and enjoy this moment. I am so thankful to be here with the amazing people in this university and especially our college. Note the accomplishments highlighted in each newsletter.

Thank you all for your efforts with One Day for State. It was truly a remarkable team effort and will make a big difference for our students now and into the future.

Hobo Day will be here soon. Our college

will have an alumni tent in a primo spot on the parade route. Following the parade will be an open house to showcase the new Anatomy Lab and to demo science virtual reality equipment. Hope to see you all there!

We have made it through September and onto October. The day light hours get shorter, the days seem to go by faster, and the "to do" lists grow. Keep your spirits up, enjoy the change of seasons, and use each day to absorb what you can from your university experience. Let others know if you are struggling. We are here for each other. Keep being awesome Natural Sciences!

## Celebrating Work Anniversaries

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### September 2021

Volker Brözel - 18 years  
Radhey Kaushik - 18 years  
Marj Thompson - 15 years  
Anne-Marie Hoskinson - 5

# Awards & Recognition



The following awards were announced on 8/26/2021 at the annual Chemistry & Biochemistry Department picnic:

Leo and Elaine Spinar Award for Outstanding Undergraduate Teaching - **Dr. Nicole Grove**

ACS Analytical Chemistry Award - **Justin Hoogestraat**

ACS Organic Chemistry Award - **Jacqueline Laddusaw**

ACS Physical Chemistry Award - **Brandon Schuldt**

Shanghai Ranking has released their 2021 Global Ranking of Academic Subjects (GRAS). GRAS contains rankings of universities in 54 subjects across Natural Sciences, Engineering, Life Sciences, Medical Sciences, and Social Sciences. The rankings are based on transparent methodology and objective third-party data. In the area of **Remote Sensing**:

- South Dakota State University was ranked at #19 worldwide
- In the United States, SDState was ranked at #4

Other recent notable rankings:

- #9 on the "20 Best Drone Training Colleges" list (published by [SuccessfulStudent.org](https://www.successfulstudent.org))
- #11 on the "30 Best Bachelor's in Geography" list (published by [CollegeRank.net](https://www.collegerank.net))
- #12 on the "Best Online Bachelor's Degrees in Environmental Science" list (published by [OnlineU.com](https://www.onlineu.com))

Congratulations to everyone in **Geography & Geospatial Sciences Department!** Your hard work and commitment is being recognized internationally.

Congratulations to **Noe Aparicio**, current undergraduate student in the Chemistry & Biochemistry Department, who received an ACS Bridge Career and Professional Development Award!

Congratulations to **Isaac Tuffour**, current graduate student in the Chemistry & Biochemistry Department, who received the "Love of Learning Award" from the Phi Kappa Phi Honor Society!



**SOUTH DAKOTA  
STATE UNIVERSITY**

*College of Natural Sciences*

# Student Clubs in Natural Sciences

Click the boxes below to learn more about these clubs, see upcoming meetings, or contact officers!

## **American Medical Student Association (AMSA) pre-medical chapter**

For students interested in a career in medicine or related health professions. Meetings include speakers, info sessions (e.g. MCAT prep, etc.), healthcare-related volunteering, and medical school campus visits.

**President:** Emily Wilde

**Faculty advisor:** Marj Thompson

## **Chemistry Club**

For students who love chemistry and science, meetings include fun chemistry experiments, external speakers, career development, and volunteering in the community. It's also a safe space to get support from other students who have taken those really hard classes.

**President:** Aubrie Franken

**Faculty advisor:** Melody Jewell

## **Drone Club**

The purpose of this club is to encourage students to develop skills around the use of controlled aircraft and to give students opportunities to experience practical applications of drone tools, laws, policies, and regulations while simultaneously learning about model aeronautics.

**President:** Julie Leidholt

**Faculty Advisor:** Bruce Millett

## **Geography Club**

Open to anyone interested in Geography, this club includes both academic and social functions. Examples include pizza movie nights, sports events, bowling, attending the regional Association of American Geographers meeting, and hosting the Annual SDSTATE Geography Convention.

**President:** Kaila Brudelie

**Faculty Advisor:** Kim Johnson-Maier

## **Microbiology Club**

This club is for students interested in microbiology, regardless of major. Meetings include a wide variety of guest speakers and student panels, career development, games, social events, & fun micro lab activities.

**Exec. Team:** Jadyne Perry, Eliza Peters, Regan Blackwell, Camryn Blackwell. **Faculty Advisors:**

Ashley McConnell, Jess Mediger

## **National Science Teaching Association (NSTA)**

NSTA is a small group of science educators who encourage all to join any meetings that may catch your interest! Meetings consist of science demos, lab safety, and chats with current educators, admin, and student teachers.

**President:** Samantha Lebert

**Faculty Advisors:** Larry Browning, Madhav Nepal, Matt Miller

## **Pre-Professional Science Club**

This club brings in guest speakers from the fields of Medicine, Dentistry, Chiropractic, Optometry, Physician Assistant, Mortuary Science, and Physical Therapy. Opportunities include service learning, volunteering, and campus visits to professional schools.

**President:** Alexis Elfstrand

**Faculty Advisor:** Marj Thompson

## **Society of Physics Students (SPS)**

SPS advances the knowledge of and interest in physics and astronomy among the academic and local communities, and it promotes physics as a pathway to student success in a variety of disciplines. The only membership requirement is that you have an interest in physics.

**President:** Zachary Lehmann

**Faculty Advisor:** Robert McTaggart

## **Women in STEM**

This club strives to connect and raise awareness of women pursuing educations in STEM by serving as an informational organization and encouraging all women pursuing STEM to attain higher levels of education and professional achievement.

**President:** Nichole Peters

**Faculty Advisors:** Julie Leibold, Nicole Grove

# Media Coverage of CNS



## Meet Our Jacks

*Jordan Neises*



*Biology/Microbiology PhD Student*

South Dakota State University recently featured one of our Natural Sciences students on the University's official social media accounts!

Jordan Neises is a current PhD student in the Biology & Microbiology Department.

[Click to watch his interview!](#)

### **SDSU researchers to track chemicals in counterfeit drugs:**

"Professor Brian Logue of SDSU's Department of Chemistry and Biochemistry and two doctoral students will develop techniques to determine the chemical composition of drugs from various manufacturers and come up with a chemical fingerprint. Logue has been collaborating with many of the researchers involved in the new center on projects related to security and anti-counterfeiting technologies for 15 years."

*Pictured: doctoral student Kyle Burch*



### **SD teachers learn how mRNA vaccines work:**

"The teacher workshop is part of a four-year, nearly \$1.14 million National Science Foundation project that uses simplified cell circuitry, known as synthetic biology, to study how proteins are produced, degraded and modified."

"I wish I had them all as a student—what they do is amazing," said assistant professor of biology and microbiology Nicholas Butzin, who leads the NSF project. This was his first experience with science teachers - and the first of three summers the workshop will be available for three teacher participants.

Butzin worked with professor Madhav Nepal of the Department of Biology and Microbiology to plan the workshop, selecting topics based on next-generation science standards. Ten SDSU graduate students assisted teaching the lessons, with at least two students working with each teacher."

*Pictured above: Brian LaBelle, who teaches science at Tiospa Zina Tribal School, shows off the picture he painted in a petri dish using different types of bacteria*

# Hobo Day Festivities

After taking a year off, we are excited to restart this fun tradition ... join us for the 2021 Hobo Day Parade on October 23! We'll have tents, seating, coffee, and doughnuts right along the parade route. This event is a great chance to connect with our alumni, and Natural Sciences faculty and staff. Those who attend will receive an official 2021 Hobo Day pin (pictured right) with a CNS ribbon!

**Location:** directly north of the Art Museum, east of Woodbine Cottage

**Time:** event starts at 8:30am, the parade starts at 9:30am

**Pictured below:** 2019 set up - look for the blue and yellow tents!



Right after the parade, we are offering tours of the newly renovated Anatomy Lab. This renovation has been in the works for years and is the latest capital project in the College. The Department of Biology & Microbiology is excited to showcase their new space. You are invited to come check it out!



**What:** tours & hands-on VR demos

**When:** after the parade

**Where:** 3rd floor of Berg Hall

# Open PRAIRIE Data

AUGUST 2021

Data across the whole College of Natural Sciences:

- 2,644 downloads at 274 institutions in 100 countries
- 24 new works posted, for a total of 972
- *Characterization of Landsat-7 to Landsat-8 Reflective Wavelength and Normalized Difference Vegetation Index Continuity* was the most frequently downloaded piece at 112 downloads. It was authored by several past members of the Geospatial Sciences Center of Excellence (GSCE), as well as current member Dr. Hankui Zhang.

*What is "Open PRAIRIE"?*

The **Open Public Research Access Institutional Repository & Information Exchange** tracks publications from within Natural Sciences throughout the year, showing where and when articles were opened all around the world.



## Grants Awarded in CNS

JULY - AUGUST 2021

**Jaime Lopez-Mosqueda**, PI, **Radhey Kaushik**, co-PI • Biology & Microbiology • National Institute of Food & Agriculture • CRISPR-Cas9 mediated identification of host factors important for influenza infections and persistence

**Xiuqing Wang**, PI • Biology & Microbiology • National Institute of Food & Agriculture • Role of interferon-induced transmembrane protein 3 (IFITM3) and zinc metalloprotease (ZMPSTE24) in PRRSV replication

**Bruce Bleakley**, co-PI • Biology & Microbiology • SD Soybean Research & Promotion Council • Investigating Additive Effects of Ragweed Extract and Mycorrhizae in Managing Soybean Cyst Nematode

**Brian Logue**, PI • Chemistry & Biochemistry • Regents of University of Colorado/Biomedical Advanced Research & Development Authority • SM Metabolite Analysis for Natural History Studies - Rodent

**Brian Logue**, PI • Chemistry & Biochemistry • South Dakota School of Mines and Technology CARA/SD Governor's Office of Economic Development • SD Governor's 2021 Center for Understanding and Disrupting the Illicit Economy

# One Day for State Recap

We can't say **THANK YOU** enough to everyone who supported the College of Natural Sciences during One Day for State (ODFS)! Whether you liked or shared a post on social media, spread the word by mouth, made a donation, or sponsored a challenge, you can know that your contribution made a difference. These funds will bolster scholarships in the sciences, aid student clubs with travel and professional development, help us elevate our programs, and more!

We'd like to highlight and thank our challenge sponsors again:

## Dr. Rick Holm Memorial Challenge

- Joanie Holm and family

## Keep the "Lab" in Laboratory Science Challenge

- 1980 Microbiology Graduate

## Drs. Michael Brozik & Elise In't Veld Challenge for the Human Anatomy Lab

## College of Natural Sciences Founders Challenge

- Robert Watrel
- Greg Heiberger
- Radhey Kaushik
- Charlene Wolf-Hall
- Doug Raynie

## College of Natural Sciences Advisory Board Challenge

- Dr. Rachel MK Headley
- Roger Oleson
- Ellen Bubak
- Dr. Michael Pietila
- Dr. Bill Beers
- Dr. Bree Oatman
- Dwaine Chapel
- Joni Ekstrum
- Madelyn Grogan
- Heather Peters

## Dr. Don Auger Memorial Scholarship Challenge

- Cindy Ostlie
- Friends, family, and former students of Dr. Auger

*Thank you*

## 2021 Lead Gift: Robert & Helen Gales

When they learned about their employer's matching program, the Gales family knew it was the right time to make an impact at SDState. Through their own gift and with the Halliburton Foundation, they donated \$65,000 to fund undergraduate research assistantships! They encourage others to check with their employers for possible matching programs when giving.



  
SOUTH DAKOTA  
STATE UNIVERSITY  
College of Natural Sciences

# FINAL RESULTS

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**267**  
DONORS

**\$137,408**  
RAISED



STATE  
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One day for  
STATE