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March 2023



# DEPARTMENT NEWS

*Updates from the Department of Food Science and Technology and The Food Processing Center*



**Dr. Heather Hallen-Adams** was featured in a recent IANR Faculty Spotlight. Dr. Hallen-Adams was interviewed about her work at the Department and personal interests. You can read the interview at: <https://ianrnews.unl.edu/faculty-spotlight-heather-hallen-adams>



**Dr. Andrea Bianchini** sharing about challenges facing the US in regards to food security, food defense, and other vulnerabilities in its food processing system at a recent National Strategic Research Institute/Agricultural Research Division Workshop.



**Amranda Kanner-Fair lab**, received a **2<sup>nd</sup> place award** for his **oral presentation** (PhD category) at the **annual meeting** for the **Missouri Valley Branch of the American Society for Microbiology** on **March 11 in Manhattan, KS.**

### The 2023 UNL Battle of the Food Scientists contest



With four teams competing, a kitchen filled with students, faculty, alumni, and journalists, and finishing minutes ahead of the city's biggest snowstorm of the season, you could feel the excitement and energy at this year's contest!

The first round challenged teams to create a high protein, gluten-free cookie in 45 minutes or less. The sophomore Food Science and Technology majors, **Janine Merkle** and **Adam Lierz** had the best cookie according to the judges. A team of senior Food Science and Technology majors, **Madelyn Jaska**, **Olivia Kinne**, and **Katelynn Teh**, came in second with their cookie. The rankings from round #1 provided the order for teams to select ingredients for Round #2.

In the second round, teams had 50 minutes to plan and prepare a dessert that included cricket powder and a



### Sponsors and Business Supporters

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Hormel Foods  
Balchem  
Ardent Mills  
All Things Bugs  
A-Maize-N Popcorn

### Special Recognition

We would like to thank everyone who attended the event, from the student contestants, the judges, faculty and staff, local journalists, and especially the planning committee. With a winter storm approaching, we are grateful for everyone who showed up as the snow held out.

Additional news coverage can be found from **Nebraska Today** and **The Daily Nebraskan**. A photo gallery with

pulled a big win with their Indian-inspired dish that wowed the judges for its unique flavors. Team members on the first-place team included graduate students in the Food Science and Technology Department: **Prabhashis Bose, Sedoten Ogun, Urvinder Kaur Sardarni, and Sayantini Paul**. The winners each received a trophy, \$20 gift card, and backpacks from ConAgra.

Runners-up for the event were also graduate students. **David Gomez Quintero, Armando Lerma Fuentes, Carmen Perez-Donado, and Kevin Lievano** pulled out a second-place victory with their crick-crick bars. Students received a \$10 gift card and water bottles from ConAgra.

Photos

(Left) **1st Place** From L-R: **Nicolle Kallhoff** (ConAgra), **Sedoten Ogun, Prabhashis Bose, Sayantini Paul, Urvinder Kaur Sardarni, Ava Petersen** (Ardent Mills), and **Dr. Terry Howell** (UNL FPC)

(Right) **Runner-Up** From L-R: **Nicolle Kallhoff** (ConAgra), **Armando Lerma Fuentes, Kevin Lievano, Carmen Perez-Donado, David Gomez Quintero, Ava Petersen** (Ardent Mills), and **Dr. Terry Howell** (UNL FPC)

### Outreach and Recruitment Activities



**4-H Youth from Central Nebraska** – The department hosted over 30 high school youth and their teachers/parents on March 1<sup>st</sup>. The group started with a tour of the Scarlet Hotel and learned about the benefits of working in Hospitality Management. Then the group came to the Food Innovation Center for a Sensory Science activity led by **Julie Reiling**. Following a building tour and short



**Spring Break Camp – “The Rise of the Dough”**  
**Drs. Jayne Stratton and Andreia Bianchini**, along with graduate students **Karen Nieto Flores, Aryany Pena, and Juan Villegas**, provided local middle and high school students with a one-day food science camp. In the Star Wars-themed, pizza-making camp, students learned all about wheat, milling and its properties in bread

Science of Pizza lab. Their visit ended with ice cream and information about Food Science as a future career. **Dr. Jayne Stratton** and **Dr. Andrea Bianchini** provided the lab activities, and **Sara Roberts** helped coordinate the visit.

**OLLI Baking Class – Drs. Andrea Bianchini and Jayne Stratton** led a group of 30 OLLI participants in an activity entitled “How the Cookie Crumbles: A Day in the Life of a Food Scientist” on Feb. 27<sup>th</sup>. In this activity participants had the opportunity to hear about all the steps and challenges involved in developing new food products, including those associated with consumers expectations for healthier and innovative foods. As part of this learning session, participants were faced with the opportunity of formulating a product that needs to meet certain consumer needs, without compromising product flavor, texture and color.

**LPS Middle School Science Fair – The Food Science and Technology Department** hosted a table at the LPS Science Fair held at the Lancaster Events Center. Hundreds of students with their parents and siblings attended. The students enjoyed tasting spice drops and making gummy worms. **Liyun Zhang, Alisa Holst, Chloe Calhoun,** and **Sara Roberts** represented the department at the table.

canning/preservation of tomatoes (sauce) and cheese making through acidification. Students’ knowledge of the Star Wars saga was tested throughout the day with an engaging trivia, and students ended the camp with preparing their own pizza creation. This camp was sponsored by Nebraska EPSCoR and was free for participants.

**Southeast Community College Biotechnology II class visit –** Students taking a Biotech II course at SCC made a visit to FIC 3<sup>rd</sup> floor this past month. The group visited the Benson and Auchtung labs, and met with **Nate Korth, Ph.D.** and **Dr. Jennifer Auchtung** to learn about their research.

**Central Nebraska Science Fair – Sara Roberts** traveled to Hastings, NE and provided interactive sessions for the students at the regional science fair. Approximately 115 middle and high students came to the science fair and participated in the sessions.

**Jun 9**

FPC 40th Anniversary Celebration

**June 3****Recipe to Reality Seminar**

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### Recent Publications

Nwaizu, C. C., Zhang, Q., Iluno, (2022). 3D Pore Structure Characterization of Stored Grain Bed. *Applied Engineering in Agriculture*, 38(6), 941–950. <https://doi.org/10.13031/aea.15133>.

Sarkar, Dipon, Ian Hunt, Cameron Macdonald, Bing Wang, John P. Bowman, and Mark L. Tamplin. "Modelling growth of *Bacillus cereus* in paneer by one-step parameter estimation." *Food Microbiology* (2023): 104231.

### Recent Awards

Andreia Bianchini, Discovering Food Science: Exploring Dairy Products the Milky Way, NSF-Nebraska-EPSCoR, \$8,143.

Jaber Ghorbani, 2023 Consumer Food Safety Education Conference (CFSEC), \$900.

Emerson David Nolasco Guzman, Phi Tau Sigma Student Achievement Scholarship, \$1,000.

Yanbin Yin, Carbohydrate Enzyme Gene Clusters in Human Gut Microbiome, DHHS-Nat Inst Gen Medical Sci, \$271,908.

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### Jobs

#### Quality Assurance Technician - Universal Pure

- Quality Assurance Technician Duties and Responsibilities:
- Provide daily monitoring of facility and personnel to ensure compliance to the food safety system of the facility; perform formal audit on GMPs.
- Ensure training of facility personnel on GMPs, Risk Preventive Controls, Hazard Analysis, pre-requisite programs, and other applicable food safety system elements as required
- Collect and analyze product samples as required, as well as document information derived from analysis.

Apply [here](#)

**Food Science and Technology Department Student Ambassador**

department at various recruitment events on campus, assist with outreach events across the state such as the Nebraska State Fair, Applejack Festival, and FFA Career programs, and take on leadership roles in the department including coordinating the Battle of the Food Scientists contest. The Student Ambassador position is a two-year commitment and comes with a \$1,000 annual scholarship.

Apply [here](#)

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For more news please visit: <http://foodscience.unl.edu/>

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