



IN OUR GRIT,
OUR GLORY.

DEPARTMENT NEWS

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



From the Desk of Dr. Martini

I can't believe it is time again to write an update for the Newsletter. February has gone by too fast!

Where should I start? We had a very good month of February in FST. We did a lot of fun stuff, and we accomplished a few important things. Among the fun stuff was the talk about chocolate science that I delivered to our Food Science Club. I had a lot of fun! It reminded me how much I miss being with students and interacting with them! Thanks for inviting me! Another fun event was the competition between students and faculty to practice for the IFT college bowl. Congratulations to students for beating the faculty team! I missed this event, but I heard it was a lot of fun! Let's not forget about the graduate student recruiting activity! In early February we welcomed a few prospective graduate students! They were all very smart and energetic and I hope they will all decide to join our program! We also had very good applicants that we interviewed via Zoom! I am excited to see such a great pool of applicants!

In terms of accomplishments, you already probably learned that we hired a new Graduate Coordinator. Josh Russo will join us on March 21st! We are so excited to have him! So, please come and introduce yourself to Josh! I am sure he will enjoy meeting all of you. Thanks to Susie, the search committee and everybody that met with the candidates! Susie is now focused on hiring a new person for Tech support (Graye's position). The search committee is currently screening candidates via Zoom interviews, so we are hoping to fill that position soon!

On a personal note, perhaps the most significant accomplishment for me was to meet with all faculty and post-docs in the department for their annual evaluations. I still have a few more to do, but I am almost done! I enjoyed meeting with everybody and discussing their research and accomplishments! What a great group of people! I am so proud of you all!

I'd like to finish this message by highlighting a few publications that were just released: one from Dr. Edward Deehan's group, one from Dr. Rose's research group, and another one from Dr. Jennifer Auchtung and Dr. Hyun-Seob Song's group.

- Tan, Q., Peng, Y., Deehan, E.C., Vieira, F.T., Ho, B.W.P., Afhami, S., Wine, E., Madsen, K.L., Field, C.J., Pakseresht, M., Ilkayeva, O., Newgard, C.B., Walter, J., Tun, H.M., Haqq, A.M. Fiber Intervention Study in Prader-Willi Syndrome: Insights into Metabolic and Microbiota Shifts. *The Journal of Clinical Endocrinology & Metabolism*. <https://doi.org/10.1210/clinem/dgaf142>
- McCullough, H.C., Song, H-S, and Auchtung, J.M. Diversity in chemical subunits and linkages: a key molecular determinant of microbial richness, microbiota interactions, and substrate utilization. *Microbial Ecology*. <http://doi/10.1128/spectrum.02618-24>
- Gustafson, C.R., Gitungwa, H., Boron, J.B. and Rose, D.J. Personalizing product sets to individual health priorities increases the healthfulness of hypothetical food choices in US adults. *Scientific Reports* volume 15, Article number: 7981 (2025) <https://doi.org/10.1038/s41598-025-92784-1>

Congrats to all of you and your team!

Thanks for all you do for FST!

Silvana



INSIDE THIS ISSUE

Dept. Head	1
411 Info.....	2
HR Insights.	3
Business Center.....	4
Faculty Highlights.....	5
Recruitment Roundup	6
FPC Processing Perfection.....	7
FARRP Focus.....	8
NFHC	9





Thinking about the workflow in the Teaching Laboratories—a shared space that benefits us all—I'd like to take a moment to share a gentle reminder about how we can work together to keep things running smoothly.

If we view the activities in the Teaching Laboratories as a “Life Cycle” (perhaps not as intricate as the parasitic life cycles on the CDC’s website, but still a helpful visual), we see that each stage plays an important role. Whether carried out individually or as a team, every step ensures a seamless transition to the next. When each part of the cycle is completed, the space remains organized, efficient, and welcoming for everyone. However, when a stage is skipped, it can create challenges for others who need to use the space.

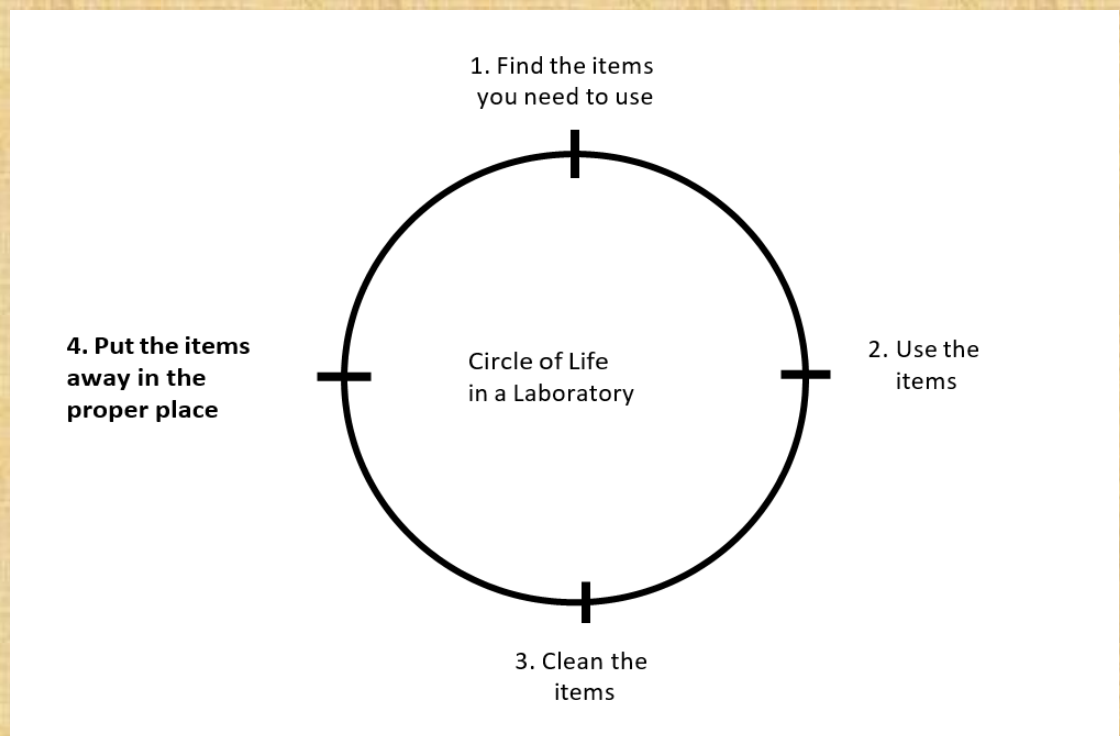
To keep our Teaching Laboratory running at its best, we all share the responsibility of maintaining organization, cleanliness, and safety.

Here are some tools to help make that easier:

- In **FIC 107, the Food Grade Laboratory**, each of the 10 stations has an inventory sheet listing the equipment found in that station. Since all 10 stations are set up the same way, this makes finding and replacing items simple.
- In **FIC 104, the Prep Room**, a clipboard holds lists and a map to help you locate supplies and equipment efficiently.

By working together and following these simple steps, we can ensure the Teaching Laboratories remain a well-organized, safe, and welcoming space for everyone.

Thanks for doing your part!



BUILDING BETTER TEAMS: HR INSIGHTS

Holiday Closedown Dates 2025 (Please plan accordingly. Remote work during the Holiday Close down is only allowed for late-year new hires who do not have banked floating holiday hours. Supervisors must email an individual formal work plan and statement of approval to Terri Hutchison.)

December 25 – Holiday

December 26 – Closedown – Floating Holiday in lieu of President’s Day

December 29 – Closedown – Floating Holiday in lieu of Arbor Day

December 30 – Closedown – Floating Holiday in lieu of Juneteenth

December 31 – Closedown – Floating Holiday in lieu of Indigenous People’s Day/
Columbus Day

January 1 - Holiday

January 2 - Closedown – Floating Holiday in lieu of Veteran’s Day

Inclement Weather Days – UNL policy can be found at: <https://nebraska.edu/-/media/unca/docs/offices-and-policies/policies/policies/hr-04-inclement-weather-closure-pay-policy.pdf>. Non-essential employees who can work at an alternate worksite should work remotely during inclement weather days. Below is a list of work related assignments provided by IANR/HR for these situations:

Any Bridge trainings <https://nebraska.bridgeapp.com/learner/courses>

Professional Development Plan <https://nebraska.bridgeapp.com/learner/courses>

1. Review department/lab policies
2. Review department/lab procedures

Title IX training <https://nebraska.bridgeapp.com/learner/courses>

EHS Training <https://nebraska.bridgeapp.com/learner/courses>

Microsoft Online training <https://support.microsoft.com/en-us/training>

ODI training here <https://hr.unl.edu/odt/open-access/>

If you scroll to the bottom there are free online learning resources on a variety of topics from Coursera.

We can discuss free books/journals/articles available that may be helpful to a specific field



The Business Brief: Updates from the Business Center



Reminders when using your Purchasing Card

P-Card Holder Responsibilities

Submit Documentation: Send the voucher, receipt, and any additional required documentation (agenda, invite, list of attendees, etc.) to nicbc@unl.edu.

- **Compliance with P-Card Policies:** Ensure all transactions comply with the University's P-Card policies and procedures.
- **Timely Reconciliation:** Review and reconcile all cardholder transactions within 10 days of purchase. This is necessary to make sure we are not posting charges to closed grants. If the grant ends before reconciliation, the faculty's state account will be charged.
- **Retention of Documentation:** Retain P-Card documentation according to the University's record retention policy.
- **Disputed Transactions:** Track disputed items to ensure proper credit.
- **Proper Documentation:** Include business purpose and other required information to support all P-Card transactions.
- **Appropriate Use:** Ensure that transactions are for legitimate University business purposes.

Correct Cost Objects: Ensure the use of appropriate cost objects for each transaction.

Use Secured Websites:

Ensure a site is secure before making a payment with a P-Card by looking for a padlock icon or "https" in the URL.

Sales Tax Exemption:

The University is sales tax exempt in NE, FL, IL, KS, MA, MO, ND, and TX. Please ask for sales tax exemptions for all purchases. The business center will send back all p card requests that include sales tax to the cardholders for sales tax refund. Exemption forms can be obtained through the Ariba tile in Firefly, or you can reach out to the business center.

Allowable Purchases:

- **Goods & Services:** Includes books, cleaning supplies, advertising, consulting, conference registration, food for research, etc.
- **Food:** Allowable for research, emergency needs, childcare centers, and events (with specific guidelines).

Miscellaneous: Includes office supplies, safety supplies, training materials, and subscriptions.

Prohibited Purchases:

- **Gifts:** Gifts to alumni, gift cards for prizes, personal purchases, and items for personal use (e.g., microwave, donations).
- **Pyramiding:** Breaking up large purchases to bypass limits.
- **Travel-Related Purchases:** Items like lodging, rental vehicles, and travel expenses are prohibited under state guidelines.
- **Alcohol & Entertainment:** No purchases for alcohol, amusement, or entertainment.
- **Personal Use Items:** Items like gifts for faculty/staff, holiday decorations, personal appliances, and more.
- **Travel-Related:** Includes transportation, travel fees, and related expenses.

Other: No donations, legal or medical services, or purchases for non-university employees or non-student events.

If you have any questions on allowable purchases, you can find a more detailed list at <https://nebraska.edu/offices-policies/business-finance/procure-to-pay/how-to-buy/purchasing-guide/purchasing-card> or you can contact the business center directly at nicbc@unl.edu.

THE FACULTY FORUM: HIGHLIGHTS AND ANNOUNCEMENTS

We are thrilled to share that Dr. Changmu Xu, a former faculty member of Food Science and Technology, was recently featured on NPR for he and his wife's marketing and use of the aronia berry. Dr. Xu and his wife, Xiaoqing Xie, own and operate a startup company right here in Nebraska that produces juice sourced from the aronia berry. Dr. Xu has gone on to the University of Illinois as of last year. The story can be seen here: [story on NPR](#)

Exciting News!

Here are two papers that were recently published in collaboration with Edward Deehan's group.

- Feng C, Cai C, Deehan EC, Jiang S, Yang M, Weng Z, Long J, Li G, Li J, Liu J, Zhang Z. Evaluating the effects of intrinsic and isolated arabinoxylans on human gut microbiota and short-chain fatty acids: A systematic review and meta-analysis. *Trends Food Sci Technol.* 2025; 156: 104837.
- Tan Q, Peng Y, Deehan EC, Vieira FT, Ho BWP, Afhami S, Wine E, Madsen KL, Field CJ, Pakseresht M, Ilkayeva O, Newgard CB, Walter J, Tun HM, Haqq AM. A Randomized Crossover Fiber Intervention Study in Prader-Willi Syndrome: Insights into Metabolic and Microbiota Shifts. *J Clin Endocrinol Metab.* 2025. dgaf142.

RECRUITING ROUNDUP: UPDATES AND INSIGHTS

This month in recruiting really picks up. We continue to help host Omaha high schools on East Campus as well as have an uptick in invitations to spend time with students at STEM nights, career fairs, and the LPS Science Fair.

Especially notable was hosting the first immersive field trip for an LPS Culinary III class. Prior to their visit, the students learned about Food Science with a video/slideshow presentation from their instructor. They then came and toured FIC as Culinary II students. As Culinary III students, this is their third exposure to Food Science as a career. The students competed in a baking challenge and toured our Product Development Lab with our April Johnson! 10/11 News came to cover the event!

<https://www.1011now.com/2025/02/26/lincoln-high-school-culinary-students-take-crack-unls-cooking-lab/>



VOLUNTEERS!!

Thank you for your continued volunteering! Your help with tours, helping prep materials, and with developing activities is gold. You ARE the amazing Food Science Department! Anytime faculty and students are involved you are increasing the excitement for potential students and even becoming a familiar face.

Another, upcoming opportunity to volunteer is our FFA competition on Thursday, April 3rd from 7-9am. We host 200+ students in our 4 part Food Science Competition. I need 15 volunteers to host this amazing event. Email or stop by if you'd like to help this day. Thank you!

FPC Director Attends Nebraska State Dairy Convention

On February 25th, Food Processing Center (FPC) Director Ellie Watts attended the Nebraska State Dairy Convention. The convention provided an excellent opportunity to network with industry partners and discuss critical issues facing the dairy and food processing sectors. A highlight of the event was the afternoon Ice Cream Social, where The Dairy Store generously donated Heart of Gold ice cream. Additionally, Ellie had the opportunity to speak directly with keynote speaker Governor Jim Pillen about potential agricultural production and food processing policy changes. The FPC has been actively expanding its involvement in the dairy and ice cream sector.

We are excited to announce that four flavors of UNL Dairy Store ice cream will be shipped to U.S. Senator Pete Ricketts' office and featured at a special luncheon on March 27th. This event will showcase our hand-crafted ice cream to U.S. senators, providing a taste of Nebraska and UNL's long-standing dairy tradition in Washington D.C. It's an honor to be part of this occasion and represent the excellence of UNL and the FPC on such a distinguished platform. Go Big Red!

Looking ahead, we're also preparing to unveil a new ice cream flavor to honor the 2025 State FFA Convention, taking place April 2-4. Additionally, we are in discussions with UNL Athletics to expand our ice cream offerings at athletic events and exploring the potential of developing featured flavors to represent some of our prestigious athletic teams! It's early in discussion; we will provide updates as more details progress. Furthermore, the FPC is thrilled to partner with our Food Science Club to hold an ice cream flavor ideation session on April 2. Lastly, the Dairy Plant has been collaborating with The Dairy Store to strategically plan and expand summer trail sales, ensuring a strong presence at local city events, county fairs, and the Nebraska State Fair.

Dairy Research Announcement

We are pleased to announce the results of the Dairy Research RFP, which was released late last year. Three proposals were submitted, and the Food Science and Technology Department has awarded funding to Dr. Liu, Dr. Deehan, Dr. Achtung, and Dr. Li for their collaborative dairy research proposal with the FPC. Their project, titled "Comparing Functional Yogurts Enriched with Polyphenols from Midwest Fruit and Grain Crops," aims to explore innovative dairy product formulations with potential health benefits. Please join us in congratulating Liu et al. on this accomplishment. We look forward to the outcomes of this exciting research!

Strategic Planning Retreat

The FPC has been actively preparing for several key events and initiatives. Next week, on March 17th, the FPC will hold its annual retreat. A key priority of the retreat will be extending the current strategic plan for an additional three years while also brainstorming innovative ways to implement the plan effectively and drive progress toward our goals. This extension will align the FPC's objectives with the Food Science and Technology Department's (FDST) academic program review, set to be renewed in two years. Ensuring that our strategic goals are closely integrated with FDST's mission will strengthen our collective impact.

Upcoming Workshops and Conferences

The FPC has a packed schedule of workshops designed to support food industry professionals:

- High Pressure Processing & Dehydration Workshop – March 19-20
- Better Process Control School for Acidified Foods (Online) – April 22-23
- Extrusion Workshop – April 22-24

The FPC will also be represented on March 12th at the Nebraska Sorghum Symposium, where growers, researchers, industry professionals, and policymakers will discuss the latest advancements in sorghum production technology and market opportunities. Additionally, the FPC will be well represented at the Grow Nebraska MarkeTech Conference in Kearney, NE, on March 25-26. Senior Product Development Manager Edel Summers and Director Ellie Watts will attend the event. Ellie will also lead a breakout session titled "Taste of Triumph: Secrets to Thriving in the Food Industry." Her presentation will provide insights into navigating and succeeding in the evolving food industry landscape.

We look forward to engaging with industry partners, advancing our strategic initiatives, and continuing to support food innovation and education.

Stay tuned for more updates from the FPC!

Food Processing





The Food Allergy Research and Resource Program (FARRP) within the Department of Food Science and Technology at the University of Nebraska is celebrating its 30th year of supporting national and international stakeholder groups on the advancement of food allergy research and management.

Founded in 1995 by Drs. Steve Taylor and Sue Hefle to address emerging challenges associated with food allergies and sensitivities, Drs. Baumert, Downs and Johnson and their team of emeriti and adjunct faculty, senior research associates, post-doctoral fellows, staff and graduate and undergraduate students (32 team members in total) continue the core mission of FARRP to provide support for the research needed to advance food allergen detection, management, and control within the food industry.

The research and outreach objectives of FARRP have expanded over the years but the core mission of providing science-based information and assistance to the food industry has been central to the continued success of the program. Current research projects are focused on developing improved analytical methods for the detection and characterization of food allergens using both immunochemical and mass spectrometry methods and developing risk assessment models to advance risk-based approaches for allergen management.

FARRP's extension activities also provide analytical services to the food industry, training and consultation on allergen management, and novel food and GM safety assessments. If you are interested in learning more about FARRP, please contact Joe Baumert (jbaumert2@unl.edu), Melanie Downs (mdowns2@unl.edu) or Phil Johnson (philip.johnson@unl.edu).



NFHC



NEBRASKA
FOOD FOR HEALTH
CENTER *at the University of Nebraska*

Dr. Nicole Koropatkin from the University of Michigan Medical School

Title: Microbial Carb Loading: How gut Bacteroides eat starch

Summary: Bacteroides species are some of the most abundant and prevalent bacteria within the human gut microbiome. These organisms have an interesting duality in human health as commensals that provide beneficial short chain fatty acids and train the immune system, and as opportunistic pathogens in extraintestinal infection. A detailed understanding of their unique physiology can lead to the development of therapeutics to manipulate their metabolism in the gut or treat infection. Bacteroides have a prolific ability to degrade complex carbohydrates but the most widely utilized carbohydrates across species are alpha-glucans including dietary starch. My lab studies various aspects starch utilization by gut Bacteroides including the structure and function of cell surface enzymes and the outer membrane import machinery. The goal of our work is to build a comprehensive molecular understanding of how Bacteroides competitively scavenge alpha glucans.