

Spring 2023

Department of Food Science

IMPACT

News for Alumni and Friends of the
Department of Food Science

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Greetings from the Chair

Dear Food Science Alumni, Family and Friends,

“This is not going to go away” is a quote that I think is worth sharing. Recently shared with me by a senior faculty administrator, they described the increased direction of current and novel funding sources seeking to couple scientific discoveries more closely with indicators of economic growth. Increases in revenue streams, job creation, business start-ups, export performance, and other indications that the discoveries made in our research programs have significant impacts on the world around us, and we need to be at the forefront of this change.

Historically, the model of scientific discovery has yielded a rich foundation of principles and theories based on some of our greatest advancements. Research activities like these will always be part of a community of scholars seeking to learn for learning and advanced understanding. However, there is a clear presence within the systems that fund basic and applied research that societal and economic impacts are also being sought. Food Science and food, in general, are well positioned to compete in this developing novel model of research programming.

Food-based issues and opportunities for innovation will always remain on everyone’s minds, with implications on food quality/safety, human nutrition, the environment, and remedies to food insecurity. From the early developments of Stephen M. Babcock himself to more recent findings involving pigments, peptides, and fermentation, our department’s history includes impactful discoveries within various disciplines yielding a variety of economic impacts.

With the new round of faculty hires in the department and the strength, energy, and expertise they bring, I look forward to the discoveries yet to be made. Indeed, it is a new era of scientific discovery and innovation, with funding systems presenting a renewed energy and design to implement what we may have already articulated for some time – the Wisconsin Idea – and its invitation to use our discoveries to enhance the lives of our community, nation, and world.

Warm regards,

Scott A. Rankin
Professor and Chair

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CREATIVITY *Research Spotlight*

Dr. Gulustan Ozturk

New Faculty Member

The Department of Food Science is delighted to announce that **Dr. Gulustan Ozturk** joined our faculty in August 2022. Originally from a small town in the Mersin Province of Turkey, Dr. Ozturk earned her bachelor's and master's degrees in food engineering from Ankara University in Turkey. More recently, she completed her PhD at UC Davis where she studied food science with a dedicated emphasis in biotechnology. As a postdoc at UC Davis, Dr. Ozturk worked with an interdisciplinary team that focused on bioactive compounds. This motivated her to build her own research program in next-generation foods to improve human health.





Research Spotlight (continued)

This background uniquely qualifies Dr. Ozturk for an assistant professor as funded through the Dairy Innovation Hub (DIH). The DIH is a \$7.8 million annual investment by the state of Wisconsin with an expressed purpose to support research and development at UW Madison, UW Platteville and UW River Falls. Dr. Ozturk's research aligns with the DIH focal area of "enriching human health and nutrition" and specifically in the application of principles relevant to the creation of dairy foods impactful for human health. To that end, the goal of Dr. Ozturk's research is to apply bio-guided processing to isolate bioactive compounds from milk or dairy streams. Another goal is to design and develop microbiome-centered therapeutic interventions with applications in personalized nutrition.

In addition to research, Dr. Ozturk will contribute to instruction, outreach and service within the department, campus and beyond. For example, she actively participated in Food Manufacturing (FS 532) this fall in preparation to assume a teaching role in that course. She is working to establish industry ties and recently visited The Lactalis Dairy Company in Belmont, Wisconsin.

For fun and relaxation, Dr. Ozturk enjoys hiking, working out, travel, music and food! Now that she is in Wisconsin, she plans to pursue kayaking and cross-country skiing. When asked what she thought of the massive winter storm that hit Madison on December 23rd, she said "It was a very different experience. I have seen snow before, but not at - 35 (windchill) temperature". She also shares that she was very impressed at how well the city prepared for the storm. She is enjoying the beauty of a Wisconsin winter. "I did not get out skiing (yet) but walking to Picnic Point was my first hike in winter. I was amazed to see Mendota Lake in white; it had started to freeze and was beautiful".



COMMUNITY

Instruction Spot Light

Instruction Under Construction: Graduate Program

Discovery and change in industry challenge us to regularly, if not constantly, review the curriculum for our graduate and undergraduate programs. The department is currently in the process of restructuring the graduate curriculum. This particular restructuring includes the development of two new courses: **Advanced Food Chemistry** and **Advanced Food Microbiology**. Each of these graduate level courses will be team-taught. There is also a plan to make changes to the MS and PhD curriculum course requirements. Our hope is to advance scholarship by including courses on scientific writing and ethics. Watch for further information in our next newsletter.





OPPORTUNITY

Dairy Products Evaluation Course

One of the standout course offerings of the Department of Food Science is a one-credit Dairy Products Evaluation class, taught by **Beth Button - Teaching, Learning & Technology Specialist**.

The class puts a focus on becoming familiar with dairy notes within a variety of categories, such as dairy beverages, fermented dairy, ice cream, cheeses, butter, and more. With the increasing varieties and specificities of these products on the market, students learn to become familiar with how they should taste. The class also covers various aspects of the industry, such as the vocabulary and markets of dairy, further preparing students and developing their skills for their future careers in food science. Additionally, there is time at the end of the semester for students to learn about an area in food that interests them, allowing students to follow their curiosities in developing their knowledge.

The course provides skills which are valuable to bring into any food science career, whether within or outside of dairy. As Beth Button said, “We’ve heard feedback from many industries within the dairy world, as well as the food science world, that they want people like us to know how to taste food.” Through developing students’ skills in relation to both sensory and industry knowledge, they are able to bring these to thrive into their future careers. Further, the class does not only focus on dairy products, but extends the curriculum to include non-dairy alternatives. Particularly in the fluid milk category of the course, since 30% of that market has become non-dairy products, students learn about these along with cow milk in order to get a comprehensive education on the industry. UW-Madison also participates in the Collegiate Dairy Products Evaluation Contest, an opportunity often taken by students in the course, which sends a new group every year to participate. The team made it to nationals last year, and they hope to compete at that level again this year and beyond.

The class is offered every fall as Food Science 375, and since there are no requisites, any interested student may sign up to develop their skills in the area.

Contact: Beth Button - Teaching, Learning & Technology Specialist
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OPPORTUNITY

Student Spotlight: Sophia Post

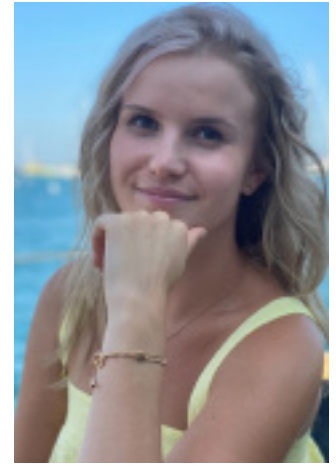
One of the most valuable aspects of our undergraduate program is the opportunity to gain paid work experience through summer internships. There is the obvious benefit of professional development through application of knowledge.

In addition, students share unexpected experiences related to current economic, political and social events.

Sophia Post successfully completed a summer internship in Chicago last summer and shares some of the unique aspects of learning along the way.



Student Spotlight: Sophia Post *(continued)*



For what company did you intern and what was the nature of your work?

I worked for Kraft-Heinz in Chicago last summer as a Regulatory, Labeling and Compliance Intern. The internship was a 10-week program in which every intern (R&D, Operations, Marketing, Finance, Supply Chain, and Human Resources) was matched with a project. The projects were created by managers across the country and focused on specific and imminent issues. My project fell in the food safety and regulation space, which was daring to me at the beginning, coming from a more R&D background, but by the end of the internship I was thankful for the new perspective.

How did change in federal food policy influence your work at Kraft-Heinz?

In April of 2021, the FASTER Act was signed into law and sesame was added to the list of big allergens, now called the “Big 9”. Food companies had until January 1st of 2023 to comply with the change, and thus my project was born. I became an expert on the FASTER Act and food allergen labeling within Kraft-Heinz. I worked within food regulation, and cross functionally with the legal team, procurement, and R&D to ensure the allergen labeling of all Kraft-Heinz products was compliant with the FASTER Act. It was especially challenging in such a large company to ensure sesame was properly recorded throughout the product lifecycle from raw material to finished good. It was also essential to communicate with every plant to ensure sesame was recognized as a BIG allergen in which there are specific protocols to prevent cross contamination such as sanitization and cleaning.

What did you learn or what surprised you about this change in federal policy and its impact on your work?

I learned that although adding one allergy to the recognized list of big allergens does not seem like a large adjustment, to food companies even the smallest alteration takes an extremely large amount of work to implement down the production line. I also learned how important accurate and organized records are especially for food safety and regulation. These documents can easily get lost within a company as employees move to different positions or out of the company entirely. Finally, I learned how important it is for food companies to be proactive and agile when it comes to food regulation. If a new big allergen can be added roughly 20 years later, it's possible and probable that eventually the cycle will repeat, and another allergen will be added as well. It is vital that food companies learn from the past and become more efficient with legal alterations. The second part of my project focused on the rise of pea protein in food products and how pea protein has the potential to be the next big allergen. With this knowledge I suggested many ways I felt the company could be more efficient with recording allergens and could better prepare themselves for the addition of pea protein as another big allergen.

Is there anything else you care to share about your internship experience?

I was very thankful for the experience I gained in food safety and regulation. I would suggest to anyone thinking of working in food production such as R&D, marketing, procurement, finance, supply chain, etc to learn about or spend some time in food safety and regulation. It is not glamorous and often overlooked, but it truly is the backbone of food production.

CELEBRATIONS

Welcome! **Emily Merlin**

The Department of Food Science would like to welcome our new Graduate Program Coordinator, **Emily Merlin!** Emily is from Madison and received her degree in Applied Science- Marketing from Madison College. She has a Wisconsin Seal of Biliteracy in English and Spanish, and enjoys reading, drawing, playing video games, and going on walks!

Some other fun facts about Emily are that she writes in cursive and has two cats which both have three legs!
Welcome, Emily!



CELEBRATIONS

Welcome! **Sydney Steidl**

The Department of Food Science also welcomes our new External Communications Intern, **Sydney Steidl!** Sydney joined the department during the Summer of 2022. Sydney is from Madison and is a second semester freshman majoring in Journalism and Political Science.

Some extracurricular activities Sydney is involved with: The Daily Cardinal, Camp Kesem and the Leukemia & Lymphoma Society. Sydney's hobbies include reading and playing tennis. Welcome, Sydney!



Welcome!

Chancellor Jennifer Mnookin

April 14, 2023 | By Doug Erickson

The University of Wisconsin–Madison formally installed Chancellor Jennifer L. Mnookin as its 30th leader on April 14, 2023, during a jubilant and majestic investiture ceremony steeped in tradition yet focused squarely on building a strong future for the university.

“This is a new chapter in the UW–Madison story,” said UW System President Jay Rothman, who called Mnookin “the right leader at the right time” while welcoming more than 400 people to the Hamel Music Center and others watching on livestream.

The ceremony capped a week of special investiture events that celebrated both Mnookin’s ascendency to the chancellorship and the university’s history of curiosity-driven yet revolutionary research, esteemed public service and teaching excellence.



PHOTO: BRYCE RICHTER

Mnookie Dough: The tasty icing on the investiture celebration

April 14, 2023 | By Elise Mahon

On Friday afternoon, students, faculty, alumni and Badgers of all kinds lined up on Library Mall in anticipation of the reveal — and first taste — of Babcock Hall Dairy Plant’s newest ice cream flavor: **Mnookie Dough**.

The flavor was created to celebrate the investiture of Chancellor Jennifer Mnookin and welcome her as the university’s 30th leader. **Scott Rankin, professor and chair of Food Sciences in the College of Agricultural and Life Sciences**, introduced the new ice cream at the Campus Community Picnic that followed the morning’s investiture ceremony. Chancellor Mnookin holds a cup of ice cream in one hand and a spoon in the other.

Chancellor Mnookin chose Mnookie Dough as her ice cream flavor. It has a vanilla ice cream base, bites of chocolate chip cookie dough and swirls of fudge and caramel. Photo: Althea Dotzour

“I’m here today to announce a newer tradition related to Babcock ice cream – a flavor named in honor of the Chancellor,” Rankin said. “It is my great pleasure to unveil our newest flavor – Mnookie Dough. It is vanilla ice cream with a fudge and caramel swirl with chocolate cookie pieces included.”



PHOTO: ALTHEA DOTZOUR