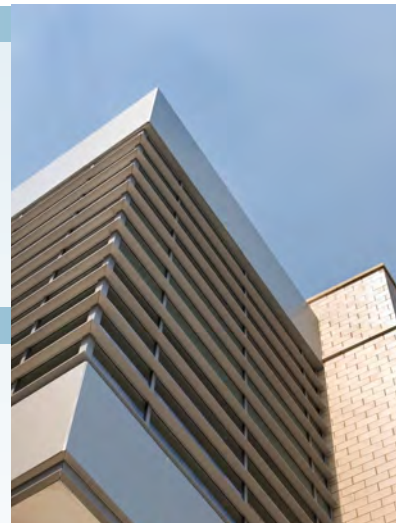




# Food Science News

Department of Food Science



## Department Head Update

Beginning with the Ice Cream Short Course in January, the spring semester is always a blur. Time moves very quickly from Spring Break to finals week and then onto commencement. It is hard to believe that Spring 2025 graduation was already 5 days ago! As reported in this issue, 28 students graduated with a BS in Food Science. In addition, 2 MS and 2 PhDs graduated this spring with several more getting ready to graduate this summer. We wish them the best of luck as they embark on their career journeys.

Lest you think things slow down over the summer... On the Monday after graduation, a group of 18 students from Food Science and Plant Science who are taking "Wine Science and Business in Italy" left to spend two weeks in Tuscany learning about wine with Dr. Ryan Elias from our Department and Dr. Michela Cetenari and Dr. Kathy Kelly from the Plant Science Department. In June, 19 students will come for an 8-week summer Research and Extension Experience for Undergraduate (REEU) program. There will be two distinct REEU programs, the first led by Dr. Ed Dudley supported by Dr. Jasna Kovac, Dr. Darrell Cockburn, and Dr. Josephine Wee with 10 students, and the second led by Dr. Helene Hopfer supported by Dr. Kathleen Keller (HHD), Dr. Travis Masterson (NS), Dr. John Hayes, Dr. Misha Kwasniewski, Dr. Josh Lambert, Dr. Yi Zhang, and Dr. Kevin Curry (AESE) with 9 students. The USDA REEU program led by Dr. Dudley is in its 7<sup>th</sup> year, and this is Dr. Hopfer's first year leading her REEU program. Both programs culminate with final presentations in August. In July, Dr. Hopfer will be taking a group of students to Graz Austria for the International Food Science Summer school, and we also have a group of 9 undergraduate students headed to spend part of their summer in Greece taking classes at Perotis College. These are just a few of our summer activities!

This June will be a time of transition. At the end of the month, Distinguished Professor, Dr. Greg Ziegler, will retire after more than 37 years of service. Greg's ability to question, to integrate research concepts and to connect people will be greatly missed. In addition, Dr. Dan Azzara, Warehime Professor of Food and Agri Business, will also be retiring in June. Dan has been instrumental in raising the profile of Entrepreneurship and Innovation in the College, as well as in developing our product development teams and course. We wish them both well in the next chapter of their lives.

I hope you have an enjoyable summer, and I look forward to hearing from you or seeing you at the Annual Tailgate on November 8th.

All the best,

Bob Roberts, Professor and Head

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## International food science summer school comes to Penn State

A two-week food science summer school was hosted by Penn State's College of Agricultural Sciences this past July, giving undergraduate and graduate students the opportunity to learn from experts both internal and external to the University.

Participants from Penn State; the University of Pittsburgh; California State University, Fresno; University of Arkansas; and Graz University of Technology in Austria attended the course. Niklas Pontesegger, a university assistant at Graz, said he was thrilled by the course's hands-on curriculum.

"The summer school was not only the perfect opportunity to learn from experts in food regulation, production and analysis, but we also got a behind-the-scenes look at a variety of activities and workshops," Pontesegger said. "We even had exciting experiences producing chocolate and ice cream."

Food science brings together people from many different disciplines who are interested in the overarching topic of food and beverages, according to [Helene Hopfer](#), associate professor of food science at Penn State and leader of this year's course. A chemist by training, she uses chemical and instrumental analysis to determine what influences a person's perception and acceptance of different foods.

But food science is not just chemistry, she stressed. It's a multidisciplinary field combining specialities such as engineering, nutrition and microbiology.

"The beauty of this program is that it's for anybody who's interested in food from a science and analysis point of view," Hopfer said. "About a third of the students were officially enrolled in a chemistry program. But there were also people that work on packaging materials and inorganic elemental analysis."

Aidan Lusk, a third-year student in food science at Penn State, agreed that the course was welcoming of everyone from any background.

"The summer program solidified my sense of belonging within the food science community," Lusk said. "I met wonderful people while gaining knowledge regarding both the scientific and the cultural and interpersonal aspects of food science."

This year's course began in Washington, D.C., where attendees met with Penn State alumni working at the U.S. Food and Drug Administration. Hopfer said the intention of this part of the course was to expose students to the regulatory framework around food in the U.S. and to contrast it with regulations in the EU. The group then traveled to State College after a pit stop at the Hershey Company to tour its research and development facilities.

Once participants arrived in State College, they attended lectures, worked in groups to research food misinformation, and attended a few "practical sessions" to see how chocolate and ice cream are made.

"We made chocolate and ice cream because Penn State is quite known for its research on ice cream and chocolate," Hopfer said. "Understanding how a raw ingredient is turned into a finished food product exposes students to lots of different processing steps. And we were tasting throughout the process, to see how the product changes, and why each of these steps is necessary to get the final end product. And you know, who doesn't like chocolate?"

The group work was another way to connect students — whether undergraduate or graduate, European or American, chemists or biologists. Hopfer remarked that groups were chosen deliberately to mix students of different degree levels and majors.

"Groups had to research a common food fad related to a particular food ingredient," she said. "We put the students together so that they had complementary skill levels. For example, the food scientist could explain something to the chemist, and the chemist could explain something else to the food scientist. And it highlighted cultural differences too, especially with regulations that are quite different in the U.S. versus Europe."

Connecting over cultural differences was an integral part of the course, Hopfer added.

"These summer schools are a really cool opportunity to experience a cross-cultural exchange," she said. "And it's not just cultural learning, but it's also peer learning. I told them at the end of this course that this network exists for the rest of your life. And so, if you ever go anywhere, look up these people. Maybe they still want to see you again!"

At the end of the course, the students presented a seminar during which the groups discussed the food fads they researched, and the graduate students presented on the research they conduct at their respective home institutions.

"Because we had such a breadth of graduate students presenting their research, I wanted to show these undergrads what graduate students work and spend so much time on," Hopfer said. "Grad school might have seemed very daunting to them, but now they've met and spent two weeks with these people and know that they can do it too." [Full Article... \(Penn State News\)](#)



*Food Science summer school attendees at a bean-to-bar chocolate making workshop.*  
**Credit: Penn State. [Creative Commons](#)**

## How Food Science Club helps shape the food scientists of tomorrow

This year marks the 51st anniversary of the Penn State Food Science Club, an organization that, in affiliation with the Institute of Food Technologists Student Association (IFTSA), promotes community within the university's Department of Food Science while also providing networking and career opportunities to students. The approximately 50 members of the Food Science Club are the food scientists of tomorrow — and their research and work within the department could just influence your current or future favorite foods.

So what exactly is “food science”? It's much more than product research and development.

As is the case with many programs at Penn State, IFT Student Association Penn State Chapter and Food Science Club President Kacie Czyszczon says that the food science major is an interdisciplinary one, combining various scientific fields.

[Josephine Wee](#), assistant professor of food science and advisor for the Penn State Food Science Club, further describes the calling to be in food science as a combination of a love for food and the “nerdiness” of science. Food science, she said, is based on four pillars: food engineering and processing, food safety and microbiology, food chemistry and sensory and consumer science. From growing ingredients to exploring how humans interact with food once it lands in consumers' laps, food science touches it all.



*The Penn State Food Science Club promotes community within the university's Department of Food Science while also providing networking and career opportunities to students.*

One of the Department of Food Science's more obvious impacts — at least in the lives of the average consumer — can be seen at your local Fine Wine & Good Spirits store, or at your nearest Happy Valley brewery or winery. The university receives funding from the Pennsylvania Department of Agriculture to promote the marketing and research of Pennsylvania brewed beverages like wine and beer. “One of the ways food science can help [in this instance],” said Wee, “is [looking at], how can we increase, for example, the quality and safety of these beverages, from the taste to nutritional benefits?”

“We're strong in cocoa research, too,” she added. “The Hershey Company has a really close relationship with Penn State. They hire a lot of our students. ... Cocoa is highly priced now, due to shortages and sourcing from regions of the globe with climate, social or economic issues. As food scientists, we're looking at alternative solutions to a global problem. If we want to continue producing chocolate that people love, we must be creative with our ingredient sourcing, formulation and processing.”

Czyszczon, a fourth-year undergraduate pursuing a degree in food science, is working on a research project examining sugar reduction strategies in iced coffee, to ultimately reduce the sugar content in mainstream beverages. It's a topic she came across after completing an internship at Wawa.

Gaining industry experience like this ahead of graduation is an opportunity made easier by the Food Science Club's strong ties with the department's alumni base. Regular meetings often bring in alumni from various food companies to speak about their careers and companies, with Wee estimating that, in a given year, club members are able to network with 20-30 different alumni from a range of backgrounds. About 60-70% of these food science students go on to work in product development, she said, with lesser numbers finding work in quality assurance. Impressively, the program boasts a 100% placement rate, with all graduates securing relevant roles within the food industry within six months of graduation. Repeat employers that frequently recruit from Penn State include household brand names such as Campbell's, Smucker's and Hershey.

However, for both Czyszczon and Wee, the thing they love most about working and studying within the university's food science program isn't the research that impacts moments in consumers' everyday lives, or the vital industry connections — it's the community built by initiatives such as the Food Science Club. It's what first drew Czyszczon to Penn State as an undergraduate and it's what convinced Wee to take her position at the university in 2018.

“From my very first day interviewing at Penn State, I felt an immediate sense of belonging,” Wee said. “There's incredible energy within this Happy Valley community. We're exceptionally skilled in many areas of teaching, research and extension, but what truly distinguishes us is that we are community and people-driven first. We value our students, staff and faculty. We all genuinely care about one another, creating a rare and wonderful environment.”

*Article by Holly Riddle, a freelance food, travel and lifestyle writer.*

## Visit to Lactalis American Group

On Friday, April 4<sup>th</sup>, a group of FDSC undergraduate, graduate students, and post docs led by Dr. Federico Harte and Brian Adair, visited Lactalis American Group at their Buffalo, NY facilities.

While there, students toured Lactalis's Cheese Plant and R&D Pilot Plant and the new Sensory Evaluation Center while having the opportunity to meet and receive presentations from top level executives on topics such as Marketing, Supply Chain Management, Milk Procurement, Quality Assurance, Packaging, and Research and Development.

Through our continued partnership with Lactalis American Group, our students have been able to receive summer internships, employment opportunities, and a sponsored master's degree in France. The Lactalis Scholarship Program that provides one sophomore per year an opportunity to be awarded \$5k for their Sophomore, Junior, and Senior Year.



*Food Science students tour Lactalis American Group at Buffalo New York facility*

## Penn State Ag student Auja Bywater wins global research award



*Auja Bywater*

[Auja Bywater](#), a doctoral student in Penn State's College of Agricultural Sciences, has been awarded second prize in the Global Challenges University Alliance (GCUA) 2030 research competition for her work titled "Improving Food Safety in Controlled Environment Agriculture Systems."

GCUA 2030 is an [international network](#) of 15 universities dedicated to equipping the next generation of researchers, educators and academic leaders with the knowledge and tools needed to address the United Nations' Sustainable Development Goals. Coordinated by the Swedish University of Agricultural Sciences, the alliance fosters interdisciplinary collaboration and global academic expertise to tackle pressing global challenges.

Bywater's research centers on food safety within controlled environment agriculture systems, particularly in soilless farming methods such as hydroponics. She said her work examines how pathogens interact with these systems, how they persist and how they can be controlled, contributing significantly to sustainable food production. She has conducted this research for nearly a year and a half in a biosafety level 2 laboratory, which enables the safe handling of pathogens. Reflecting on her second-place finish, Bywater emphasized the importance of making food safety research more accessible to the public.

"The biggest opportunity of this honor is to share my research," she said. "Many people may not fully understand the food safety risks associated with hydroponic systems. Raising awareness about food safety is really exciting, and I hope to inspire future students and professionals to explore this field."

As part of the award, she will present her research at an upcoming GCUA 2030 webinar, during which she will share her findings with an international audience and promote interdisciplinary collaboration.

"We are so proud of Auja's award in a very competitive field of students from the GCUA network," said Deanna Behring, assistant dean and director for Ag Sciences Global. "Her work is increasingly important as we look for novel ways to feed the world safely while facing harsher environments. Auja has also shown great leadership on campus as the president of the INTAD Graduate Student Association, helping others find opportunities to engage." ([Penn State News](#))

## “We Are” Shoutouts

The “We Are!” series is a feature in Penn State Today that provides students, faculty and staff with a fun and easy way to give kudos to fellow Penn Staters for going the extra mile in the work they do for the University.



*Karen Mullen*

### Karen Mullen, Administrative Assistant and Graduate Coordinator

“We Are” shoutout to **Karen Mullen**, administrative assistant and graduate student coordinator in the College of Agricultural Sciences, whose nominator wrote: “Karen is the salt of the earth and goes way above and beyond to help co-workers, students and faculty. She's the focal point of the department activity committee and has demonstrated her ‘can-do’ attitude on countless occasions. She is also the ‘decorator-in- chief’ who keeps the workplace festive and cheerful.” ([Penn State News](#))



*Ashley Tice*

### Ashley Tice, Financial Associate

“We Are” shoutout to **Ashley Tice**, financial associate in the College of Agricultural Sciences, whose nominator wrote: “Ashley has been a wonderful addition to the Department of Food Science team. She is eager to learn and make process improvements as needed. She enjoys making everyone around her feel welcome and included. She will go above and beyond to help anyone in our department.” ([Penn State News](#))



*Tom Dimick*

### Tom Dimick, Outreach Coordinator and Computer Support

“We Are” shoutout to **Tom Dimick**, outreach coordinator and computer support web site contact for the Department of Food Science in the College of Agricultural Sciences, whose nominator wrote: “Tom has been a valuable member of the Department of Food Science for over 35 years. He is always willing to help new employees understand how the department works and how far it has come. He strives for excellence in everything he does and sets an example for everyone in the department.” ([Penn State News](#))

## Gamma Sigma Delta Awards

Gamma Sigma Delta is an organization having as its objectives the advancement of Agriculture in all its phases, the maintenance and improvement of the relations of agriculture with other industries, and the engagement of recognition of the responsibility of those engaged in agriculture to their fellow citizens. The society seeks to encourage high standards of scholarship and worthy attainment in all branches of agricultural science and education and a high degree of excellence in the practice of agriculture pursuits.



### Faculty Awards:

Excellence in Teaching Award - [Dr. Helene Hopfer](#)

### Research Expo:

#### Undergraduate

**Anna Gerstner** (Advisor: Helene Hopfer) - 1<sup>st</sup> place Undergrad Human Behavioral & Social Sciences: Chewy, hard, or springy? Relating Instrumental Texture Analysis to Texture Perception and Acceptance of Different Chicken Nuggets.

**Quinn Burnett** (Advisor: Josephine Wee) - 1<sup>st</sup> place Undergrad Microbiology & Microbiome Sciences: Identification of sourdough microbiomes that degrade FODMAPs in final breads.

#### Graduate

**Ishita Ghosh** (Advisor: Yi Zhang) - 3<sup>rd</sup> place Grad Food Systems: Polypeptides produced from lentils as novel fat replacers and use in improving non-fat yogurt texture.

**Rory Campagna** (Advisor: Yi Zhang & Ryan Elias) - 2<sup>nd</sup> place Grad Food Systems: Valorizing waste stream proteins via enzymatic hydrolysis to produce clean-label antioxidants for use in food emulsion systems.

**Yashmita Grover** (Advisor: John Hayes & John Coupland) - 1<sup>st</sup> place Grad Food Systems: Investigating physicochemical interactions of sensory stimuli with proteins.

**Morgan Failla** (Advisors: Helene Hopfer & Josephine Wee) - 1<sup>st</sup> place Grad Human Behavioral & Social Sciences: More than a feeling: Development of an EmoSemio questionnaire to evaluate emotions evoked by cell-cultivated meat label terms in Singapore and the USA.

**Riley Brooke** (Advisor: Josephine Wee) - 3<sup>rd</sup> place Grad Method & Process Development: Development of a High-performance Liquid Chromatography Method to Examine Ergothioneine Content in Spring Oat Varieties.

**Sujata Chatterjee** (Advisor: Misha Kwasniewski) - 1<sup>st</sup> place Grad Method & Process Development: How to overcome co-elution challenges in cannabinoid chromatography using with tandem mass spectrometry?

**Auja Bywater** (Advisor: Jasna Kovac) - 3<sup>rd</sup> place Grad Microbiology & Microbiome Sciences: Microbiome Analysis of Nutrient Solution and Bok Choy in Five Different Hydroponic Systems Across Seasons.

**Tyler Chandross-Cohen** (Advisor: Jasna Kovac) - 1<sup>st</sup> place Grad Microbiology & Microbiome Sciences: Effects of Protein Stress Factors on the Cytotoxicity of Supernatants from Psychrotolerant *Bacillus cereus* Isolates.



*Megha Vegas and Elisabeth Thomas*

## Elisabeth Thomas recipient of American Dairy Products Institute Phil Tong Educational Scholarship

Congratulations to undergraduate **Elisabeth Thomas** as the recipient of the 4th annual ADPI Phil Tong Educational Scholarship from the American Dairy Products Institute (ADPI). This annual scholarship endowed by ADPI is in recognition of Dr. Tong's contributions to the training, education and development of people in the dairy industry and, most recently, within the scope of the dairy science and technology realm and the domain of ADPI member companies.. Elisabeth works in Dr. Federico Harte's lab under the supervision of **Megha Vyas** (PhD student).

## More Awards & Honors

### Promotions

**Dr. Josephine Wee** - Tenured and promoted to Associate Professor

### College of Agricultural Sciences High-Impact Publication Award - Nutritional and Food Security

**Laura Rolon, Xiaoqing Tan, Taejung Chung, Narjol Gonzalez-Escalona, Yi Chen, Dumitru Macarisin, Luke F. LaBorde, Jasna Kovac**  
For their publication - *The composition of environmental microbiota in three tree fruit packing facilities changed over seasons and contained taxa indicative of L. monocytogenes contamination. Microbiome, 11(1), Article 128*

### National Association of Flavors & Food-Ingredient Systems (NAFFS) Scholarship awards for 2024

**Isato Shabazz**  
**Sydney McMurray**

**Dr. Daryl B. & Mrs. Dawn L. Lund Student International Scholarship of Phi Tau Sigma Award** - The Dr. Daryl B. & Mrs. Dawn L. Lund Student International Scholarship of Phi Tau Sigma, The Honor Society of Food Science and Technology, is given to a student member of Phi Tau Sigma to supplement international travel for educational purposes.

**Tyler Chandross-Cohen**

**The President Walker Award** - This award is presented annually to undergraduate degree candidates and degree-seeking provisional students who have earned a 4.0 (A) cumulative grade-point average based on at least 12 graded Penn State credits completed during their first semester of admission.

**Quinn Burnett**  
**Katelyn Jones**  
**Madeline Schoenbaum**  
**Matthew Shue**

### Food Industry Group Student Leadership Awards

**Sydney McMurray** - Judith A. Williams Food Industry Group Undergraduate Student Leadership Award

**Auja Bywater** - Food Industry Group Graduate Leadership Award

## Spring Class of 2025

**Lily Bartholic**  
**Abigail Boxler**  
**Kacie Czyszczon**  
**Laura De Jesus Vittini**  
**Thomas John Deakyne**  
**Alexandra Diamond**  
**Ethan Dick**  
**Olive Djonou Komou**  
**Zahra Gani**  
**Anna Gerstner**  
**Katherine Haagen**  
**Ethan Harris**  
**Gabriella Hoffmann**  
**Fletcher Kanas**



*Congratulations Spring Class 2025!*

**Rebecca Krauss**  
**June LaRegina**  
**Marielle Manes**  
**Mark Mariani Jr.**  
**Sydney McMurray**  
**Eliza Polyak**  
**Benelli Risser**  
**Pia Rosales**  
**Benjamin Stanell**  
**Paula Szymanowicz**  
**Sabrina Ventoso**  
**Sarah Wick**  
**Lauren Wolf**  
**Allison Yap**

## MS and Ph.D. Graduates, Spring 2025



*Astrid D'Andrea*, MS

Thesis title: *Chemical determinants of sourness and related attributes* (Advisors – John Hayes and Helene Hopfer)



*Amelia Navarre*, MS

Thesis title: *Prevalence and control viable Campylobacter on chicken breast* (Advisor – Jasna Kovac)



*Marjorie Jauregui*, Ph.D.

Thesis title: *The role of mushrooms and microgreens as sources of essential nutrients and non-nutritive phytochemicals in a post-nuclear catastrophe scenario.* (Advisor – Josh Lambert)



*Daphne Weikert*, Ph. D.

Thesis title: *The anti-inflammatory effects of cocoa fractions in pre-clinical models of inflammation.* (Advisor – Josh Lambert)

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**Giving to the Food  
Science Department go to:**  
[GiveTo.psu.edu/FoodScience](http://GiveTo.psu.edu/FoodScience)

## Upcoming Events

June	16-25	<a href="#">Better Process Control School (Virtual)</a> , University Park, PA
	16-20	<a href="#">Penn State Chocolate Short Course</a> , University Park, PA
	24-27	<a href="#">Fundamentals of Food Science Short Course</a> , University Park, PA
Sept.	16-18	<a href="#">Pasteurization Short Course</a> , University Park, PA
	23-25	<a href="#">Cultured Products Short Course</a> , University Park, PA
Oct.	7-9	<a href="#">Food Sanitation for Food Manufacturers</a> , University Park, PA
Nov.	8	Food Science Tailgate, University Park, PA

For a complete list of events, visit <https://foodscience.psu.edu/events>



 **PennState**  
College of Agricultural Sciences

Department of Food Science

## Food Science Tailgate

*Save the Date : November 8, 2025*  
*PSU vs Indiana*

## Update Your Alumni Information

Updating your information with the Alumni Association is now easier than ever. You can change your home address, work address, e-mail address, and other information online at the Penn State Alumni website. Or you may also contact the Alumni Records staff directly.

**Web:** [Record Update Form](#)

**Phone:** 800-548-LION (5466), option 2

**Mail:** Penn State Alumni Association  
Alumni Data Access & Services  
Department B  
Hintz Family Alumni Center  
University Park, PA 16802



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