Oregon State University

NOVEMBER 2022

EAT, DRINK, THRIVE

Newsletter of the Department of Food Science and Technology

Inspiring, Collaborating, Innovating to Advance Safe and Sustainable Food for a Healthier World

Believe It! A new start for Wiegand

A message from Dr. Lisbeth Goddik, department chair:

Dear FST alumni and friends,

On Oct 14, OSU launched our new university-wide campaign – "Believe It." – which aims to raise $1.7billion to strengthen programming, facilities, and student support. **I am thrilled to announce that the renovation of Wiegand Hall is one of two College of Agricultural Sciences priority capital projects within the Campaign.**

We earned our place in the campaign because of program excellence. Readers of this newsletter know that FST is experiencing exceptional growth as our research program has tripled in size, our program ranking has firmly established us as a top tier program, and we've just rolled out a new and innovative major in Food Science & Sustainable Technologies.

The greatest challenge facing FST is the inferior and crumbling infrastructure of Wiegand Hall, our main research and teaching facility in Corvallis. Completed in 1952, Wiegand is outdated, inefficient and

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Oregon State University

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lacks the capacity to support the department's world-class teaching, research and outreach programs. We have more faculty, more graduate students, more postdocs and more equipment. A two-story brick building, Wiegand has no earthquake mitigation and-no space for growth. The auditorium has steps so steep they are considered a safety hazard.

To recruit top talent for our Sustainable Food Technologies Initiative and other programs, we need a facility on the forefront of sustainability that communicates excellence, innovation and distinction. We want to keep our growing program within Wiegand to maintain our outstanding collaborative environment. We need large, state-of-the-art open laboratories to create an inspiring environment where students can learn from each other and efficiently share equipment, rather than our current situation where graduate students are spread out over 31 small, individual laboratories.

> ***Stacy Simonich, dean, College of Agricultural Sciences*: "We have 21st century scientists pioneering research and teaching future leaders in a facility that was built more than 70 years ago — when Sputnik orbited the planet and Super Glue was invented. Renovating Wiegand Hall isn't a cosmetic exercise, it is vital to the future of food science and the industries that rely on it in Oregon and beyond."**

We need a renovated building that features sustainable utilities and design as we teach sustainable food technologies to today's students and tomorrow's leaders. In summary, we need improved infrastructure to support excellence in research, teaching and outreach, and advance safe and sustainable food for a healthier world.

In keeping with our goals of sustainability, we propose renovating Wiegand Hall, rather than tearing it down and rebuilding. Due to its location within the Corvallis Historic District, the exterior walls will remain brick

Dr. Lisbeth Goddik, Department Head
Paul & Sandy Arbuthnot Professor
Jacobs-Root Professor
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while the entire interior will be updated using principles of sustainable design, incorporating renewable energy, water and energy reduction techniques, skylights and people-friendly design. The renovated building will be suitable for world class research and will deliver an inspiring and welcoming learning environment.

The auditorium will be converted to two levels of research and teaching laboratories. The renovated building will contain three large, flexible-use research laboratories (food chemistry, microbiology, innovation), two shared pilot plants for brewing, vegetable and fruit processing, and sustainable food manufacturing, teaching classrooms and laboratories, staff, faculty, and graduate student offices, with undergraduate teamwork suites and lounge.

Costs are estimated at $55 million, at least half of which must be raised through philanthropy. Prior to starting a general fundraising campaign, we must secure a lead donation of $20 million. If you have suggestions or advice on how to secure the lead gift, please reach out to me at *lisbeth.goddik@oregonstate.edu*.

Back by popular demand

OSU's famous taste expert draws rave reviews with her take on the classic bird

As director of product and process development at OSU's Food Innovation Center in Portland, Sarah Masoni draws national attention for using her uniquely-qualified taste buds as a "food designer." She offered "CBS Sunday Morning" her own take on a holiday staple in November of 2018, and people still write to her every fall to tell her how much they like it.

Sarah Masoni's Citrusy Bacon Wrapped Smoked Turkey

Ingredients

1 12-14 lb. turkey, thawed
1 bunch of fresh sage, chopped
1 bunch of fresh rosemary, chopped
1 bunch of fresh thyme, chopped
6-8 cloves of garlic, minced
½ lb. of butter, at room temperature
4-6 stalks of celery
3 carrots
2 lbs. of extra-thick-cut bacon

Brine ingredients:

1 lemon, 2 oranges 1 apple, cut in slices
1 cup apple juice
½ cup of frozen berries of your choice (raspberry, blackberry or marionberry)
1 cup orange juice
2 cups brown sugar
1 ½ cups kosher salt 2Tb Pepper corns
3-4 bay leaf
as many peeled garlic cloves as you wish.

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What to drink with that Thanksgiving meal

We asked a couple of FST experts about choosing beer and wine for a turkey feast.

"Thanksgiving turkey, yams and cranberries are foods that pair well with malty and sour beers as opposed to hoppy, bitter IPAs," said Tom Shellhammer., Nor'Wester Professor of Fermentation Science. "I think there are two different approaches to this pairing. One is to go with a malt-forward beer that has low hop bitterness such as an Amber Ale, Porter or a darker lager. Dark lagers are somewhat niche but there are some fine ones in Oregon if you look for dark lager, Märzen, or Oktoberfest. The other approach is to pair with a sour beer since these the sourness pairs well with meat and root vegetables.

Oregon has some outstanding sour beer producers. These beers take from 8-24 months to produce, so they vary based on availability. I suggest lambic-inspired and/or American wild ales or Flemish red/brown ales, which are crisp, dry-medium dry, and sour as opposed to barrel-age stouts and porters, which can be big, boozy, and sweet."

As for wine, Elizabeth Tomasino, associate professor of enology, had a couple of ideas: "I suggest a dry or off dry Riesling. Many places are also doing a white Pinot noir that would go very well with turkey."

Sarah Masoni's Citrusy Bacon Wrapped Smoked Turkey

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Instructions:

Make the brine concentrate by placing all of above brine ingredients (except the fruit) in a pot and heat to dissolve the sugar and salt. Cool the concentrate leaving all of the spices in the brine, and cool. Blend into 2 gallons ice and water, and put your turkey into the brine. Then to complete add sliced oranges, lemon, apples, and berries, or whatever fresh fruit you like.

Put the turkey in the chilled brine for a minimum of 8 hours and as long as 36 hours.

Before the turkey is removed from the brine create a compound butter. Mix 3 tablespoons of sage, 3 tablespoons of rosemary, 3 tablespoons of thyme, and all of the garlic with the butter.

Remove turkey from brine and rinse. Place turkey in baking pan. Insert all of the compound butter under the skin of the breast meat as far back as you can place it without tearing the skin.

Insert carrots, celery, rosemary, and fruit from the brine into cavity of turkey and place bird into the oven. Cook at 500°F for 30 minutes.

While the turkey is cooking in the oven, prepare a lattice of bacon. Place a piece of plastic film on your counter to build the lattice on. Place 7 strips of bacon next to each other. Then take an additional strip and weave it through the lattice. Repeat until lattice is complete.

Remove turkey from oven. Using the plastic film, place bacon lattice on top of turkey with one corner at the front of the turkey breast. Wrap turkey legs in bacon.

Insert thermometer into thickest part of the turkey through the leg and into the breast. Place turkey into outdoor smoker for one hour at 170° to cold smoke it. Then turn heat up to 375° and cook for an additional 2 ½ to 3 hours. The turkey is done when the meat thermometer indicates an internal temperature of 165 degrees.

Remove turkey from smoker and let it rest for 20 minutes before slicing.

Field trials tackle onion crop risk

Food Safety Squad digs into Salmonella causes and protections

In 2020 and 2021, two large Salmonella outbreaks were epidemiologically linked to the consumption of dry bulb onions. Investigations by the FDA failed to confirm a route of contamination, but contaminated irrigation water was a main suspect.

It was crucial to quickly gain more clarity on the matter; onions are among the Oregon's top 10 crops, with an annual production of 1.3 billion pounds and $115 million in sales. Now, a Food Safety Squad assembled by FST's Joy Waite-Cusic, associate professor of food safety systems, appears to have cracked the case.

Joy Waite-Cusic pauses work in an onion field just long enough to grab a selfie with part of the Food Safety Squad.

With help from a $388,000 grant from the Center for Produce Safety and the California Department of Food and Agriculture, Waite-Cusic pulled together a team of top food safety microbiologists (Linda Harris, UC-Davis and Faith Critzer, University of Georgia) and onion specialists (Stuart Reitz, OSU-Malheur County Experiment Station and Tim Waters, Washington State University-Franklin County Extension) for a set of investigative field trials.

Their work demonstrated that late season overhead irrigation presented the highest risk for crop contamination of the water applications tested, but field curing effectively mitigated this risk and E. coli was not detected in field-cured onions (n = 80) tested at harvest (4 weeks of field curing). Contaminated crop protection sprays presented low risk of initial contamination and again, field curing effectively mitigated the contamination.

New trials will examine risks of overhead irrigation throughout the growing season. Meanwhile, researchers are investigating water and microbial movement in the onion bulb. Post-harvest storage and handling is being investigated as part of a new grant of $249,000 from the Washington Specialty Crop Block Grant Program.

In the 2022 field work, Reitz and Waters planted and managed onion fields in Ontario, Oregon and Pasco, Washington during the growing season. In mid-August, Waite-Cusic and her Food Safety Squad headed to the fields. In Pasco, they inoculated irrigation water with generic E. coli. and in Ontario, contaminated water was used to prepare crop protection sprays, specifically a fungicide and clay used for sun protection. E. coli levels were monitored mid-August throughout the field curing period. Over five weeks, the squad traveled more then 7,000 miles, took over 3,000 pictures and collected and analyzed over 2,000 onion and water samples.

"This scale of field work cannot be accomplished without the work of a great team," wrote Waite-Cusic. "The Food Safety Squad did a great job of working together to analyze a tremendous number of samples in a short period of time."

Waite-Cusic's lab manager, Sam Burroughs, coordinated supply acquisition and organization and led the coordinated analysis of onion samples. Additional Food Safety Squad members and scientists across FST helped with sample analysis, media preparation and waste disposal.

Smoked Wine and Grapes Lab on the way

Facility underwritten by $2.68 million legislative appropriation after 2020 wildfires

Were it not for Covid-19, 2020 would be remembered as the year of the wildfire and for one of the most perplexing problems ever to impact Oregon's wine industry.

As a result, a new FST lab is under construction to help the wine industry mitigate the impact of wildfire smoke.

2020 began not with lockdowns and quarantines, but with one of the worst wildfires in Australian history. Nine months later, the U.S. had its own historic experience, with wildfires and their smoke spreading all over the west. Portland had the worst air quality in the world. That year over 10 million acres burned in the U.S., twice as much as the previous year, an unfortunate national record.

The direct effects of the wildfires included 47 lives lost, nearly 14,000 buildings incinerated, and up to 3000 indirect deaths due to smoke inhalation.

The wildfires hit the Oregon wine industry hard. Grapes are particularly sensitive when exposed to wildfire smoke, creating flavors in the resulting wine that have been called "ashy," "campfire-like," or "rubbery."

The wildfires — mostly their smoke — are estimated to have cost the Oregon industry $1.5 billion, and the national wine industry $3.7 billion.

Growers and vintners needed to have their samples tested for smoke-related chemical compounds to determine the level of smoke exposure in their products. But test results in 2020 were slowed when shipments were blocked by wildfires and the lines for testing were so long that it could take more than a month to get results needed to make critical decisions. Wine industry leaders described this to state legislators and asked for an Oregon-focused testing facility for smoke-impacted wines. The funding for the Smoked Wine and Grapes Testing Lab was approved in 2021.

Elizabeth Tomasino, an associate professor of enology, and Cole Cerrato — then a postdoc student but now assistant professor, senior research, and manager of the smoke lab — as they study smoke exposure's impact on grapes at OSU's Woodhall Vineyard.

The state-of-the-art facility will focus on serving the Oregon winemaking community and will include a variety of instruments capable of testing for compounds currently associated with smoke-impacted wines, plus a new class of compounds causing ashy flavors in much lower concentrations than previously thought.

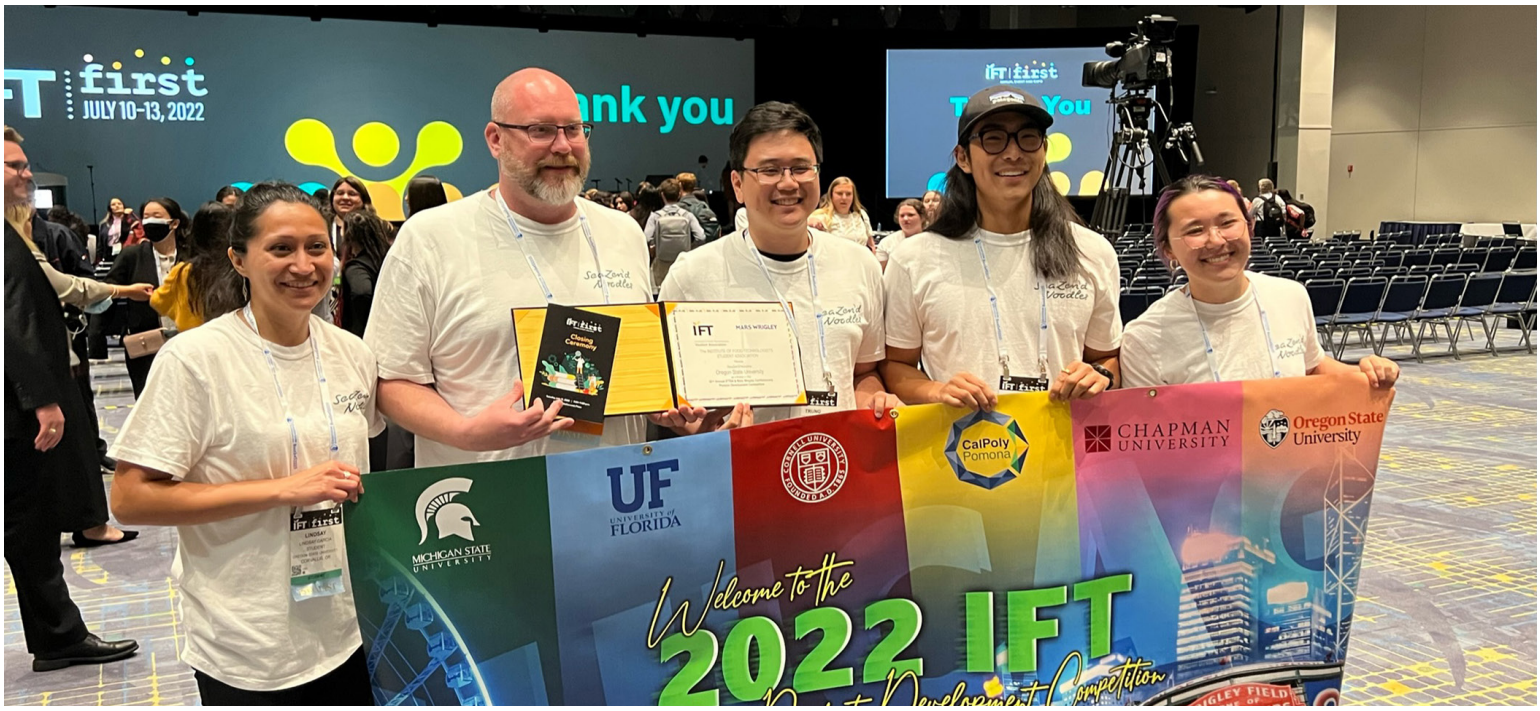
In addition to testing potentially smoke-impacted samples, the lab will research smoke-affected wines to give winemakers the tools to ameliorate the taste impact if grapes are exposed. The lab will be equipped for liquid and gas samples using mass spectrometer.

Construction on the new Smoked Wine and Grapes Chemistry Lab began in October 2022 (in a part of Wiegand Hall that won't be altered in the planned renovation) and is expected to be completed in Spring 2023.

Anyone who is interested in having their grapes analyzed for smoke compounds or would like to request other analyses can contact Cole Cerrato at ***cole.cerrato@oregonstate.edu***.

IFT team snags top honor

"Better than winning the Super Bowl!" - Lisbeth Goddik, FST chair



Winners Lindsay Garcia, Brandon Riesgaard, Trung Tran (Captain), Andrew Choi and Sage Taylor.

One of FST's greatest wins ever in competition with other programs around the nation started with a simple desire, according to team captain Trung Tran. The team's eventual entry, SeaZen'd Noodles, is a healthier alternative to instant ramen noodles. It's a low sodium, high protein, plant-based ramen that is good for people and the planet. The biggest question, and problem, was "how do we replace salt without compromising flavor?"

It took the team of culinary experts and scientists 9 months to figure this question out. Members (Trung Tran (Captain), Brandon Riesgaard, Andrew Choi, Lindsay Garcia, and Sage Taylor) decided to compete at the 32nd annual IFTSA-Mars Wrigley Product Development Competition, one of the oldest and well-known competitions that IFT (the Institute of Food Technologists) hosts. The Beavers were surprised to get past preliminary rounds and find themselves where no OSU team had ever been — the finals — against experienced, veteran teams.

"This was a big deal for Oregon State Food Science as we have never had a team make it to the final rounds of the Mars Wrigley Competition," said Tran. "We were definitely the dark horse of the competition. ... Despite all the challenges and fierce competitors, our team did not falter. Just making the final rounds alone was already a huge accomplishment for the team and we were very surprised when they announced that Oregon State University had won 1st place in the competition!"

OSU Food Science & Technology Chair Lisbeth Goddik summed it up this way:

"I do not recall OSU FST ever placing first in this prestigious international competition. This is one of the finest achievements in OSU FST's 104-year history and I am so proud of our team. This is better than winning the Super Bowl!"

FST hosts university leaders

FST hosted the OSU Board of Trustees along with OSU senior leadership in Wiegand Hall on Oct 27. Pre-dinner, attendees learned about FST programs and tasted their way through internally and externally produced food and beverages with FST connections. The Seafood Center and the Food Innovation Center were both well represented.

The evening ended with dinner in the pilot plant and everyone left with a goody bag containing FIC developed foods. Message delivered: FST is a program of excellence, in need of improved infrastructure.

Photos at right, top to bottom:

Dinner is presented in the brewery.

Robin Frojen introduces the Beaver Classic program and explains the power of experiential learning to OSU President Murthy and Kirk Schueler, Chair of the OSU Board of Trustees.

OSU Provost Ed Feser wears a nose clip as he participates in a sensory experiment.

MS student Bryan Gaspich explains his research project focused on upcycling seafood co-products.

FFST Club keeps busy with fun, learning

A report from Sage Taylor, president of the Food and Fermentation Science Club:

"The FFSC is still going strong with the events and activities for members in the FST program and majors beyond! Club brews last year included a honey blonde ale and a wild rice English mild brew. A new partnership with the Organic Growers Club, run by Professor James Cassidy, yielded garlic and green bean pickling and an awesome green tomato workshop!

"As winter term came to an end with spring came the annual Astoria smoked salmon trip! Members traveled to the OSU Seafood Lab in Astoria (photo above) and were taught how to filet salmon, brine and smoke it.

"Due to the pandemic we were not able to host an Oktoberfest but luckily the club pulled together a new event held at the end of spring term called Springfest! Festivities included hosting a pretzel and paneer cheese workshop prior to the event and grilling up sausages, cheese and pretzels to serve to FST faculty and friends. Donated beverages were supplied by 2Towns, BNF Kombucha and the Homebrewers Association."

Career Fair, Taste of Research among calendar highlights

February 21, 2023: FST Career Fair — Here is an outstanding opportunity for food and beverage companies to recruit students with an interest in careers in food. Students from FST, microbiology, viticulture, and engineering, along with FST alumni looking for new positions, are invited to the event. Companies that wish to attend should contact Deborah Gould at Deborah.gould@oregonstate.edu

June 8, 2023: Taste of Research — This informative annual event is our opportunity to showcase FST research to our industry stakeholders. Graduate students present their research through rapid three-minute presentations. Come and learn what the future of food looks like. For more information contact Lisbeth Goddik at lisbeth.goddik@oregonstate.edu

Schoenhard support provides experience and opportunities

Eight FST undergraduate students were supported by the Grant and Alice Schoenhard Practical Experience Education Fund as they completed summer internships. Also, two students received a short study tour in France.

Hugh Clarke and **Miya Stahle** interned at **Worthy Brewing** in Bend. They gained experience in both production and quality assurance of Worthy's sustainably produced beers. In her second summer at Worthy, Maya had the opportunity to regularly operate Worthy's 30-barrel brewing operation. She progressed from running the system with supervision to full responsibility for brewing batches of beer. She also was responsible for training Hugh on the system. Maya commented that two of the most valuable elements of the experience were being able to utilize theory from her brewing courses in a production environment, and the confidence she gained from the regular problem solving that is part and parcel of day-to-day operations. Another intern, **Sean Wee**, is at **Boston Beer** (producer of Samuel Adams beers), where he is a little more than halfway through his six months.

Anthony Suryamiharja interned in product development for plant-based meat analogs company **Plantible Foods**, Sand Diego, CA. Anthony worked to incorporate a novel plant based "Rubi Protein" into analogs of sausages, burgers, and chicken nuggets. His work including bench scale formulation and testing, as well as conducting sensory evaluations of texture and flavor. Anthony found it both fascinating and challenging to work for a start-up company with a rapidly evolving approach.

Hayden Metzger interned in the dairy industry with **Darigold** in Portland. The company allowed Hayden to choose an area of focus. He selected to concentrate in the microbiology lab. There he learned to both chemical (e.g., butterfat, moisture, and total solids) and rapid microbiological testing methods for quality and safety. He also became familiar with the use of LIMS for information management. In addition to the lab skills learned, Hayden felt he gained valuable insight into communication

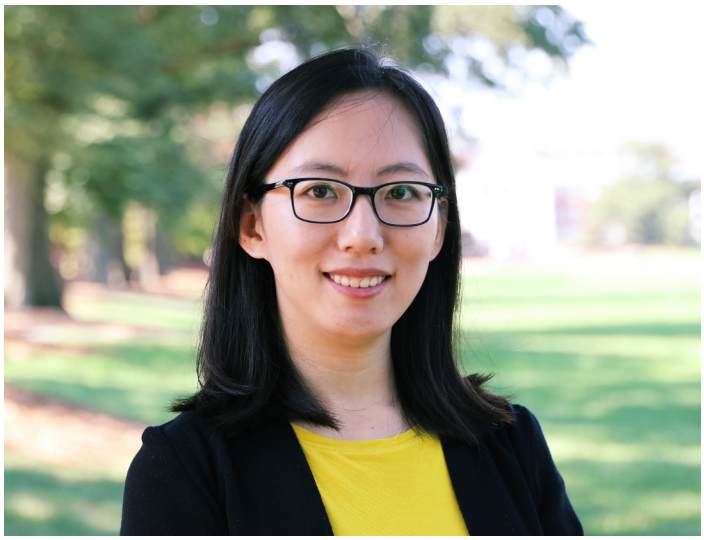
between different departments and the operation of a well-structured management team.

Shah Meer (pictured above) is working at **Bruce Pac** (meat processor in Woodburn) and **Madelyn Luther** interned with **Laird Superfoods** (Sisters). Laird produces unconventional coffees (including mushroom) and plant-based coffee "creamers." Shah commented: "The funds were critical in allowing me to relocate; without the funds, I would not have been able to acquire accommodation and, as a result, would not have had the chance to work with BrucePac."

Galen Moll participated in a two-week OSU Honors College faculty-led study tour in France. There were two focus areas: 1) French food and culture, 2) adaptation of the French food industry to climate change. Additionally, two students participated in the Anne Saxelby Legacy farmstead cheese internship at locations in the upper Midwest and New England.

Qingyang Wang joins faculty

Qingyang Wang will join the FST faculty in January as an extension assistant professor, fruit and vegetable specialist.



She received her Ph.D. in food science from the University of Maryland, College Park (2015-2019), M.S. in Food Science from Drexel University (2013-2014), and B.S. in Biology from Ocean University of China (2008-2012). Her professional experience includes working as a Postdoctoral Research Associate at North Carolina State University (2019-2022), and intern in R&D in the food industry (2012 and 2017).

Qingyang's research background includes both food processing and food safety. Her main research goal is focused on innovative technologies to improve the safety, shelf life, and nutritional value of foods while addressing the current sustainable challenges faced by the food industry.

Specifically, her interests include but not limited to nonthermal technologies (such as cold atmospheric pressure plasma, ultraviolet light, ultrasound, and electrolyzed water) and hurdle technology for improving food safety and quality, sustainable sanitation strategies for food and food processing facilities, natural antimicrobial edible coatings for minimizing food losses, and utilization of food waste for value-added products.

Her research has resulted in peer-reviewed manuscripts in renowned journals, a book chapter, and presentations at national and international conferences. In addition to research, Qingyang is interested in education on food processing technology and food safety.

She has taught courses for both graduate and undergraduate students on nonthermal technologies for food processing and microbial control. She is also certified in Food Safety Preventive Controls Alliance (FSPCA) Preventive Controls for Human Food and Produce Safety Alliance (PSA) Grower Training.

$800,000 grant will support dairy program coordinator

In September 2022, OSU Food Science and Technology was awarded $800K, part of a $19M, 4-year grant as a member of the USDA funded Pacific Coast Coalition (PCC).

OSU's $800K award will support a Dairy Program manager to coordinate efforts across the growing dairy program and serve as a point of contact with industry; development and launch of an online work force training including Dairy Foods Manufacturing and Food Quality Certificates; in-person dairy workshops; and equipment for the renovated Arbuthnot Dairy Center pilot plant and the Food Innovation Center in Portland.

The PCC was established in 2021, funded by the USDA Agricultural Marketing Services Dairy Business Innovation Initiative (AMS DBII) grant spanning California, Oregon and Washington.

The resulting collaborative network includes OSU, Washington State University, California Polytechnic University, University of California at Davis, Chapman University. It is led by Fresno State University.

FST faculty recognized with awards

MICHAEL QIAN

2022 DISTINGUISHED LIPID AND FLAVOR SCIENCE AWARD, INSTITUTE OF FOOD TECHNOLOGISTS

and

EXCELLENCE IN FLAVOR SCIENCE AWARD, FLAVOR & EXTRACT MANUFACTURERS ASSOCIATION

The IFT national award recognizes a leading scholar in flavor chemistry, developing new analytical methods to identify key flavor compounds in dairy products, small fruits, wine, beer, seafood and distilled spirits. The FEMA national award honors significant contribution to our understanding of flavor chemistry in dairy products, berry fruits, wine, beer, and other alcoholic beverages through his research. Dr. Qian has devoted much of his highly lauded research to helping the flavor industry innovate and solve challenges.

ELIZABETH TOMASINO

OSU PROMISING SCHOLAR AWARD

The Promising Scholar Award recognizes junior faculty whose outstanding scholarship has been recognized by peers, and who have demonstrated a high level of accomplishment over a relatively short period of time at OSU. The 2022 recipient is Elizabeth Tomasino, associate professor with FST.

Tomasino has established herself as a world leader in the understanding of the impact of smoke on grapes and wine, a particularly important area of research given the increased threat of wildfires to grape crops in the U.S. She has been highly successful in gaining competitive grants from a variety of funding agencies, and her research into lipids and chiral aroma compounds has resulted in discoveries challenging existing dogma and leading to a significantly better understanding of wine chemistry and sensory perceptions.

FST faculty awards, continued

YANYUN ZHAO

OSU ALUMNI ASSOCIATION DISTINGUISHED PROFESSOR AWARD

The OSU Alumni Association Distinguished Professor Award is given to a person who demonstrates outstanding professional achievement through teaching and scholarship, service to the university and the community, and professional leadership, nationally and internationally. This year, the recipient is Yanyun Zhao, a professor in FST.

Zhao leads the Sustainable Food Processing and Packaging program. She is an internationally prominent researcher and trailblazer, and her pioneering work, including 10 OSU patents, aims to reduce the food industry's dependence on single use plastic packaging along with upcycling of food waste to reduce methane release. Additionally, her work in edible coating has been recognized extensively for its contributions to US agriculture.

LISBETH GODDIK AND SARAH MASONI

PROMOTION AND INDUCTION, GUILDE INTERNATIONALE DES FROMAGERS

Oregon's Rogue Creamery hosted the Guilde Internationale des Fromagers Induction Ceremony at the American Cheese Society Annual Conference in Portland, and two FST team members. Lisbeth Goddik, a member for many years, was promoted to "Educator" and Sarah Masoni was inducted as an Alliance member.

The Guilde Internationale des Fromage works to promote training and education in the cheese industry, honoring makers, mongers, buyers, retailers and educators with annual recognition ceremonies all over the world.

Tasting in Corvallis, Portland or online

How about a spot of the bubbly?

Champagne is a unique sparkling wine that originates from one spot in the world and is made using a special process, *methode champenoise*. This two-hour class, "**Experiencing Wine: A Champagne Evening**," takes you through the history of champagne, teaches you how champagne is made, discusses different styles of champagne, examines aroma/flavor training specific to champagne wines, and shows you how you can decipher champagne wine labels.

Wines tasted in class include examples of champagnes made from different grapes (blanc de blanc and blanc de noir) and examples of different styles of champagnes.

This unique workshop couples science with the senses, which results in a richer tasting experience. Through lectures and guided tastings of a range of champagnes, you will discuss taste, mouthfeel, aromatics and spoilage. You will also learn how to:

- Understand the traditional champagne winemaking process.
- Evaluate aroma/flavor standards associated with champagne.
- Differentiate the information on champagne labels.
- By the end of this workshop, you will be able to critically evaluate champagne with authority and communicate that expertise to others.

There are three options depending on your preference:

$75 - December 2 in Corvallis — Samples included. Must register by November 25.

$75 - December 3 in Portland — Samples included. Must register by November 26.

$25 - December 10 online — Bring your own samples. Must register by December 8.

Whether attending in person or virtually, all participants must be 21 years of age or older.

Information: ***workspace.oregonstate.edu/course/sensory-evaluation-of-wine***

Recent workshops, public courses

At right, in October, Dr. Zeynep Atamer and Marc Bates co-taught **a short course on Cheese Science & Technology**. The course was held at the Food Innovation Center in Portland because of the ongoing renovation of the Arbuthnot Dairy Center in Withycombe Hall. Twenty attendees learned the principles of each step of the cheese making process from standardization to culturing, renneting, cutting, salting, and aging.

Above, in November, Sarah Masoni, with the assistance of Dr. Doug Goff and 18 other presenters, offered the **third annual Food Innovation Center Ice Cream Course** at the OSU Center in Portland. This year's focus was on chocolate ice cream. Over 60 industry professionals attended the course.

Alumni stories

Dicki Lulay, '73: Leveraging opportunities, giving back are key

The common theme throughout my career has been to make the most of opportunities, play to my strengths and proactively ask for opportunities to leverage these. I create strong networks and find mentors by seeking people who thoroughly understand me and who will provide unfiltered direction and feedback. I set aside time to be there for others (speaking at IFT meetings, university student discussions, mentoring colleagues).

My career began as QA Director, Northwest Products, Castle and Cooke. I took buyers into the plant to see their products being produced and meet with line supervisors, who showed them firsthand the care put into producing their products. This resulted in significantly increased purchases and I was promoted to corporate. Leading Innovation, I asked for and was given offices in both corporate and R&D to optimize innovation and commercialization. Concurrently, I pursued an MBA, which gave me a further foothold into business development.

At Basic American Foods my focus was on leveraging their dehydration market leadership, and we commercialized dehydrated refried beans. Having studied sensory aspects at OSU, I knew that an investment in sensory resources would help prove to customers our product was indistinguishable from scratch. Leveraging IFT connections to network within Taco Bell, we replaced their scratch beans, leading to the most significant business gain in 20 years.

Next, I headed business development at Chef Francisco. I requested a dedicated innovation R&D team and we created the best-selling foodservice chili within nine months. At Nabisco I first led the foodservice national accounts, but my responsibilities quickly expanded to cover ingredient sales, due to my deep industry networks. I presented to executives the concept of foodservice-specific branded products, e.g. Oreo Brownies, Hickory Smoked Grey Poupon. Promoted to head business development, I requested and was given a dedicated R&D team. We turned mustard brand waste into a natural humectant for bread. I received the President's Award for Entrepreneurship.

During this period, I was elected as the IFT Council chair, served as a Citizen Ambassador to China (Eisenhower Foundation) and was honored to be sponsored by three past IFT Presidents to be named an IFT Fellow. I launched Lulay & Associates in 2008, providing proven strategies to build sustained business growth for over 70 global clients, including top 10 global ingredient and CPG companies.

Sumesh Hirway, '68: A great visit to campus after 55 years

In June 2021 I visited the OSU Food Science Dept, after 55 years. My visit was arranged by my son Hrishikesh Hirway as a Father's Day gift. Dr. Lisbeth Goddik, head of department, was very gracious and agreed to give us a tour of the food science department, despite it being Saturday and her social commitments. We were supposed to be there for one hour but ended up spending two hours with her. We visited the food science department, teaching rooms, various labs and pilot plant. I was excited to see the freeze dryer, which I used for my master of food science work.

Aside from myself, there were four of us in the group: my son Hrishikesh Hirway of Los Angeles, my daughter-in-law Lindsey Mortensen, Brian Mortensen (Hrishikesh Hirway's brother-in-law), and Samin Nostrat, best-selling author of Salt, Fat, Acid, Heat, who works with my son on his podcasts and contributes to The New York Times.

Since 1973, I have worked in the food industry until I retired in 2015 as a senior principal food scientist at Griffith Foods. I have many accomplishments in developing successful seasonings and meat products; too many to list here. A few of my contributions include microwave tempering technology for thawing frozen meat and seafood, and hot dogs with reduced salt.

I am retired, but involved with a food incubator in Rhode Island to help develop Indian sauces for Meal Mantra.

Just for fun and history's sake ...

Above, from the FST image archive at OSU's Special Collections and Archives Research Center (which provided both of these images), is a photo labelled "Canning Short Course," dated 1929-1936. Judging by the cans at the bottom, more practice appears to be in order.

Below is the Dairy Building, opened in 1912 at 122 Waldo Place. Look, it says so right there above the doors. If you didn't know that, it's probably because it became Social Science Hall in 1951, and then Gilkey Hall in 2001, named for Gordon Gilkey, first dean of the College of Liberal Arts.

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