Oregon State University

FALL/WINTER 2023

EAT, DRINK, THRIVE

Newsletter of the Department of Food Science and Technology

The Forefront of Safe and Sustainable Food for a Healthier World

The whey to success

FST alum Emily Darchuk makes sippable spirits from milk byproduct

MORE ON ALUMNI ENTREPRENEURS, PAGES 4 & 5

New faculty spots bring leap for FST

From Dr. Lisbeth Goddik, department chair, Paul & Sandy Arbuthnot Professor; Jacobs-Root Professor:

Three years ago, the Department of Food Science & Technology started a transformation to develop a strong emphasis on sustainable food manufacturing. I'm thrilled to share that this direction has received broad endorsement with the funding of five new tenure track professors on the Corvallis campus and two more positions at the Astoria Seafood Research and Education Center.

In spring of 2022, we organized

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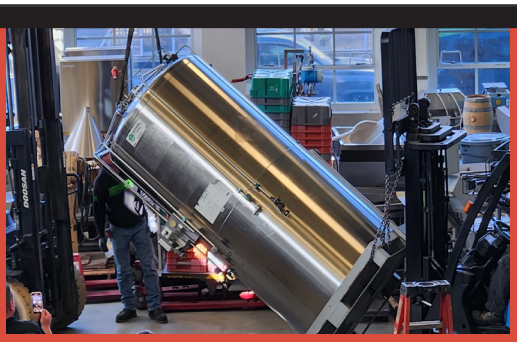


Oregon State University

New faculty spots highlight focus on reliable food systems

(MESSAGE FROM DR. GODDIK, CONTINUED FROM FRONT PAGE)

the first Sustainable Food Manufacturing Forum to bring together industry leaders from across Oregon to explore what sustainability means for our stakeholders, and how FST can serve as a catalyst and changemaker.

In fall of 2022, we launched a new major in Food Science & Sustainable Technologies. Now we are completing the first phase of our transformation by expanding faculty expertise in this area. Following enthusiastic industry encouragement, the 2023 Oregon Legislature approved the Resilient Food Systems Initiative, which provides funding for multiple new faculty positions:

Sustainable Food Manufacturing Specialist: Will teach food manufacturing and will conduct research into how to produce food and beverages using less water, less energy, and less inputs, while creating less waste and greenhouse gases. We also expect the faculty to focus on process efficiencies using tools such as lean manufacturing.

Sustainable Food Packaging Materials Specialist: Will focus on developing new packaging materials that are biodegradable, compostable, or reusable. The overall goal is to eliminate single use plastic packaging. The faculty will teach food packaging classes.

Intelligent Food Systems Engineer: Will research Smart Manufacturing tools, such as AI and Robotics, for food and beverage manufacturing. The position will be joint with Biological and Ecological Engineering (BEE and formerly Ag Engineering), but the tenure home will be in FST. The faculty will teach food engineering with a special focus on data analysis.

Waste to Resource Engineer: Will work on upcycling industry byproducts to control and limit food waste. This position is also joint with BEE and the faculty will help teach food engineering.

Food Chemist: Will advance the application of chemistry to develop understandings of new and unique sustainable food systems, improve food quality, eliminate sensory defects, or enhance product shelf life and stability. The incumbent will teach food chemistry.

Sustainable Seafood Processing Specialist: This Astoria-based position will support the utilization of 100% of seafood with special emphasis on value-added components.

Seafood Safety Specialist: The future seafood safety specialist, also located in Astoria, will develop safety systems and technologies to minimize foodborne risks associated with seafood.

A position in food systems economics: Will be placed within the Department of Applied Economics. We expect to collaborate extensively with this faculty member in our research and outreach projects.

As you can imagine, we are busy preparing Wiegand Hall for our new colleagues. It is a rare opportunity to start on such a cluster hire, launching a new era in FST with a strong focus on technology innovation and manufacturing. We are already collaborating with many departments across the College of Engineering, and our new food science engineers and processing specialists will strengthen those connections.

With the new positions, we are ready to conduct research and train students in the future of food, incorporating artificial intelligence, machine learning, and process optimization while continuing to develop economically viable technologies that limit the use of water, energy, and labor while controlling waste and release of greenhouse gases.

This is a giant leap forward for FST and I'm deeply grateful to so many people: Our Advisory Board, which proposed this strategy when we first met back in 2019; our many stakeholders and alumni who contacted the Oregon Legislature to promote the Resilient Food Systems Initiative; our faculty who are giving up space to make room for the new hires; and Dean Staci Simonich, who enthusiastically supports our transformative changes. All positions will be posted at jobs.oregonstate.edu

Sustainable Food Manufacturing Forum gathers ideas, momentum

By Sheri Cole, Assistant Professor of Practice
FST Sustainable Food Manufacturing & Dairy Extension

An important element of FST's growing sustainability mission is acting as a convener within the food and beverage ecosystem to create inclusive spaces for shared learning, decision-making and productive action toward common goals.

FST convened the second SFM Forum at the CH2M HILL Alumni Center in October, and attendees jumped right in to discuss why a vigorous, sustainable, and equitable food and beverage industry in Oregon matters, identify common ground where working together can activate the envisioned future, and explore where to have the greatest impact, particularly for small and medium sized businesses.

Participants included thought leaders spanning Oregon's food and beverage community who are already working for change, want to meet others to spark ideas and hope to catalyze new collaborations. Included were established and emerging manufacturers, food hubs and networks, business leaders, non-profits, advocates for sustainability and underserved communities, education, government and business and economic development.

The forum committee engaged Mark Grimes, a serial founder and entrepreneur who explained how using an "unconference" model could bring important discussions to life. Instead of a predetermined schedule and set speakers, attendees collaborated to define the agenda and lead discussions on topics relevant to them. Though there are ground rules, it's an intentionally flexible format. Attendees brought their ideas for breakout sessions, and then built a schedule of roundtable discussions.

The result was 28 breakout sessions with topics that included 1) creating solutions to upcycle food waste from manufacturing; 2) novel distribution systems for small/medium processors; 3) what is the role of innovation hubs to enable businesses; 3) how to create

a sustainable coastal infrastructure to scale businesses; 4) methods of de-carbonizing food manufacturing; 5) creating a better co-manufacturing infrastructure in Oregon; 6) connecting agricultural producers with small processors; 7)"Benevolent brokerage:" is it a thing or how to make it one.

FST students generously volunteered their time to take notes for each session. Opportunities distilled from the notes are being redirected to relevant OSU faculty to incorporate into existing programs, and shared with all attendees with encouragement to broadcast the information more broadly.

Based on the exit survey, an overwhelming number of attendees felt that the event was of value (79% good or excellent) and believe it should happen annually (95%).

The 2022 and 2023 Forums were funded by a 2-year College of Agricultural Sciences Strategic Advantage grant, and FST is exploring how best to support spinning off an ongoing event.

The Planning Committee was led by Sheri Cole (OSU Sustainable Food Manufacturing program) who was joined by Hannah Kullberg (Community Co-Pack NW), Amy Gilroy (Oregon Department of Agriculture), Paul Evers (Cultivate Bend, Riff Cold Brew Coffee), Kim Johnson (Bohemia Food Hub), Kristen Penner (Bluefish Siren Shellfish, North Coast Industries), and Sydney DeLuna (Oregon Food Hub Network).

Entrepreneur Focus: Emily Darchuk

Her company, Wheyward Spirit, makes news upcycling dairy waste

Emily Darchuk earned her master's degree from the Food Science Program in 2015. Her graduate research focused on the impact of milk hauling on milk quality and although it had close ties to the dairy industry, she never thought her experience learning about supply chain logistics of the dairy industry would come in so handy for her future role as an entrepreneur managing logistics of her own company from farm to flask.

Prior to coming to OSU, Emily had an undergraduate degree in Food Science and Nutrition from the University of Illinois and worked in the food industry as a product developer, formulating innovations from bench top through commercialization at Kellogg's in Michigan and Whitewave (Dean Foods) in Colorado.

While working on a commercialization project in 2012 Emily found herself regularly traveling from Colorado to a co-packing facility in Portland and during that time, she fell in love with the food scene in Oregon. When looking for a master's program, OSU was at the top of her list and the opportunity to do applied research with industry was a unique opportunity that other master's programs didn't offer.

While at OSU completing her degree, she took multiple MBA courses and had an internship at NASA's Space Food Systems Laboratory at the Johnson Space Center in Houston. Following graduation, she took a role as a product developer at Coca-Cola's global juice center in Florida but after a few years and attending trade shows like Natural Products Expowest, she noticed a shift in the food industry where the truly innovative products and categories were now being developed by entrepreneurs versus the large corporations at which she had spent her early career. At that time, she decided to create the type of product and company she'd always dreamt of working on, which inspired her to return to Oregon to earn her MBA with a focus in Innovation and Entrepreneurship from the University of Oregon while supporting FST extension on industry focused innovation projects.

By combining her experience and education in food science and business, Emily was well equipped for entrepreneurship through the founding of her company, Wheyward Spirit, which makes more sippable and sustainable specialty spirits upcyled from whey.

It took years of work to bring Wheyward Spirit to market but since launching in the fall of 2020, the company has lived up to its name, disrupting the industry for good. With over 467 million press impressions in 2022, Wheyward Spirit is leading the conversation around upcycling and innovation in the dairy and spirit sectors through collaborations and partnerships with Ben & Jerry's and Fever-Tree and by winning top honors at spirit competitions across the world. Wheyward Spirit furthered innovated by launching its second product, Wheyward Wheyskey, a first-of-its-kind, barrel-aged whey specialty spirit in May of 2023.

Emily has been named as a Grist 50 Environmental Fixer and one of 20 women revolutionizing the alcohol industry and proudly serves on the OSU FST advisory board and on the under 40 advisory board for the UO Lundquist College of Business.

Entrepreneur Focus: Dave and Lois Cho

Proud of their Korean-American heritage and award-winning wines

Dave Cho, winemaker/cofounder of CHO Wines in Oregon's Willamette Valley, was introduced to the world of winemaking while performing music at local wineries in southern California. He grew his passion for the trade while meditating with monks in Burgundy and sipping through California and beyond.

He moved his family from California to Oregon to pursue a career in the wine industry, gravitating toward more nuanced and delicate wines and working for some of the most notable wineries in the Willamette Valley, including Argyle Winery and Stoller Family Estate.

Itching to make autonomous decisions from vineyard to bottle, in 2020, with a 2018 BS in Enology & Viticulture from Oregon State's widely recognized winemaking program, he jumped in head first to create his own small production label. He and his wife Lois Cho founded CHO Wines, becoming the first Korean-American winemakers in Oregon.

Lois, who also founded Oregon Asian and Pacific Islander Food and Wine, has been full-time CEO of CHO Wines since 2022. A family nurse practitioner for a decade, she says she has been and remains Dave's number one supporter, from their days busking together on the streets of Santa Monica to their busy life today, running a winery, planning a tasting room and production facility, planting a vineyard and raising a young family (two girls and a boy).

She said she founded the Oregon AAPI Food and Wine nonprofit to shine a light on AAPI representation in the food and beverage industry. She is also a board member of Women in Wine Oregon.

CHO Wines has taken the Oregon wine industry by storm, having received 90-plus scores from *Wine Enthusiast* and James Suckling for their first release in 2021. CHO was nominated in *USA Today's* Readers Choice 10 Best New Winery Category and the brand's sparkling wine made The *Enthusiast* 100 List in 2022.

The Chos are developing 77 acres in the Willamette Valley into a sustainable vineyard and Oregon white oak

savanna, with a winery and tasting room build scheduled for 2024. They have been named a 2023 Future 40 Tastemaker by *Wine Enthusiast* and a 2023 Drinks Innovator by *SevenFifty Daily*.

Dave says his favorite pairings are sparkling wine with sushi or southeast Asian inspired foods, and he sees Oregon developing into a producer of world-class sparkling wine.

Smoke & wine lab almost done

State-of-the-art help coming soon for winemakers and grape growers

By Cole Cerrato, Assistant Professor

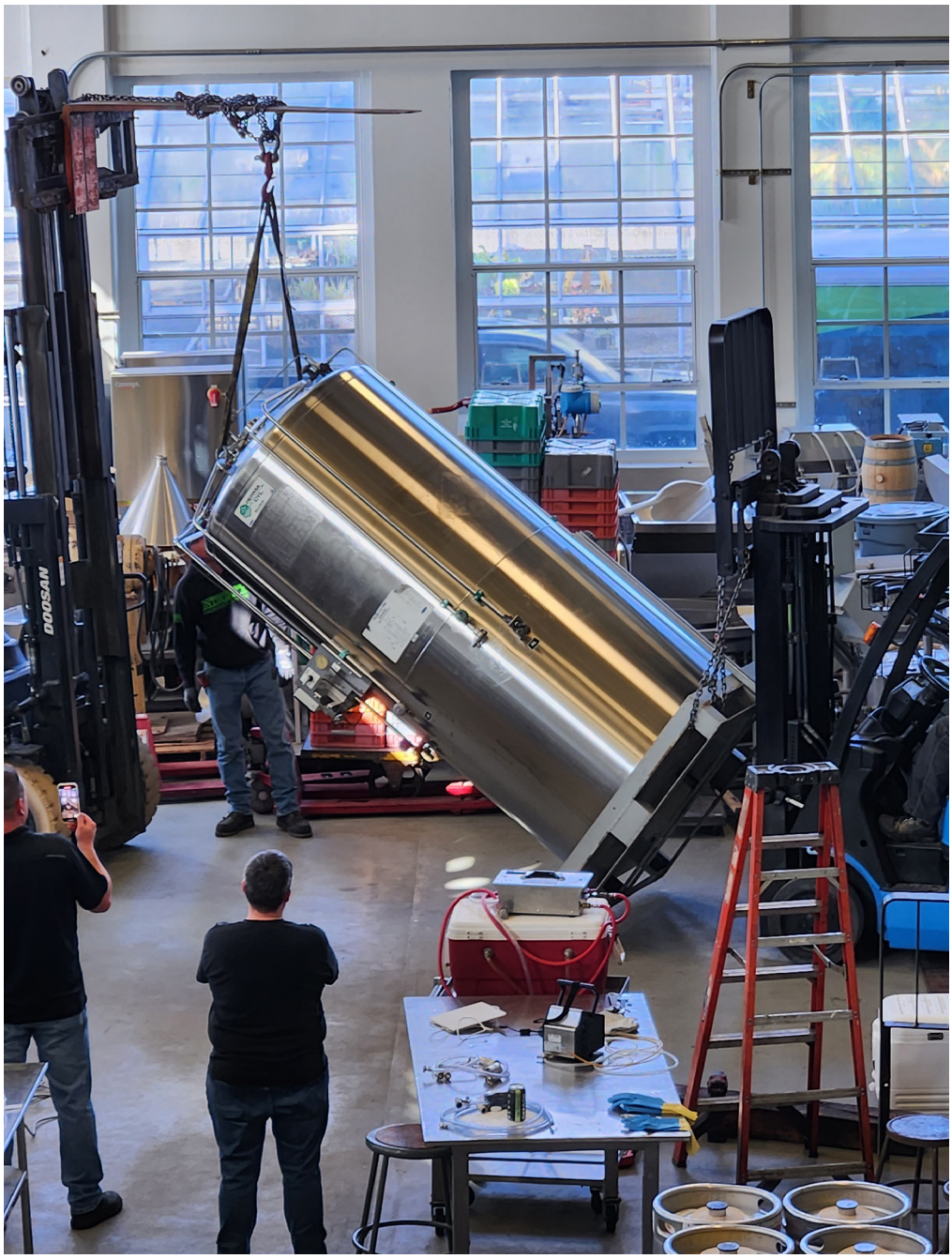
The Smoke, Wine, and Grapes Analytical Chemistry Lab is in the final phase of installation!

Over the summer, FST saw the installation of the GC-MS/MS (combination of a gas chromatography device with a mass spectrometer) and two LC-MS/MS (combination of a liquid chromatography with a mass spectrometer) instruments, air conditioning, flooring, and ceilings.

We wanted to ensure Oregon winemakers and grape growers had an available facility in case any wildfires potentially impacted them. And we have already started serving the Oregon wine community during this soft opening by providing them with analytical services on their grapes.

In September the liquid nitrogen bulk tank was installed (see image at right). It will be predominantly used as the sheath gas for the LC instruments. We look forward to the first fill in November so we can get research underway on wines and all the collaborative projects we have planned for those instruments,

Most recently we have installed the new GC-QToF (which allows sophisticated compound identification). The installation process for the QToF instruments is lengthier in order to achieve much lower pressures in these instruments, but we anticipate the GC-QToF being ready in the first half of November.



The final installation we are looking forward to is the installation of the LC-QToF also in November.

These instruments will be essential in discovering novel compounds in foods and beverages.

For more information, visit: https://foodsci.oregonstate.edu/food-sci/smoke-wine-and-grapes-analytical-chemistry-lab

Student Spotlight

Tracy Onufer

Tracy is one of our post-baccalaureate and non-traditional students. She got her first undergraduate degree in chemical engineering from the University of Michigan but decided to join the Air Force instead of going to industry. She spent the first half of her military career as an Electronic Warfare Officer on AC-130 gunships, and the second half in leadership and staff positions. She retired with the rank of colonel in November 2021 after serving 25 years. She also earned two master's degrees while in the Air Force, the first in management from Troy University and the second in defense analysis from the Naval Postgraduate School.

Tracy chose FST at OSU because of the Enology and Viticulture option, as she wants to be a winemaker for her second career.

She also appreciates how welcoming Oregon State is to post-bacc students, especially ones like her who are in a later stage of life.

She finds it highly amusing that she's the same age as most of her classmates' parents, and she doesn't shy away from going "Mom" on her classmates when needed.

Since starting at OSU in September 2021, Tracy has taken advantage of the wonderful opportunities offered to students in the Food Science department. She completed a harvest internship at Sokol Blosser Winery in the fall of 2022, she has worked in Dr. Tomasino's Wine Research Lab since March 2022, and she has been awarded the Schoenhard undergraduate research scholarship twice and the Paul R. Elliker microbiology scholarship. She'll graduate in June 2024 and hopes to find a full-time enologist position to start her winemaking journey.

Alyssa Thibodeau

Alyssa is an FST M.S. student:

"Jasper Hill is a medium-scale creamery in Greensboro, Vermont that specializes in raw milk and cave aged cheeses. During this past summer, I interned for the company, thanks to the Anne Saxelby Legacy Fund (ASLF).

"The internship engaged me in all areas of production and sales, though the highlights were spiking wheels of blue cheese, milking animals, and the endless supply of cheese.

"This opportunity was life changing in terms of the experience, knowledge, and networks I obtained. Not to mention, Vermont in itself is a slice of dairy heaven.

"I highly recommend looking into the ASLF and visiting the caves at Jasper Hill."

CAS Legacy Alumni Award goes to FST's Charlie Cook

Charlie Cook, a 1958 graduate of FST who became an industry leader in food safety and who continues to support Oregon State with his time and treasure, has received the Legacy Alumni Award from the College of Agricultural Sciences.

"In 1954, wide-eyed 17-year old Charlie Cook flew from Sydney, Australia into Corvallis airport on a beautiful fall afternoon and began his experience at Oregon State College with a greeting from Dr. Schultz, FST Department Head and John Siegle, an Australian graduate student," FST department head Lisbeth Goddik wrote in her nomination letter.

"Charlie took full advantage of all the opportunities OSC provided, being active in sports, college clubs, and campus politics, before transitioning to graduate school in Wisconsin."

Following his PhD, he returned to Australia and joined the faculty of the University of Sydney, but returned to the U.S. and eventually went to work for Louis Rich (Oscar Mayer) for 24 years. He held senior executive positions in R&D, quality control and regulatory affairs, and was active in many trade associations.

When he retired in 1995, he and his wife Jean founded Cook and Thurber, a food safety and quality consulting and auditing firm. They were instrumental in developing process-based food safety audits. In 2001, Charlie and Jean sold the company and transitioned to consulting on supplier food safety programs. This consultancy remains active in the global market and serves major market players, including the global management of Subway and Little Caesars. He has served in an advisory capacity to both USDA and FDA and as an expert witness.

"Charlie has had a truly outstanding career and he is perhaps our best-known alum in the US and beyond," Goddik said. "Charlie and Jean both have a passion for supporting the training of students interested in food safety and quality management. Recently, they decided to provide seed funding and continuing advice to FST to develop a curriculum to support practical food safety and quality management training for both OSU undergraduates and people working in the food industry.

"This program is unique and will set FST up as the world's leading online trainer of practical food safety for industry professionals (through PACE and Ecampus)," Goddik said.

"I am thrilled that Charlie partners with our food safety faculty and works to improve our program. With alumni such as Charlie, it's easy to serve as department head. "In fact, it's hard to imagine anyone more deserving of this award."

New leadership means expanded opportunities for Beaver Classic

Beaver Classic is a brand of products created by students at Oregon State University's College of Agricultural Sciences under the guidance of world-renowned experts in agricultural sciences. What began as a line of cheese in 2012, has evolved to now include ice cream, honey and beef jerky. However, scalability has historically been limited without investment in an experienced business, marketing, and expanded student learning programs.

Under the leadership of the newly appointed Business and Student Development Manager, Dhaval Bhakta, a revitalized vision for the future of this unique, high-impact program is underway.

Under Bhakta's leadership, Beaver Classic aims to increase its sustainability to elevate the breadth and quality of experiential learning. This includes improving operational efficiencies, growing partnerships with key stakeholders, and adding an agricultural business management student program to help scale and manage its future as new Beaver Classic products are developed in FST and other departments.

With the addition of jerky, honey, and ice cream to the cheeses that Beaver Classic is most known for, Beaver Classic has already begun to expand to include students across different departments of the college. This interdisciplinary approach gives faculty and students the opportunity to collaborate in new ways and discover new opportunities for product development.

Online sales remain the primary means of supporting the program and for this holiday season, Beaver Classic will introduce two sizes of holiday boxes that include cheeses, jerky and honey. For those interested in supporting the program, while also enjoying high-quality artisan foods, orders are being taken now at: https://beav.es/qM8

FST's James Osborne heads Oregon Wine Research Institute

Following a comprehensive search, the College of Agricultural Sciences has named Dr. James Osborne as its new Director of the Oregon Wine Research Institute (OWRI).

Osborne is a globally recognized professor and enology Extension specialist in FST. His research focuses on the impact of wine microorganisms on wine quality and has been featured in more than 50 peer-reviewed journal articles, conference proceedings, trade magazines, and Extension publications.

A recognized leader in the American Society for Enology and Viticulture (currently serving as second VP), Osborne's academic career began at Massey University in New Zealand, and he holds a Ph.D. in Food Science from Washington State University. Osborne has received numerous awards for his research and teaching efforts including co-authoring the best enology paper in the *American Journal of Enology and Viticulture* for 2023 and being added to the registry of Distinguished Teachers at OSU.

"We are thrilled to announce Osborne's appointment to this important leadership position," said Staci Simonich, Dean of the College of Agricultural Sciences and Director of the Oregon Agricultural Experiment Station. "His expertise working with international research collaborators, and the trust he has built with both colleagues and Oregon's vital wine industry over the seventeen years he has been with our College make him a strong leader for this important multidisciplinary institution."

According to a 2022 report from the National Association of American Wineries, the Oregon wine industry generates over $7 billion of value to the US economy. Founded in 2008 as a partnership between the Oregon wine industry and Oregon State University, the Oregon Wine Research Institute

(OWRI) builds on Oregon's reputation of quality in grape and wine production and enables growers and winemakers to make informed decisions to further enhance its well-deserved reputation.

"I am excited to lead this group of world-class scientists at the OWRI in our mission to support the dynamic Oregon wine industry", Osborne said.

"During my time at OSU it has been amazing to see the growth of the Oregon wine industry and how the OWRI partners with industry to address various challenges and opportunities that arise. We are fortunate in Oregon to have some of the top scientists in the world leading cutting-edge research to help advance solutions to increasingly complex challenges."

Osborne will continue to lead his research program as he takes on this new leadership role at the OWRI.

FST graduate Marcia Walker directing Food Innovation Center

Following an exhaustive national search, Oregon State University's College of Agricultural Sciences has named Dr. Marcia Walker as the director of the Food Innovation Center (FIC) in Portland.

A 2003 Ph.D. graduate from the College's Food Science and Technology department, Walker joins the FIC from Greenleaf Foods, where she served as Director since 2021. Spearheading processing, manufacturing, and commercialization, she oversaw a team of innovative food scientists introducing more than 11 new products to market. Prior to her time at Greenleaf, she held leadership positions at Tofurky, PepsiCo, Starbucks, and Avomex.

"We are excited to have Marcia join the team and step into this important role at our urban agricultural experiment station location," said Staci Simonich, Dean of the College of Agricultural Sciences and Director of the Oregon Agricultural Experiment Station.

"Her expertise in food science combined with her entrepreneurial background will be a tremendous asset in serving the needs of emerging and established food and beverage businesses here in Oregon and beyond."

Said Walker: "I was fortunate to be involved in Department of Defense research into novel food processing technologies, and specifically chose High Pressure Processing to improve combat rations for the military during my time at OSU. We developed specific products that included soups, RTE meals, yogurt, cheese and fruits; conducted microbiological validation and sensory research on many types of foods and collaborated with equipment companies that helped lead to the commercialization of HPP food processing in the food industry. During this time at OSU, HPP was in its infancy as far as industrial adoption for food applications. Since then, HPP has made tremendous progress and is now one of the leading technological innovations that find its place as an indispensable technology in the modern food industry sector."

With increasing food safety awareness and inclination of people opting for more natural products and less preservatives, application of HPP has had exponential growth.

"It has been a privilege to take what I learned at OSU Food Science and build a challenging career with impact to the food industry and consumers," Walker said. "I'm thrilled to return to Food Science at OSU. Having been here when the FIC was just getting built, I am eager to bring back the food industry experience I've gained, innovating new food products, to serve Oregon, the nation, and the world. The FIC is a unique asset and there is such tremendous potential to leverage its capabilities to serve as a hub for economic development and innovation."

Want a new take on sweet potatoes? Try "Sweet heat"

Here's a fall/winter recipe from Bryan Gaspich, a recent FST master's graduate, now in a new role at the Food Innovation Center, working on dairy product research and development:

Sweet Heat (Spicy Mashed Yams) - *A simple take on a classic dish to spice up your holiday meal*

Ingredients

2 Large yams (about 2 lbs)

2 Jalapenos

3 Tbsp Sour cream

3 Tbsp Butter

1 Tbsp Half and Half

2 Tbsp Brown Sugar

1/4 Tsp Salt

Wash, peel, and slice yams into 1-inch rounds. Bring to a boil a pot of water filled high enough to submerge the yams. Cover the pot, turn the heat down to medium high, and boil for 25 minutes or until a fork easily penetrates the yam.

Place a tablespoon of cooking oil in a sauté pan and turn to medium heat. Wash, destem, halve, and deseed the jalapenos. Press the jalapenos flat with your fingers, making small cuts in the narrow points if needed. Place the jalapenos in the pan and cook for 3 minutes on each side. A shorter cook time can be used for increased spiciness. Once jalapenos are removed from the pan, mince the jalapenos with a knife.

Drain the yams thoroughly, place in a bowl with the butter and mix on medium speed until the large pieces begin to break down. Let rest until the butter is melted. Add all other ingredients and mix until the consistency is smooth and creamy. Enjoy warm!

Makes enough for four people.

1987 FST grad Ellen Bradley seeks help getting alumni board started

At the Homecoming Alumni Barbecue I was talking to Dr. Goddik about how great the department was doing and how nice it was to meet and see other alumni.

I have attended the last two Taste of Research days and have been blown away by the research being done in the department and the research dollars that are pouring in. Want to know how the department compares to others across the US? (spoiler alert, top ten!) In the course of our conversation we got to talking about forming an FST Alumni Group in order to inform alumni on the department's comings and goings as well as stay in touch with each other. Ideas included gatherings across the state (and possibly further), helping to promote continuing education, mentoring students and inviting elected officials to hear how important food and beverage production is to the world. Have any other ideas?

Dr. Goddik has tapped me (I was closest) to lead this new group. We are looking for a group of alumni volunteers to form a board and get some of these ideas off of the ground.

Ideally we will represent all aspects of the department. If you are interested, please contact me, Ellen Bradley (BS '87) at *ellen@rivercityfoodgroup.com*. I look forward to hearing from you!

FST's Homecoming tailgate draws crowd

On Oct. 14, nearly 200 FST alumni and friends came to Wiegand to celebrate Dan Smith at the FST Homecoming. Graduates gathered in the auditorium and shared favorite memories of Dan as advisor and instructor.

Dan's amazing knowledge of OSU processes has helped many students find the shortest path to graduation. Alumni emphasized how Dan helped them find internships and receive scholarships. Dan's help didn't stop at graduation because he often helped students locate great jobs and get into graduate school.

Jeff Clawson guided an engaged team of current and former students who prepared a tasty BBQ. They served everyone and even provided leftovers for lunch in the student lounge the following week.

As always, the Homecoming Tailgater was a collaboration with the Oregon Section of the Institute of Food Technologists. OSIFT members showed up and engaged with students through games with plenty of donated prices.

FST appreciates our wonderful partnership with OSIFT.

Food and Ferm Club updates

Ecuador trip

FST students Avery Haymowicz, Hugh Clarke, and Vincent Vega went on a two-week faculty-led tour in Ecuador. The trip was led by Dr. Dave Stone, director of the Food Innovation Center, and Evelyn Smith, the Small Farms & Master Gardener Coordinator at the Lincoln County OSU Extension.

The journey began in Quito, where the students were accommodated at Universidad Andina Simón Bolívar. Here, the group learned of the world of modern and historical Ecuadorian agro-economy, food sovereignty, and cuisine. Javier Carerra lectured on the underground seed networks protecting food sovereignty and biodiversity in Ecuador, Dr. Ronnie Lizano explained Ecuadorian Agriculture, and Mónica Izurieta lectured on both Ecuadorian food history and the present-day food situation.

The tour then moved on to the Galapagos Islands, where the students explored local farms, gain insights into the region's food and waste systems, and even enjoy snorkeling. During their stay in the Galapagos, the students were hosted by local families.

Following the Galapagos experience, the tour continued with visits to a nature reserve in Mindo, a chocolate farm in Mashpi Shungo, and a shrimp farm and lab, as well as a coffee farm in Manabi. In the final days of the tour, the group visited the Iche Ecosystem Culinary Innovation Center for a wonderful meal and a culinary lesson.

The whole trip was centered around the idea of sustainable agriculture and there was not a single farm in the trip that did not do something to ensure sustainability in their practices, ensuring a future for themselves, their community, and their environment.

Back-to-school event

The Food and Fermentation Science Club and OSIFT partnered to host the FST back-to-school event! FFSC presented on club structure and upcoming club events, while OSIFT gave a presentation on their function within food science and the many opportunities available for undergraduates.

Afterward, students and faculty came together in the Wiegand Hall Pilot Plant for Chipotle (provided by OSIFT) as well as cookies baked by Sue Quessier's FST101 students. OSIFT hosted a small food trivia game, and new and old students were able to mingle.

Seafood lab helping industry work on many issues, including effluent

The OSU Seafood Laboratory has had a busy summer with many stakeholder-driven projects. Perhaps one that is most timely is our activity supporting the industry as it continues to try to meet new Oregon DEQ processing water discharge limits.

Dr. Christina DeWitt has provided expert witness testimony and provided statements at hearings concerning the nature of the seafood processed in Oregon's facilities and the unique challenges presented by some of the species. The lab also hosted a listening session with Sen. Ron Wyden and helped the senator's team connect with seafood processors as part of his Oregon Bounty effort. (Wyden has also visited with FST staff in Corvallis and Bend.) The Astoria session gave fishers and processors a venue for productive discussions regarding their challenges.

In addition, the laboratory has partnered with a local processor to evaluate the impact of harvested shrimp quality on processing effluent discharge.

FST's Haluzak named OSU Exemplary Employee

University Day 2023 saw FST's own Sarah Haluzak, who, according to department head Lisbeth Goddik "really runs FST," win the university's Exemplary Employee Award.

"The Department of Food Science & Technology has been doing very well over the past 4 years," Goddik wrote in her nomination letter. "The success is thanks to a concerted effort by the entire FST team, but I can confidently state that the instigator and mastermind behind our success is Sarah Haluzak. Sarah and I have an effective distribution of responsibilities where I, as department head, handle external contacts with stakeholders, agencies, and funders, while she handles everything internal. She leads the team and makes FST a great place to work.

"Most of us spend as much time at work as we do awake at home. We can all agree that life is too short to work in an unpleasant work environment. Sarah knows everybody and quickly recognizes if someone is not well. She goes out of her way to help make the work situation better for faculty, staff, and students alike."

New lead advisor selected, in training

Sue Queisser, the new Lead Academic Advisor for the department, is being trained this fall by Dan Smith and will fully take the reins in January.

Sue is excited about helping to launch the next generation of food scientists: "I really feel that all my life experiences have placed me in the right place at the right time." Her eclectic background in art, mechanical engineering and food science connects her to students on many topics. As an FST alum, she knows the curriculum, went on internships, played College Bowl, and received departmental scholarships. As a result of running the department sensory lab for the last seven years she knows about consumer science and how companies launch products. She also owned and ran her own bakery

On top of that, she and her family have had a band for over 10 years. She attributes the strong connection with her husband and daughters to making music together. "There is no way you can create art with another human and not form a bond. If you want to feel closer to someone, make something together!"

Sue says her motivation in life springs from an interest in beauty of all sorts. "I like things to be well-made, jobs well-executed, shapes and colors that are pleasing to the eye, singing a song in the perfect range, thought-out ideas that are simple to understand. ... Right now, my passion is to figure out the best way to get students through our program – beautifully."

Meet FST's new recruiter, marketer

Hailey Light became one of the newest additions to the front office team at Wiegand Hall in June. She worked for the OSU Admissions Team since 2021, based at the the Cascades Campus in Bend. She is an OSU alumni, graduating with a B.S. in Sustainable Tourism Management and a minor in Spanish.

Hailey is developing a complex recruitment plan to drive community engagement and undergraduate student enrollment within the department; based on trends within higher education and the needs of this generation of students. Part of this plan is increased program awareness, and one of her strategies for this section is to bring the department to the student by visiting AVID classes in high schools.

Advancement Via Individual Determination (AVID) is a program that is offered to high schools in the U.S. The purpose of this program is to prepare students for college eligibility and expose them to career pathways. So far Hailey has visited nine classes of high school juniors and seniors in the Portland area to speak to them about the multitude of opportunities afforded by an OSU food science degree. She plans to visit more classes this year to increase awareness of the program.

Follow us on our social media sites to get updates about the program.

Instagram: *@OregonStateFoodScience*

Facebook: *OSU Dept. of Food Science and Technology*

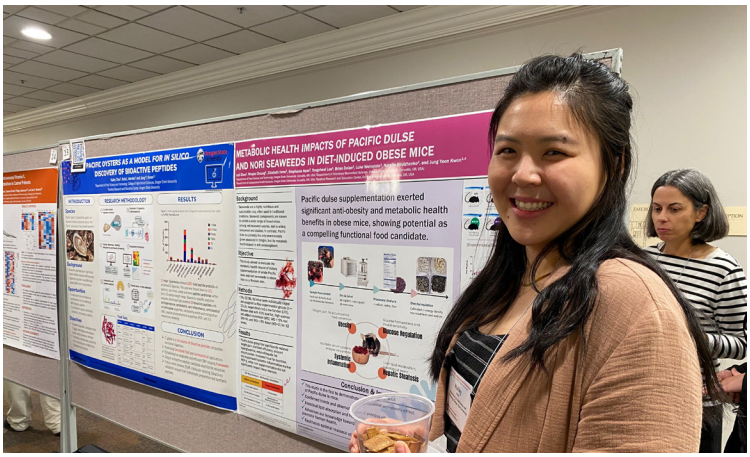
LinkedIn: *OSU Food Science and Technology*

Students receive awards

JENNA FRYER

NATIONAL IFT AWARD FOR RESEARCH COMMUNICATION

The IFTSA Graduate Research Video competition challenges graduate students to communicate their research in a creative and concise way through a 3-minute video. The winner receives a 10-day trip to the United Kingdom with the competition sponsor, Campden BRI, to gain insight on the UK/EU food and beverage industry. See the video: https://youtu.be/R0CXfVE8vS4



HAILEY ZHOU

DIET AND OPTIMUM HEALTH CONFERENCE AWARDS

Kwon lab participated in the Diet and Optimum Health Conference (Corvallis, September 2023). Hailey Zhou, recently graduated with her master's degree, received a student registration award and gave a lightning talk and poster presentations. Our abstract was selected as one of three lightning talks at the conference.

Jooyeoun Jung receives grants

Sponsor: The Northwest Center for Small Fruits Research (NCSFR)

Title: Development of advanced package for ensuring post-harvest storability of soft strawberry cultivars grown in the Northwest (NW) region

Summary: Suitable and advanced package for soft strawberry cultivars grown in the NW region will be developed to enhance the market value and competitiveness of NW strawberry industry. This will reduce postharvest loss and increase the economic benefit for stakeholders. Also, storability and quality of NW strawberries will be enhanced to satisfy the consumer's needs and to expand the long-distance markets.

Sponsor: Rural Development Administration in South Korea

Title: Establishment of a platform to utilize alternative food/biodegradable materials derived from processing by-products to contribute to carbon neutrality

Summary: This project will develop biodegradable packaging material and an application technology for the industrial use of water-insoluble polymers derived from spent coffee grounds. There will be three specific goals:
1) Analysis of lignocellulosic composition and fibrous morphology for spent coffee grounds
2) Transformation and extraction of lignin, cellulose, and phenolic compounds
3) Development of application technology to manufacture biodegradable and edible packaging material using water-insoluble fibers.

Wine industry awards to FST scientists

Matt Garcia, a master's student in the Osborne lab, was awarded "Best enology flash talk" at the recent American Society for Enology and Viticulture National Conference in Napa. Matt presented findings from his research on "Impact of malolactic fermentation timing and addition of Torulaspora delbrueckii during cold soak on Pinot noir wine properties."

A team of Oregon Wine Research Institute scientists, including FST faculty James Osborne and Elizabeth Tomasino, was recently awarded the "Best Enology Paper of 2023" by the American Society for Enology and Viticulture for the paper "Fertilize or Supplement: The Impact of Nitrogen on Vine Productivity and Wine Sensory Properties in Chardonnay". The study investigated the addition of nitrogen in the vineyard vs. the winery, and concluded that nitrogen addition in the vineyard could boost tropical notes in Chardonnay wine while similar additions of nitrogen in the winery did not result in the same sensory changes.

Tom Shellhammer's spare-time pursuit is a bit like his work

(Introducing an occasional series exploring what some of FST's faculty and staff do in their spare time.)

Tom Shellhammer, Nor'Wester Professor of Fermentation Science and an internationally recognized expert in hops chemistry:

My first foray into fermentation science was as an undergraduate enology student at U.C. Davis in the early '80's. This was before home winemaking and home brewing was as popular as it is nowadays, and thus it was not odd that I knew very little about how wine or beer was made.

The adventure of learning about the science and technology of wine (and beer) during my undergraduate studies combined with several summer/fall harvests in the Napa Valley made an indelible impression on me and it cemented my love of science and its application to food.

However, it wasn't until I was in my 40's that I began making wine as a hobby. It was a return to my educational roots that provided a celebration and reassurance of the seasonal nature of agriculture. It is a fun endeavor that I engage in with a group of friends who are almost entirely associated currently with OSU, such as Jeff Clawson and Zak Wiegand, or formerly with OSU, such as a professional sensory panelist from Mina McDaniel's lab, Susie Leslie, and a former graduate student of mine, Daniel Sharp.

There are other members, too. We gather a few times every year to enjoy each other's company and to tend to the various elements/stages of winemaking. It is about process more than it is about product, but the product is nonetheless very enjoyable.

As some hobbies go, it started getting out of hand.

This photo was from several years ago shortly after bottling Tempranillo, Cabernet sauvignon and Sangiovese, and the cases of wine were waiting to be picked up by members of the group. Thankfully, we have scaled back, which means there are far less barrels in the garage and it looks much less like a messy barrel room.

Floyd Bodyfelt remembered

FST graduate, teacher and extension dairy specialist left a huge legacy

It is with a heavy heart that we share the news of the passing of one of our dearest friends, Floyd Bodyfelt. Oregon State University Professor Emeritus Floyd Bodyfelt, born May 9, 1937, left us on September 17, 2023, leaving behind a legacy that will forever be etched into the Oregon dairy industry.

Floyd's dedication to the industry was unwavering. He was a true champion of dairying, contributing his expertise and passion to our cause for many years. His legacy will forever be etched in the history of ODI, and his impact will continue to shape the future of dairy in Oregon and beyond.

In his final months, Floyd received exceptional care and support at the Oregon Veterans' Home in Lebanon. We extend our heartfelt gratitude to the dedicated staff and healthcare professionals who cared for him.

In honor of Floyd's life and his invaluable contributions to ODI, we invite you to consider making a donation to the ODI Bodyfelt Scholarship Endowment.

This endowment, established in Floyd's name, supports aspiring students pursuing careers in the dairy industry. Your generous contributions will help ensure that Floyd's legacy continues to inspire future generations of dairy professionals.

Gifts can be made online at give.fororegonstate.org or mailed to OSU Foundation, 4238 SW Research Way, Corvallis, OR 97333.

Your support, whether through a donation or a heartfelt memory, is a meaningful way to honor Floyd's memory and his dedication to Oregon's dairy community. Let us celebrate his life and the positive impact he made, as his legacy is sure to continue to inspire and guide us as we carry on his work.

FUND THE FUTURE OF FOOD SCIENCE EDUCATION AT OSU

and honor an exemplary career by donating to the future Dan Smith Food and Beverage Teaching Laboratory in Withycombe Hall

IN DAN'S OWN WORDS:

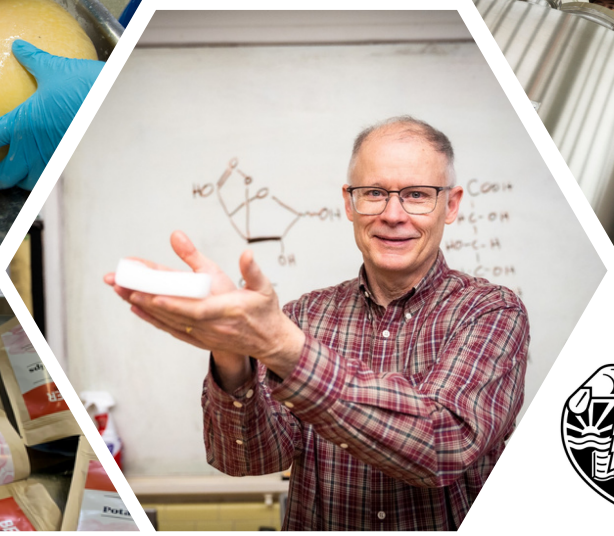
"I am calling on friends and alumni of FST to help me realize the goal of having this state-of the art space filled with equipment to match. It would be gratifying to know that those who succeed me will have all the tools required to create a compelling and fully relevant learning experience every week."

Employer matching is encouraged and appreciated.

Scan QR code or go to link, type in Food Science & Technology Department Unrestricted Fund. Specify Dan Smith lab on last page.

https://give.fororegonstate.org/PL1Uv3Fkug

or contact
Lisbeth.Goddik@oregonstate.edu



Oregon State University