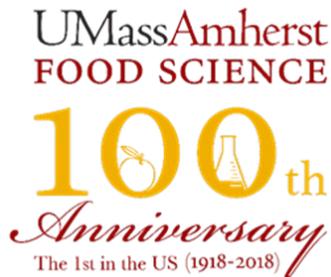




University of Massachusetts
Department of Food Science Newsletter
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UMass Food Science turns 100!

Join us to celebrate the first and best in the U.S.

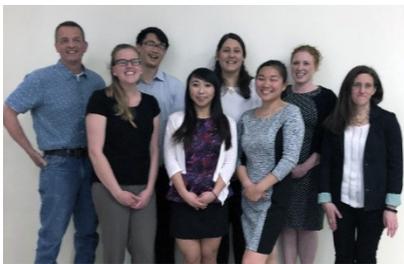


Our 100th anniversary alumni weekend committee has put together a great agenda for this momentous event. On Friday, September 28, we will have a banquet with the Chancellor, Provost and Dean in attendance. The dinner will be themed on recipes from 1918 in celebration of our founding year. On Saturday morning, September 29, you can choose from several activities including apple butter making in the pilot plant, a campus scavenger hunt to see the incredible changes that have taken place on campus and a cooking demonstration. Lunch will be the in the newly renovated Old Chapel, where we will also have our traditional raffle

drawing. Please consider showing your support by donating to the raffle. Donations can take many forms— company swag, wine, product baskets, gift cards, lottery tickets, etc.— and can be of any value. Item donations can be brought to the reunion, or sent to the department in advance. Your alumni contacts for the raffle are **Vanessa Brovelli** (vbrovelli8@gmail.com) and **Liisa Holcomb** (lholcomb@batoryfoods.com). If you have any questions, please reach out to them.

We are hoping to make this the largest and most successful Alumni Reunion Weekend ever. Please mark **September 28 and 29, 2018** on your calendar! You can register, buy 100th anniversary shirts, and book a hotel at www.UmassAlumni.com/foodscience100.

Chili Chocolate Chip Wins in Ice Cream Competition



From left: creamery owner **Bruce Jenks**, winning students **Erica Snyder, Joshua Liao, Jozxelle Tongon, Rachael Montigny, Marina Gela, Gina Grimaldi** and assistant professor **Maria Corradini**.

The winning flavor in this year's University of Massachusetts Amherst student ice cream competition was Chili Chocolate Chip. It will become the latest UMass student-created ice cream produced by Maple Valley Creamery of Hadley. The three other entries in this spring's competition were a butternut squash flavor with lemon zest, ginger, turmeric and semi-sweet chocolate bits, a chocolate banana graham cracker flavor and a strawberry-basil flavor with dark chocolate pieces. The strawberry-basil, dubbed "Summer Blush" by its creators, won the audience's vote for best flavor.

UMass Amherst executive chef Simon Stevenson greatly assisted students in their flavor planning. Also, UMass Amherst food science alumni **Steve Platt** and **Ameena Cohen** from the ingredient manufacturer Star Kay White, Inc. and **Scott Coldwell**, brand president of Carvel Ice Cream, gave a seminar on “Branding, Innovation, and Careers in the Ice Cream Industry” as part of this year’s class.

UMass at IFT

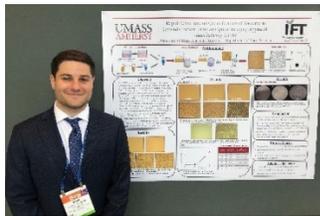
UMass Receives First Place in Smart Snacks for Kids Product Development Competition



Amadeus Driando Ahnan (Xiao lab) and **Mitchell Culler** (Decker lab) won first prize in IFT’s Smart Snacks for Kids Product Development Competition. Products were required to abide by the USDA “Guide to Smart Snacks in Schools” recommendations which included restrictions on calories, sodium, sugar, total, saturated and trans fat. A crucial component of a winning product is the team’s ability to relay the food or beverage’s “smart” qualities to both a technical and a general audience. The product was “Tempgrams” which turns snack-time into learning time. Tempgrams are tangram-shaped, tempeh-based wafers flavored with honey and apple and coated with naturally colored white chocolate. On the back of each

Tempgrams lid, children would find a tangrams puzzle to create, allowing them to play with their food before getting to enjoy a nutritious snack. Congratulations Mitch and Ando!

IFT Research Competitions



Adam Salhaney received First Place in the IFT Undergraduate Research Competition for his work in Dr. **Lili He’s** laboratory. The title of his research was "Rapid Detection and Quantification of Bacteria in Ground Chicken Using a Novel Optical Imaging Approach". This is the third student from Lili He’s lab to win IFT’s Undergraduate Research Competition in the past 6 years.

Phoebe Chen (Park lab) received third Place in the IFT Nutraceuticals and Functional Foods Division Poster Competition. Phoebe also received the Outstanding Student Award from the Chinese American Food Society at IFT.

Phi Tau Sigma Scholarships

UMass Food Science did exceptionally well in the Phi Tua Sigma Scholarships receiving awards in four of the four scholarship categories. **Weicang Wang** (Zhang lab) and **Zipei Zhang** (McClements Lab) received the Phi Tau Sigma Guy Livingston Scholarship, **Xiaoqiong Cao** (Xiao Lab) received the Phi Tau Sigma Student Achievement Scholarship and **Amadeus Driando Ahnan** (Xiao Lab) received the Phi Tau Sigma Daryl B. Lund International Travel Scholarship. **Tianxi Yang** (He lab) received the Achievement Scholarship.

IFT Feeding Tomorrow Scholarships

UMass Food Science also had tremendous success in receiving IFT's Feeding Tomorrow Scholarships. **Cally Toong** (Corradini lab) received the General Mills Scholarship & Internship, **Ezgi Ozcan** (Sela lab) received the Gerber Graduate Scholarship and **Amadeus Driando Ahnan** (Xiao Lab), **Thanh Vu** (Decker lab), **Tianxi Yang** (He Lab) and **Weicang Wang** (Zhang lab) received IFT graduate scholarships. **Isabelle Domingos** received a freshman scholarship.

IFT Alumni Reception



For the second year in a row, we switched our IFT Alumni get-together from a breakfast event to an early evening reception at an off-site location at IFT. This year, we had the reception at the Metropolitan Club on the 66th floor of the Willis Tower (formally the Sears Tower). It was a perfect day and the views of Chicago were fantastic. Over the course of the evening we had over 50 alumni stop by. Many thanks to **David Coles** of **D&S Solutions** who arranged the location and sponsored the food along with **Otis Curtis** who obtained sponsorship from **Kerry Foods** and **Todd Zaniewski** who made a personal donation.

Other Student Awards

Northeast IFT Scholarships

Phoebe Chen (Park Lab), **Thanh Vu** (Decker lab), **Ruojie Zhang** (McClements lab)
Amadeus Driando Ahnan (Xiao Lab)

American Society for Nutrition Awards

Ezgi Özcan (Sela lab), 1) Travel award; 2) Co-First Place, Emerging Leaders in Nutrition Science Poster Competition (Nutritional Microbiology Research Interest Group).

Korin Albert (Sela lab), Co-First Place, Emerging Leaders in Nutrition Science Poster Competition (Nutritional Microbiology Research Interest Group).

Yanhui Han: (Xiao lab), First Place, Emerging Leaders Poster Competition winner (Dietary Bioactive Components Research Interest Group).

Zhengze Li (Xiao lab), NeoLife Student Phenolic Research Award Winner (Plant Phenolics and Human Health Research Interest Group).

American Oil Chemist Society Awards

Ruojie Zhang (McClements lab), 1) Honored Student Award; 2) First Place, poster competition, Edible Applications Division; 3) Lipid Chemistry and Nutrition Award; 4) Thomas Smouse Award

Zipei Zhang (McClements lab), 1) Hans Kaunitz Award; 2) Third place poster competition, Health and Nutrition Division

Other Scientific Awards

Yang Lyu (Sela lab), Travel Award, International Society of Research on Human Milk and Lactation Conference

Ruojie Zhang (McClements lab) excellent graduate research award in “Nanoscale Science and Engineering for Agriculture and Food Systems” Gordon Research Conference.

Ezgi Özcan (Sela lab), Travel award, International Society of Research on Human Milk and Lactation Conference

Weicang Wang (Zhang lab), Outstanding Poster Award at the 17th International Winter Eicosanoid Meeting

Xiaoqiong Cao (Xiao lab), Travel Award, International Association for Food Protection

Amadeus Driando Ahnan (Xiao Lab), Research Chef Assoc. Bill "Pops" Hahne Memorial Scholarship; 1st Place, Waters Photo Competition; 1st place Voices of Tomorrow Competition at the GapSummit Biotechnology Conference at Cambridge University

The team of **Tianxi Yang**, **Michael Hickey**, and **Bin Zhao** (He lab) won the 3rd place in the BASF research competition on fieldable technology for plant stress detection.



This year the UMass Graduate School held a 3 minute thesis competition. Three Food Science student were among the 6 finalist with **Yuren Yue** (Park lab) taking second place and **Xiaoqiong Cao** (Xiao lab) being the People’s Champion Award winner. **Louis Colaruotolo** (Corridini lab) was also a finalist.

Winner Monika Roy (right) with second place winner **Yuren Yue** (left) and People’s Champion **Xiaoqiong Cao** (Xiao lab).

Triclosan, a Common Antimicrobial, Linked to Colonic Inflammation, and Altered Gut Microbiota in Mice

A research team led by senior author Guodong Zhang at the University of Massachusetts Amherst reports that the antimicrobial ingredient triclosan, found in hand soaps and toothpastes among other products, could have adverse effects on colonic inflammation and colon cancer by altering gut microbiota, the microbes found in our intestines. Co-first authors Haixia Yang and Weicang Wang, members of the Zhang laboratory, point out that triclosan is among the most widely used antimicrobial ingredients and is found in more than 2,000 consumer products. They note that a National Health and Nutrition Examination Survey showed that triclosan was detected in about 75 percent of the urine samples of individuals tested in the United States and it is among the top ten pollutants found in U.S. rivers.

The study reported in *Science Translational Medicine* suggests that short-time treatment with low-dose triclosan caused low-grade colonic inflammation, and exaggerated disease development of colitis and colitis-associated colon cancer in mice, Zhang says. “These results, for the first time, suggest that triclosan could have adverse effects on gut health,” he notes. In this study, the 21-member team that included 12 UMass Amherst researchers, investigated the effects of triclosan on colonic inflammation and colon cancer using several mouse models. In all mouse models tested, triclosan promoted colonic inflammation and colon tumorigenesis. Feeding triclosan to mice reduced the diversity and changed the composition of the gut microbiome, a result similar to what was observed in a human study conducted by others, Zhang says. Also, triclosan had no effect in a germ-free mouse model where there is no gut microbiome present, nor in a genetically engineered mouse model where there is no Toll-like receptor 4 (TLR4) – an important mediator for host-microbiota communications. “This is strong evidence that gut microbiota is required for the biological effects of triclosan” Zhang points out. In an editorial note accompanying the article, the journal says, “Triclosan exposure is practically unavoidable in the United States, but little is known how ingestion may affect our health.” This study observed that triclosan altered mouse gut microbiota, increased inflammation, increased the severity of colitis symptoms and spurred colitis-associated colon cancer cell growth. Though limited to mouse models, “this work suggests that the effects of triclosan on human health should be examined more closely,” editors noted.

The paper was the subject of 83 news stories published by 81 media outlets including Fox, Yahoo News, Los Angeles Times, BuzzFeed and U.S. News and World Report.

Faculty News

Amanda Kinchla was promoted to an Associate Extension Professor, CONGRATLUATIONS! Amanda also gave a talk on improving food safety practices with small entrepreneurs and chaired a session focused on the challenges of implementing preventive controls at the International Association of Food Protection Annual Meeting.

Eric Decker gave a talk on “Natural Antioxidants” at the Clean Label Conference and gave a talk on Methods for Sodium Reduction” for the UMass Chef Conference.

Lili He was invited to give several talks at the USDA-Food Safety and Inspection Service (FSIS) sponsored Information & Communication Technology Summit at the Partnership for Food Safety Education Meeting. Lili also gave a webinar for the Thermo Fisher Scientific sponsored North American Chemical Residue Workshop.

Julian McClements received the Tanner Award in recognition of the most-cited paper of 2015 published in the Nanoscale Food Science, Engineering, and Technology Section of the Journal of Food Science. Julian also was also the recipient of the 2017 IUFOST/Fi Lifetime Achievement Award for Excellence!

Matt Moore was elected Vice Chair of the International Association for Food Protection's Developing Food Safety Professionals group. Matt was invited to give a talk on the "Study, Detection, and Control of Foodborne Viruses" to the Jackson Laboratory for Genomic Medicine.

Yeonhwa Park gave a talk on CLA delivered as nanoemulsions reduced fat accumulation and increased activity in *C. elegans* at the American Oil Chemists' Society Meeting and also did invited presentation at the 2018 Korean Society of Food Science and Technology International Symposium and Annual Meeting

Hang Xiao was promoted to Full Professor, CONGRATUATIONS! Hang was a co-chair for the Food & Function (a Royal Society of Chemistry journal) Symposium on "Food for Health and Wellness in Xi'an, China and he gave a talk at the Univ. of Hohenheim in Germany.

David Sela organized a pre-conference program at the ASN annual meeting entitled, "Emerging Science of the Microbiome and Impacts to Human Nutrition.". David and **Guodong Zhang** we recently appointed as co-directors of the Clydesdale Foods for Health and Wellness Center.

Guodong Zhang gave invited talks on the negative health effects of oxidized fats at the Food & Function International Symposium in Xi'an, China and at the American Oil Chemist Society Annual Meeting & Expo, Minneapolis where he received the Lipid Oxidation and Quality Division Junior Researcher Travel Award.

Leadership Fundraising Campaign

The success of our students has always been a tremendous strength of the department and has been critical in shaping our future. We recognize that the food industry is changing and requires us to expand our curriculum beyond the science and technology and develop educational offerings into areas such as marketing, product development, business communications, finance, and entrepreneurship. In addition, for our students to continue to be as successful as their predecessors, we must provide more early research experiences and product development opportunities. To meet these goals, we are building a \$750,000 endowment, the Food Science Student Leadership, to expand student opportunities to strengthen their training and augment their experiences. We have obtained over \$550,000 in pledges towards a \$750,000 goal. Please contact Lina Thompson (lina.thompson@umass.edu; 413-577-4015) if you would like to donate to the campaign.