



The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter July 2022

News:

Phi Tau Sigma Awards Ceremony

The Phi Tau Sigma Awards Ceremony will be **presented virtually on July 7, 2022 at 2pm eastern, 1pm central, 12 noon mountain, and 11am pacific times at:**

<https://youtu.be/OHlgLLNc4L8>, and will be available on our website afterward. Everyone, Phi Tau Sigma members or not, is invited. Bring your colleagues, family, friends. **Please attend and support our honorees.**



Are you moving this summer to take a new position?

Contributed by Terri D. Boylston, Ph.D., Chair, Chapter Affairs Committee

Are you moving this summer to take a new position? Be sure to complete the Contact Information Form (<http://phitausigma.org/contact-information/>) with your new contact information and send to the Kathy Kotula, Executive Director (klkotula@msn.com).

This will not only make sure you continue to receive the monthly newsletter but the Chapter Affairs Committee will help you make connections with the local Chapter in your new location and to continue to build your network. Many of the Chapters around the country have active programs to keep you on the cutting edge of latest hot topics and trends in Food Science and Technology.

Paid internship opportunity at the USDA-ARS:

The US Department of Agriculture's Environmental Microbial and Food Safety Laboratory located in Beltsville, Maryland has numerous paid internship opportunities available for the summer of 2022 and beyond.

Research objectives may include but not limited to characterizing protozoan parasites and assess their transmission, characterizing pathogenic enteric bacteria in the environment, investigating the transport of pathogens from manure/feces via water and animal/insect

vectors, assessing the introduction, dissemination, persistence and survival of saprophytic vs. pathogenic enteric bacteria during growth, harvest, postharvest handling and processing of fresh fruits and produce, developing rapid and sensitive methods for the identification of specific food-borne pathogens as well as rapid nondestructive methods for the detection of biological and chemical contaminants on fresh fruits and produce and on food processing surfaces etc.

You can find details and submit application via:

<https://www.zintellelect.com/Opportunity/Details/USDA-ARS-2022-0193>

Career Opportunities at FDA - Bedford Park, IL

- FDA Postgraduate Research Engineer Fellowship - A description of the opportunity can be found at <https://www.zintellelect.com/Opportunity/Details/FDA-CFSAN-2022-20>
- FDA Postgraduate Chemist Fellowship - <https://www.zintellelect.com/Opportunity/Details/FDA-CFSAN-2022-18>
- FDA Postdoctoral Research Chemist Fellowship – Allergens - <https://www.zintellelect.com/Opportunity/Details/FDA-CFSAN-2022-17>
- FDA Postdoctoral Research Microbiologist Fellowship - <https://www.zintellelect.com/Opportunity/Details/FDA-CFSAN-2022-16>
- FDA Postgraduate Microbiologist Fellowship - <https://www.zintellelect.com/Opportunity/Details/FDA-CFSAN-2022-19>
- Goldbelt - Food Chemist (Metal Toxins) - https://www.talent.com/w/rnd-templateWhitepage/?id=0a8a80d28236&ost=true&source=joblist_partner_bulk&utm_medium=joblist_partner_bulk&ib=true

For more information about the positions, please contact Lauren Jackson, Ph.D. (Lauren.Jackson@fda.hhs.gov).

Upcoming Member Presentations:

Oral sessions of Dennis Cladis, Ph.D. for the IFT meeting:

- "Polyphenol safety: Current evidence, challenges, and opportunities"
Dennis Cladis, Ph.D., University of Minnesota.

Description: "Dietary polyphenols may have beneficial effects on human health, but there is a lack of data regarding the safety of high doses of polyphenols. This session will explore the current evidence for polyphenol toxicity, making the case that safety is key in establishing dietary guidelines for polyphenols."

Availability: The session will be recorded prior to the event and available online as part of the hybrid format of IFT22.

- "Dietary Phosphorus and Chronic Kidney Disease (CKD): Opportunities for the Food Industry"
Dennis Cladis, Ph.D., University of Minnesota.

Description: Chronic kidney disease (CKD) affects 10-15% of the population and is primarily treated by restricting dietary intakes of phosphorus, sodium, potassium, and protein, though there are very food products meeting these criteria. This session will

discuss the importance of restricting these nutrients in CKD while also presenting opportunities for the food industry to create products tailored to individuals with CKD.

Availability: The session will be recorded prior to the event as part of the "Research promotion opportunity" for early career scientists.

- "Is the future of nutraceutical and functional foods natural?"
Dennis Cladis, Ph.D. – Panelist

Availability: live Multi-Session Conversation. Details regarding session time, other panelists and moderators are not available at this time.

Poster for the International Association of Food Protection (IAFP) meeting:

- "Determination of antifouling capabilities of silane-treated wood"
Authors: Zachariah Vice, B.S., William deFlorio, M.S., T. Matthew Taylor, Ph.D., and Mustafa Akbulut, Ph.D.
Presenting Author: Z. Vice, B.S. Senior Author: T.M. Taylor, Ph.D.

Description: Wood is commonly used in the production of fresh fruits and vegetables, especially by smaller commercial growers. Some research has shown that silanes can usefully confer antifouling properties to the surfaces of porous organic food-contact surfaces, including wood. The purpose of this study is to determine the antifouling capabilities of silane-treated wood for use during fresh produce harvest against bacterial foodborne pathogens. Pine and oak boards were cut into 4 cm² coupons. Coupons were then treated with 1% (w/w) of a fluorinated silane or left untreated. Coupons were then placed in a multi-well plate in order to measure pathogen attachment to wood surfaces after 1, 4, and 8 hours post-pathogen application. All coupons were inoculated with 100 µL of bacterial inoculum with a target of 9 Log CFU/mL either *Salmonella enterica* or *Listeria monocytogenes*. At each sampling time, each coupon was rinsed using sterile PBS and subsequently collected. The rinsate was serially diluted and recovered cells enumerated following 24-48 hours incubation at 35 °C. Silane treatment for both woods produced significant reductions in pathogen attachment compared to controls for both pathogens. After allowing to attach for 1 hour, silane-treated pine produced a mean *Salmonella* attachment reduction of 61.44% (95% CI: ±15.84%); *L. monocytogenes* attachment reduction (72.06%; 95% CI: ±14.01%) was consistent to that of *Salmonella*. Treated oak produced similar results (*Salmonella* 50.02 ± 32.75% & *Listeria* 60.17 ± 16.90% [95% CI for both]). These data suggest silane-treatment of wood surfaces effectively helps to prevent pathogenic bacterial attachment to hard woods used in fruit and vegetable harvest.

Availability: IAFP Annual Meeting, Pittsburgh, PA, July 31-August 3

Oral and Poster Presentations of Lauren Jackson, Ph.D. (FDA) at the IAFP meeting:

- "The Codex process and recommendations for labeling of priority allergenic foods and ingredients derived from those foods"
Lauren S. Jackson, Ph.D., FDA

Description: " Food allergies have become a global public health priority in recent years. For packaged foods, undeclared allergens are the leading cause of product recalls in the U.S. The Codex Alimentarius Commission (CAC) first provided guidance on labeling of priority allergenic foods in 1999 recognizing 8 foods or food groups as the leading

causes of food allergy globally. Subsequently, regulatory authorities in numerous countries have developed labeling regulations for packaged foods. However, global regulatory approaches are variable from one country to another. In 2020, the FAO and WHO organized an ad hoc Joint Expert Consultation on Risk Assessment of Food Allergens under the auspices of the Codex Committee on Food Labeling (CCFL). Over the period from 2020 – 2021, this expert panel convened on multiple occasions to develop recommendations for consideration by CCFL and CAC on the global priority list of allergenic foods, thresholds or reference doses, and labeling strategies using thresholds or reference doses. This presentation will provide a summary of the recommendations from the FAO/WHO consultation.

Availability: The oral presentation will be part of a symposium entitled “Global Recommendations on Risk Assessment of Allergens from the Ad Hoc Joint FAO/WHO Expert Consultation”. The session will take place at the IAFP Meeting, Pittsburgh, PA, Tuesday, August 2, 2022: 10:45 AM - 12:15 PM

- “Variance estimations when measuring peanut and soy protein in discrete wheat flour samples”
Binaifer Bedford, M.S. (FDA), Girdhari M. Sharma, Ph.D. (FDA), Shizhen S. Wang, Ph.D. (FDA), Joshua Warren, B.S. (Illinois Institute of Technology), Sefat Khuda, Ph.D. (FDA), Rebecca Harris, M.S. (IIT), Sakshi Gandhi, M.S. (IIT), Paul Wehling, Ph.D. (ChemStats Consulting, LLC), Mark Arlinghaus, B.S. (General Mills), Thomas B. Whitaker, Ph.D. (NC State), Stuart J. Chirtel, Ph.D. (FDA) and [Lauren S. Jackson, Ph.D. \(FDA\)](#)

Description: Limited information exists on approaches for sampling grain that contains allergens due to agricultural commingling or cross-contact. The objectives of the work described in this poster were to 1) determine variance associated with quantitation of peanut protein (P) and soy protein (S) in wheat flour samples obtained by discrete sampling and 2) predict total variance (Vt) in P or S concentrations (mg/g) based on test portion size (Ns; grams) and number of aliquots analyzed (Na).

Availability: Poster Session 3. IAFP Meeting, Pittsburgh, PA, Wednesday, August 3, 2022: 8:30 AM - 3:30 PM.

Poster of Urvi Shah, M.S. at the IAFP meeting:

- “Validation of *Salmonella Typhimurium* MHM112 as a Surrogate for Inactivation of Pathogenic *Salmonella* using Plasma-Activated Water”

Authors: [Urvi Shah, M.S.](#), Jay Jackson, M.S., Qingyang Wang, Ph.D., Sophia Kathariou, Ph.D., Deepti Salvi, Ph.D.

Presenting Author: [Urvi Shah, M.S.](#), Corresponding Author: Deepti Salvi, Ph.D.

Description: Plasma-activated water (PAW) is generated by exposing water to cold atmospheric pressure plasma. PAW is an emerging sanitizer for food/food contact surfaces which has reactive nitrogen and oxygen species. The purpose of this study was to provide plasma scientists and the industry with a validated surrogate for pathogenic *Salmonella* inactivation with PAW. During PAW generation, the volume of deionized water (DI) being treated, plasma exposure time, and the distance between plasma jet nozzle and water surface play important role in determining physicochemical properties and inactivation efficacy.

Using a response surface methodology from our pilot study, two optimized conditions (#1: 250 mL, 15 min, 6.5 cm, and #2: 350 mL, 15 min, 4.5 cm) were chosen to generate PAW. Three PAW batches at each of these conditions were prepared consecutively and combined to make larger volumes to understand the effect of mixing and storage. The mixed batches were investigated immediately ($t_1 = 0$ min) as well as after storage ($t_2 = 25$ min) at 40 – 46 °C. The microbial cultures were grown on agar and suspended in tryptic soy broth. At both time points, 3 min PAW treatment of planktonic cells of *Salmonella* Typhimurium MHM112 (avirulent strain) and a *Salmonella* cocktail prepared using 6 pathogenic strains were evaluated in triplicate (student's t-test at $p < 0.05$).

There was no significant difference in inactivation by PAW at each time point between the avirulent strain and the pathogenic strains for both PAW processing conditions. In addition, the storage (25 min at 40 – 46 °C) did not change the microbial inactivation efficacy of PAW indicating that this strain can be used as a surrogate under all tested conditions.

The avirulent *S. Typhimurium* MHM112 can be potentially used as a *Salmonella* surrogate for PAW-mediated inactivation of *Salmonella* suspensions in broth.

Availability: IAFP Annual Meeting, Pittsburgh, PA, July 31 – August 3

Program Committee: Opportunity to have your presentations publicized to the Phi Tau Sigma membership

(Contributed by Lauren Jackson, Ph.D., President Elect and Chair Program Committee)

Do you have a presentation, symposium or technical session at IFT, IAFP, ACS, the Reciprocal Meat Conference (RMC) of AMSA, or any other meeting or conference in 2022? We would like to advertise these events in upcoming Phi Tau Sigma Newsletters.

Please provide the following information: Title of the presentation, Presenter (and terminal degree, and affiliation), Authors (with terminal degrees, and affiliations), Presentation Description/Summary, Meeting of which association; Date, Time, and Room number. Feel free to add any other pertinent information such as Moderator. You may not have the date, time, and room number yet, but send these as soon as you do to the email addresses below.

Please send the presentation/session information to Dr. Lauren Jackson (Lauren.Jackson@fda.hhs.gov) and copy Dr. Kathryn L. Kotula (kkotula@msn.com).

IFT FIRST 2022

IFT FIRST 2022 Annual Meeting and Expo will be held July 10-13, 2022, at McCormick Place, Chicago. A virtual option to attend will also be made available. More details on IFT FIRST 2022 can be found at <https://www.iftevent.org/>

Pins. Remember to bring and wear your Phi Tau Sigma lapel pin during any association meetings you attend.



Ribbons to attach to one's IFT badge will be available, at no charge, to Phi Tau Sigma Members in Good Standing (those who have paid their dues). There are two types of ribbons: those for regular members who have paid their annual \$20 student or \$40 professional member dues; and those for Lifetime Members, who have paid the one-time \$400 Lifetime Member dues:

PHI TAU SIGMA
Honor Society

PHI TAU SIGMA
Lifetime Member

Ribbons can be picked up in the registration area of the convention center at the ribbon desk. If you are not sure if you are a Member in Good Standing, look for your dues status on the cover email sent with this Newsletter.

Calendar:

->Phi Tau Sigma Chapter Schedule:

- October 25: Deadline to order Honor Cords and lapel pins to ensure delivery before Fall graduation dates
- March 15: Deadline for membership nominations to ensure decisions from the Membership and Qualifications Committee before the Annual Meeting
- April 1: Deadline to order Honor Cords and lapel pins to ensure delivery before Spring graduation dates
- August 1:** Deadline for Chapter annual reports

Reminder to all Chapters: In order to receive the *Certificate of Merit* or *Certificate of Excellence*, Chapters must submit their annual reports for evaluation by **August 1**. Please send your annual report to the current Chair of the Chapter Affairs Committee, Terri Boylston, Ph.D., (tboylsto@iastate.edu), with a copy to Dr. Kathryn L. Kotula (klkotula@msn.com).

->Phi Tau Sigma Scholarship and Awards Schedule:

- November 30: Deadline to submit nominations to the Awards Committee for the Dr. Daryl B. and Mrs. Dawn L. Lund Student International Scholarship.
- February 1: Deadline to submit nominations to the Awards Committee for the Phi Tau Sigma Special Recognition Award, the Phi Tau Sigma Student Achievement Scholarship, the Dr. Gideon "Guy" Livingston Scholarship, the Phi Tau Sigma Founders' Scholarship, and the Food Regulation Scholarship.
- April 1: Deadline to submit nominations to the Awards Committee for the Phi Tau Sigma Outstanding Chapter of the Year Award.

Send completed nomination forms to both Awards Committee Chair Lili He, Ph.D. (lilihe@foodsci.umass.edu) and Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com). (More information: <http://www.phitausigma.org/awards/>)

->Phi Tau Sigma – AMSA 'Research with Impact' Scholarship Schedule:

April 19: Deadline to submit nominations for the Phi Tau Sigma – AMSA Research with Impact Scholarship.

Send completed nomination forms to Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com), and the AMSA Youth Programs Manager (scholarships@meatscience.org). (More information: <http://www.phitausigma.org/awards/>)

->January 14: Deadline to submit Nominations for the **Dr. Carl R. Fellers Award**, and other IFT Achievement Awards.

(More information: <https://www.ift.org/community/awards-and-recognition/achievement-awards>)

->Election schedule:

December 15: Nominations due to Nomination and Election Committee (Liz Boyle, Ph.D., Chair, lboyle@ksu.edu)

January 2: Nominations and Elections Committee convenes

January 21: Deadline for Nomination and Elections Committee to submit slate of candidates to President

February 5: Last date on which nominations by petition may be submitted

March 2: List of candidates will be emailed to the Members for balloting

March 30: Deadline for casting ballots

April 8: Deadline for tabulation of ballots

May: Newly elected individuals announced to the Membership in the May Phi Tau Sigma Newsletter

->Phi Tau Sigma Annual Meetings and Events: 2022

June 19: Deadline for early bird registration for the Phi Tau Sigma Networking Dinner

June 24: Deadline for late registration for the Phi Tau Sigma Networking Dinner

July 7: Phi Tau Sigma Awards Ceremony (virtual)

July 12: Phi Tau Sigma Networking Dinner 6:30pm
Italian Village Restaurant, 71 W. Monroe St., Chicago

->July 10-13, 2022, Institute of Food Technologists Annual Meeting

->June 25-28, 2023 - Reciprocal Meat Conference of the AMSA, St. Paul, Minnesota

Lifetime Member Tribute: Dr. Minwei Xu

Assistant Professor, North Dakota State University

Why did you become a Lifetime Member?

I joined Phi Tau Sigma in 2018, the third year of my Ph.D. study. It is a great Honor Society that can help students improve their connections in the Food Science area. I started to realize that I joined too late as a member. I think I will keep working in the Food Science area for the rest of my life. It is good to keep connections with colleagues and students. A Lifetime Membership will help me keep pace with the development of Food Science. I will dedicate myself to the Society of Food Science.



Education:

Ph.D. Cereal Science, North Dakota State University.
Aug. 2016-Dec. 2019.

MSc. Fermentation Engineering, Jiangnan University, China
Sep. 2007-Jun. 2009

B.S. Bioengineering, Tianjin University of Technology, China *Sep. 2003-Jun. 2007*

Experience/Accomplishments:

Assistant Professor	North Dakota State University	<i>July 2021-present</i>
Food Scientist	Northern Crops Institute	<i>Feb. 2020-July 2021</i>
Director	Department of Food Inspection, Wuxi Test Center of Supervision and Inspection on Product	<i>Aug 2011-July 2016</i>
Inspector	Department of Food Inspection, Zhenjiang Test Center of Supervision and Inspection on Product	<i>May 2010-July 2011</i>
Assistant Manager	Department of Technology. Zhejiang Shangda Water Co., Ltd.	<i>July 2009-Apr 2010</i>

Areas of Expertise:

Food Processing, Cereal Science, Food Analysis, and Food Chemistry

Awards and Honors (selected list):

- The 2nd place winner of Food Chemistry Division Oral Competition, IFT, 2019
- Student Poster Award, AOCS, 2019
- Frank Bain Graduate Student Scholarship, NDSU, 2019-2020
- MNIFT Graduate Student Award, IFT, 2018-2019
- MNIFT Travel Award, IFT, 2018-2019
- The Honored Student Award, AOCS, 2018-2019
- MNIFT Graduate Student Award, IFT, 2017-2018
- MNIFT Travel Award, IFT, 2017-2018
- MNIFT Scholarship, NDSU, 2017-2018
- Lipid Oxidation and Quality Division Student Travel Grant, AOCS, 2018

Personal: Family, Interests, Hobbies:

My wife is a postdoc at North Dakota State University in the area of Beer Brewing. We have two daughters. One is 8 years old and one is 8 months old. We enjoy gardening, fishing, and signing.

Advice to university students and career food scientists and technologists:

1. Have good communication with your advisor/supervisor;
2. Keep good teamwork;
3. Manage your time properly.

Chapter News:

Phi Tau Sigma Buckeye Chapter successfully held the annual Phi-ve K Fun Run/Walk 2022

(contributed by: Shengyue Shan, Ph.D. Candidate at The Ohio State University, Phi Tau Sigma Buckeye Chapter President)

On May 19th, Phi Tau Sigma Buckeye Chapter organized the annual Phi-ve K Fun Run/Walk. This is the second Fun Run since its establishment in 2021, which was a great success in enhancing the engagement among members and introducing Phi Tau Sigma more broadly to the Department of Food Science and Technology at The Ohio State University (OSU). This event was organized by Buckeye Chapter President Shengyue Shan (Ph.D. Candidate) and Treasurer Kym Man (Ph.D. Candidate), and took place at the Columbus Campus of OSU. Twenty five students, faculty and staff from the Food Science Department were attracted to the event. Four achievements awards were granted in this race: The Speediest Student - 1st: Daniel Do (Ph.D. student), 2nd: Zhong Dong (Ph.D. student), 3rd: Stephanie Almquist (Ph.D. student), honorable mention: Chong Teng (Ph.D. Candidate); The Most Impressive Faculty - Dr. Dennis Heldman (Professor); The Most Active Staff - Miss Alex Mobley (academic program coordinator); The Most Powerful Power Walker - Fenfen Tang (Ph.D. Candidate).

The event started at 4:30 pm outside the Food Science and Technology Building. Summer in Central Ohio has just started, but the power of heat and the sunbeam was already not to be underestimated. The weather seemed to only fuel the participants enthusiasm. Prior to the race, President Shengyue Shan explained the 5-km course briefly, pointed out that the directions had been chalked on the sidewalk in the course, and reminded everybody to stay hydrated and safe during the run. Several participants had been training diligently for the Fun Run over the past year, and they dashed from the starting line as soon as the race started. Ph.D. student Daniel Do arrived at the finish line within an amazing 16 minutes 9 seconds and ranked the first place, followed by Ph.D. students Zhong Dong, Stephanie Almquist and Ph.D. candidate Chong Teng. Dr. Dennis Heldman, who serves as a senior advisor for Buckeye Chapter, made to the destination within 38 minutes 40 seconds, insisting finishing a 5-km round course. The academic program coordinator, Miss Alex Mobley, achieved her goal and finished the run within 25 minutes. After the race, everyone enjoyed the music, iced water, coke, popsicles and snacks provided by Buckeye Chapter, while chatting with the coworkers. All the participants received a notepad with a special Phi Tau Sigma Buckeye Chapter design as a gift, and additionally, the winners received a trophy and medal as their awards.

The 2022 Annual Phi Tau Sigma Buckeye Chapter Phi-ve K Fun Run was a fun summer experience shared by the Department of Food Science and Technology at The Ohio State University and has raised awareness of joining Phi Tau Sigma among the students. In the future, Buckeye Chapter will continue to hold the signature Fun Run as a reoccurring event that will bring the Phi Tau Sigma community closer together and explore other opportunities of events that will benefit the students in the department.



Left: Pre-run group picture of 2022 Phi Tau Sigma Buckeye Chapter Phi-ve K Fun Run.
Right: The awardees of The Speediest Student, Daniel Do, Ph.D. student (1st place, pictured second from the right) and Stephanie Almquist, Ph.D. student (3rd place, pictured second from the left) with Buckeye Chapter President Shengyue Shan, Ph.D. Candidate (pictured right) and Treasurer Kym Man, Ph.D. Candidate (pictured left)



Left: The participants are leaving the starting line.
Right: The awardee of The Speediest Student, Zhong Dong, Ph.D. student (2nd place, pictured left)



Left: The awardee of The Most Impressive Faculty, Dr. Dennis Heldman (pictured right) is showing his trophy and medal.
Right: The Most Powerful Power Walker, Fenfen Tang, Ph.D. Candidate (pictured middle)

Member News:

AMSA Student Teaching “Cleaver” Award



Jacob R. Tuell, Ph.D., from Purdue University has been selected as the 2022 honoree of the **AMSA Student Teaching “Cleaver” Award** at the Ph.D. level. The award aims to highlight graduate students who help to create valuable and unique learning experiences for their students. In his time at Purdue, Jacob served as a teaching assistant for Dr. Brad Kim for the undergraduate Meat Science course in 2021 and 2022. In that role, he worked with groups of students on their semester projects focused on addressing a “hot topic” within the meat industry, such as the role of meat in the diet and environmental impacts. Further, Jacob served as a mentor for multiple undergraduate students for their research projects in the area of fresh meat quality. Jacob was recognized with the award in June at the 2022 Reciprocal Meat Conference in Des Moines, Iowa.

Doubly Honored: Morgan Denzer, M.S., Ph.D. student

As the honoree of the **Robert Cassens Ph.D. Scholar Award**, Morgan Denzer, M.S., Ph.D. student, plans to attend the 2022 American Society of Animal Science Annual Meeting and 2022 IFT FIRST Annual Event to present her research. At the IFT FIRST Annual Event, she has been selected to present her research on the Research Showcase Stage in addition to the poster session and competition. "Both events will allow me to develop connections through the industry and gain knowledge relating to animal, meat, and food sciences."

Receiving the **C. Boyd Ramsey Scholar Award** helped Morgan to attend the 2022 Reciprocal Meat Conference where she presented her research. Morgan stated "While at RMC, I am excited to network and reciprocate with students, industry members, and academics about research and the future of the meat industry."

Both scholar awards allow Morgan to continue her research and Ph.D. while at Oklahoma State University. "I am excited to continue to explore the effects of oxygen on the biochemical attributes and color stability of *longissimus lumborum*, *psoas major*, and *semitendinosus* muscles and share my research. I am grateful for the support of the American Meat Science Association during graduate school and look forward the experience and knowledge I will gain from the awards."



AMSA International Lectureship Award Honoree:

Dr. Youling Xiong, a Lifetime Member of Phi Tau Sigma, was selected as the 2022 **AMSA International Lectureship Award** honoree by the American Meat Science Association. At the 75th AMSA Reciprocal Meat Conference (RMC), Dr. Xiong was honored during the international lectureship presentation entitled "*Oxidation and Muscle Protein Functionality: An Evolutionary Global Perspective*" on Monday, June 13, 2022, in Des Moines, Iowa, during the Concurrent Session over Oxidation of Muscle Proteins sponsored by Texas Tech University. The AMSA 75th RMC was co-hosted by Iowa State University, Kemin Food Technologies, the National Pork Board, and Hormel Foods Corporation.

Dr. Xiong is a University Research Professor at the University of Kentucky. He has been a professional member of AMSA since 1990. His meat science research focuses on muscle protein chemistry and functionality and ingredient technologies to enhance the functional performance of meat protein including water binding, gelation, and emulsification. His pioneering and discovery research on meat protein oxidation that impacts protein functionality is well regarded and influential for meat processing and ingredient innovation, for which he has been invited to speak at more than 100 international conferences held in 15 different countries. Professor Xiong has taught Meat Science, Animal Derived Foods,



Advanced Meat Science, and Food Proteins to more than 1,000 students. Dr. Xiong has extensively collaborated with meat scientists around the world, from Asia (China, Japan, Thailand, Taiwan, and South Korea), Europe (Italy, France, Spain, Sweden, Portugal, Slovakia, and Poland), and North and South America (Canada, USA, Mexico, and Brazil) providing valuable expertise and advice to young researchers and students in those countries. Of particular note, Dr. Xiong is instrumental in fostering the interaction and collaboration between AMSA members and Chinese meat scientists and the meat industry.

Dr. Xiong is a visionary meat scientist and prolific researcher. His productive protein research program has produced 310 peer reviewed publications in meat science and food science journals, with most addressing meat quality, shelf-life, and muscle protein functionality. For his sustained achievements and outstanding service to AMSA and the meat industry, he has been recognized with several prestigious awards from AMSA, including the Achievement Award (1995), Distinguished Research Award (1999), and Signal Service Award (2021). In addition, he is the recipient of many other national and international accolades, notably Young Scientist Award of American Chemical Society (1997), Lectureship Award of the Food Chemistry Division of IFT (2012), Tanner Award for Most Cited Paper in Journal of Food Science (2020), and Bertebos Prize of the Royal Swedish Academy of Agriculture and Forestry (2015). Dr. Xiong is a former Section Editor of Journal of Muscle Foods (2007-2009) and Scientific Editor of Journal of Food Science (2012-2019). He currently serves as Associate Editor for Food Bioscience (2012-present). He is an elected Fellow of IFT (2010), Fellow of ACS Agricultural and Food Chemistry Division (2012), Fellow of the International Academy of Food Science and Technology (2016), and Fellow of AMSA (2021).

The International Lectureship Award is sponsored by PIC and was established to honor an individual for internationally recognized contributions to the field of meat science and technology.

"Meat production may be culturally related and region-dependent, but meat science research is universally connected and does not have a boundary," remarked Dr. Xiong.

[Modified from: <https://www.linkedin.com/pulse/youling-xiong-named-2022-amsa-international-/?trackingId=zLAWHFFO8YBDSCa4upl0Tw%3D%3D>]

ASAS Fellow Award for Research from the American Society of Animal Science

Dr. Chris R. Calkins, Lifetime Member of Phi Tau Sigma, was the recipient of the American Society of Animal Science **ASAS Fellow Award for Research**, presented during the 2022 joint American Society of Animal Science-Canadian Society of Animal Science Annual Meeting and Trade Show which occurred June 26-30, 2022.

Dr. Calkins, a Professor Emeritus at the University of Nebraska, has several hundred peer-reviewed publications, holds 6 patents, and has received millions in research support. He co-led the beef muscle profiling project, which developed the flat iron steak and other new meat cuts, with an estimated annual impact of \$1.5 billion. For 40 years Dr. Calkins taught



undergraduate students and he has been the major professor to 58 graduate students. He has earned the ASAS Meat Research and the Industry Service Awards, the Distinguished Meat Research and Fellow Awards from the American Meat Science Association (and served as AMSA President), and has been named Educator of the Year by the North American Meat Processors. In 2019 he was inducted into the Meat Industry Hall of Fame. He is a NACTA Teacher Fellow. Dr. Calkins is a world-renown speaker and has given dozens of invited presentations around the world.

The ASAS Fellow Award for Research recognizes a member of ASAS who has rendered very distinguished service to the animal industry and/or to the American Society of Animal Science and had continuous membership in the Society for a minimum of twenty-five years. This award is sponsored by the American Society of Animal Science.

[Modified from: <https://animalscience.unl.edu/calkins-receives-asas-fellow-award-research-american-society-animal-science-0?fbclid=IwAR1yRy9eBcyKH2xBSD0W0Dgdd6HYv4fWTYP2LNxT62F1nRVDLA6jdv48j0Y>]

2022 IFT Achievement Awards

Collaborative Research Grant in Honor of Marcel Loncin

Honors and provides research funding for a scientist or engineer conducting basic chemistry/physics/engineering research applied to food processing and improvement of food quality.



Hang Xiao, Ph.D., $\Phi\tau\Sigma$ Lifetime Member
University of Massachusetts

Hang Xiao, Ph.D., a world-renowned expert on encapsulating nutraceuticals using nanoemulsions, is awarded the 2022 Collaborative Research Grant in Honor of Marcel Loncin. His proposed research, deemed by the awards jury to represent a step toward benefiting human health, aims to improve the bioavailability and safety of pterostilbene, a derivative of resveratrol and a potent anti-inflammatory and anticancer phenolic compound found in blueberries and grapes. He will also examine characteristics of nanoemulsion particles and their effect on bioavailability of nutraceuticals and train a young scientist and a graduate student as part of this research.

Excellence in Education Award in Honor of William V. Cruess

Awarded for achieving excellence in teaching food science and technology.



Rafael Jiménez-Flores, Ph.D., $\Phi\tau\sigma$ Lifetime Member
The Ohio State University

Rafael Jimenez-Flores, Ph.D., recipient of the 2022 Excellence in Education Award in Honor of William V. Cruess, received nominations from students and colleagues that reflected his mastery of the subject matter, his ability to communicate effectively and enthusiastically, and his ability to inspire and advise students. For example, students love his “storytelling” about “how stuff is being applied in the industry” because “he has lots of current information about the dairy industry.” He has also been recognized as 2017-2018 Food Science Club Professor of the Year by the Ohio State Food Science Club and received the 2019 NACTA Educator Award and the 2003 Milk Industry Foundation/Kraft Outstanding Teaching Award from the American Dairy Science Association.

[Articles slightly modified from: <https://www.ift.org/community/awards-and-recognition/achievement-awards>]

How/Why I came to be in Food Science/Technology

(contributed by Adam Baker, Ph.D.)

Sports are what led me to food science. I grew up playing sports, of which my favorite was baseball. Late nights and long summer days. I played throughout high school and the sport led me to the University of Arkansas-Fort Smith where I continued on the diamond. I majored in Biology, and took a food microbiology course with Dr. Carl Gilbert, who did his doctorate in poultry food safety at the University of Arkansas. At this point I was pre-dental, but after a few more microbiology courses, I gained more interest in microbiology. On top of that, I didn’t get into dental school in Memphis or Baton Rouge (sky was falling), which led me to graduate school.



It was as simple as looking at the courses offered and focus areas of the Department of Food Science at the University of Arkansas and being intrigued by the area of food safety. Once I graduated from UAFS, I logged some hours in Dr. Steven Ricke’s lab (summer of 2013) helping an astounding microbiologist at UA Dr. Peter Rubinelli, on food safety projects. I was fortunate to be enrolled in a M.S. program there and haven’t turned back. After completing my Ph.D. at the University of Florida, I am back in my hometown of Fayetteville performing research in food safety as a postdoc. As many of other food scientists, my journey has led me to great places, great friendships, and a great future. I love baseball. Anyone who knows the sport well knows that the little things make all the difference, just like in life.

We are pleased to have started this new series of articles in the Newsletter. Please share your story with us. Contact the Newsletter Editor at: klkotula@msn.com.

Dues Reminder:

Your dues status is listed in the cover email of this Newsletter. If you have not already paid your dues, Phi Tau Sigma Member dues are \$40 per year, but students get a discount so their dues are \$20 per year. Lifetime Membership is \$400 (just once). Please access the Phi Tau Sigma Membership Dues Page at: <http://www.phitausigma.org/membership-dues/>. Proceed on to pay by PayPal. Be sure to include your address. Once you are successful with your PayPal payment, you will receive a receipt. If you do not receive a receipt, please try again.

Dues can also be paid by check payable to **Phi Tau Sigma**, (made with U.S. Funds and drawn on a U.S. Bank). (Do not send a money order.) Do **not** write the check to Kantha. Mail your check to: **Kantha Shelke, Ph.D.** (Do **not** address to Phi Tau Sigma.)
33 West Ontario, Suite 57F, Chicago, IL 60654.
Send an email to Kantha to let her know to expect your check (kantha@corvusblue.net).

You are welcome at any time to give a donation to the Dr. Carl R. Fellers Award Fund, the Dr. Gideon "Guy" Livingston Scholarship Fund, Phi Tau Sigma Student Achievement Awards Fund, Phi Tau Sigma Special Recognition Award Fund, Dr. Daryl B. and Mrs. Dawn L. Lund Student International Scholarship Fund, Phi Tau Sigma Founders' Scholarship, Phi Tau Sigma Chapter of the Year Award, the Phi Tau Sigma – AMSA 'Research with Impact' Scholarship Fund, the Program Fund, or the General Fund. <http://phitausigma.org/store/>
Scroll down to Donate and click the yellow Donate button.

We also ask each Chapter to send a list of their current, and lapsed, members along with contact information to the Chapter Affairs Committee Chair, Terri Boylston, Ph.D. at: tboylsto@iastate.edu, to help ensure our records are accurate.

Phi Tau Sigma Store:

Phi Tau Sigma has an online store. Items featured include Honor Cords, Official Lapel Pins, Banners (podium and wall/table), Annual and Lifetime Member dues, printed Certificates of Membership, and an opportunity to make tax deductible donations to Phi Tau Sigma. The Society Store can be found by going to www.phitausigma.org/store.

Support Phi Tau Sigma through AmazonSmile:

If you shop at Amazon, please register Phi Tau Sigma as your charity through AmazonSmile (<https://smile.amazon.com/>). There is also a mobile app that one can access. Instructions for the mobile app can be found at: <https://www.amazon.com/b?ie=UTF8&node=15576745011>.



The AmazonSmile Foundation will then donate 0.5% of the purchase price of eligible products to Phi Tau Sigma. This may not sound like a lot, but it adds up. Be sure to enter Amazon through AmazonSmile every time you shop (<https://smile.amazon.com/>). **Thank you!**

Editorial: Phi Tau Sigma Annual Events = Opportunities

The Program Committee, led by Dr. Lauren Jackson, has worked very diligently on this year's program which includes our Annual Business Meeting and Awards Ceremony and a Phi Tau Sigma Networking Dinner.

The Annual Business Meeting and Awards Ceremony, organized by the Awards Ceremony subcommittee of the Program Committee, will be **presented virtually on July 7, 2022 at 2pm eastern, 1pm central, 12 noon mountain, and 11am pacific times, and will available on our website afterward.** Everyone, Phi Tau Sigma members or not, is invited. Please attend and support our honorees.

Also organized by Dr. Lauren Jackson, and new to Phi Tau Sigma this year, is the Phi Tau Sigma Networking Dinner, on Tuesday, July 12, 2022, 6:30 pm at the Italian Village Restaurant, 71 W. Monroe St., Chicago. Reservations required.

These are opportunities to learn about Phi Tau Sigma, our honorees, and get to know our members!

About Phi Tau Sigma Communications:

The Phi Tau Sigma Newsletter Committee includes: Kathryn Kotula, Ph.D., Editor-in-Chief, Chair (klkotula@msn.com); Claire Zoellner, Ph.D., Associate Editor (cez23@cornell.edu); Anthony W. Kotula, Ph.D.; Tianxi Yang, Ph.D., Research Co-Correspondent; Tiantian Lin, Ph.D., Research Co-Correspondent; Samruddhi Jadhav, M.S., Careers Correspondent; Kaavya.Rathnakumar, M.S., Chapter News Correspondent; Diane Schmitt, Ph.D., Member News Correspondent; Ashwini Wagh, Ph.D.; Ravi Tadapaneni, Ph.D.; Damla Dag, M.S. (Ph.D. student), Social media Co-Correspondent; Sonali Raghunath, M.S. (Ph.D. student), Social Media Co-Correspondent; Lily Yang, Ph.D., Social media Co-Correspondent.

Please be responsive to their inquiries for information for the Newsletter.

Documents:

Phi Tau Sigma Documents can be found on our website at: www.phitausigma.org.

Phi Tau Sigma Membership Nominations

<http://phitausigma.org/wp-content/uploads/2021/07/Phi-Tau-Sigma-Nomination-2022.doc>

<http://phitausigma.org/wp-content/uploads/2021/07/Phi-Tau-Sigma-Nomination-2022.pdf>

Phi Tau Sigma Scholarships and Awards Forms

<http://www.phitausigma.org/awards/>

Phi Tau Sigma Constitution and By-Laws

<http://www.phitausigma.org/constitution/>

<http://www.phitausigma.org/bylaws/>

Phi Tau Sigma Mentorship Program

<http://www.phitausigma.org/mentorship/>

Sponsors, Donors, and Contributing Partners:

Phi Tau Sigma accepts contributions and has a variety of available sponsorship opportunities, as well as the General fund and Program fund.

Phi Tau Sigma is a non-profit 501(c)(3) charitable organization, so your contributions are tax deductible to the extent provided by U.S. law.

Contributions may come from, but are not limited to, Corporations, Companies, Universities, Government agencies, Associations, Consultants, and individuals.

Contributions are appreciated in any amount, and can be made by way of the Phi Tau Sigma website (<http://phitausigma.org/store/> Scroll down to Donate and click the yellow Donate button, or by going directly to PayPal (https://www.paypal.com/donate?hosted_button_id=QTA7NUHUEEPP2). Contributions by check (written from a US bank) can be made by sending to our Treasurer: Kantha Shelke, Ph.D., 33 West Ontario, Suite 57F, Chicago, IL 60654. Please write "Sponsorship", "Donation", "Contributing Partner", etc. in the subject line. [A Sponsorship covers the cost of the honorarium and the administrative costs (PayPal, plaque, postage). A Donation covers only the cost of the honorarium. The Contributing Partners program is described below.]

Contributions of \$500 or more will be recognized publicly by the Society at the annual meeting, on the Phi Tau Sigma website, in printed material associated with relevant programs and events, and in the monthly Phi Tau Sigma Newsletter. Endowments are also accepted.

Contribution opportunities are available for the Phi Tau Sigma Special Recognition Award, Phi Tau Sigma Student Achievement Award (up to 3 will be awarded), the Dr. Gideon "Guy" Livingston Scholarship Fund, the Phi Tau Sigma Founders' Scholarship, the Dr. Daryl B. and Mrs. Dawn L. Lund Student International Scholarship Fund, and the Phi Tau Sigma Outstanding Chapter of the Year Award. Donations can be made towards the awards and scholarships listed above (on a 'first come' basis), as well as the Program fund (which includes the Phi Tau Sigma Awards Ceremony) and the General fund.

Phi Tau Sigma has a **Contributing Partners Program** with five levels of sponsorships as described below. The Contributing Partner receives all of the benefits in the previous levels, plus the addition of the benefit listed for that level. (<http://www.phitausigma.org/sponsor/>)

Bronze (\$5,000)

- Company listing in the "Donors and Sponsors" section of the Phi Tau Sigma Newsletter.
- Recognition with company name on www.phitausigma.org.
- Prominent recognition at all major Phi Tau Sigma events.

Silver (\$10,000)

- Bronze benefits.
- Posting your company's job openings and internships in the Phi Tau Sigma Newsletter.

Gold (\$15,000)

- Silver benefits.

- Acknowledgement of sponsorship and placement of corporate logo on plaque or scholarship/award memorabilia.

Platinum (\$20,000)

- Gold benefits.
- A press release associated with significant contributions, distributed to allied professional and trade associations for circulation to their membership via their publications, e-news and/or listservs.
- Complimentary access to student resume database.

Diamond (\$25,000)

- Platinum benefits.
- Prominent multi-year listing on the Phi Tau Sigma website as a sponsor of an Endowed Program.

Some corporations will match individual contributions of their employees, so check with your company about matching funds.

For more information contact the Treasurer, Kantha Shelke, Ph.D. (kantha@corvusblue.net), or the Executive Director, Kathryn L. Kotula, Ph.D. (klkotula@msn.com). Please write "Contribution" in the subject line.

2021-2022 Contributing Partners:

Hawkins, Inc. is a progressive concern that manufactures and distributes specialty chemicals and provides functional solutions for a wide variety of industries. The Food Ingredients Group is a leading manufacturer of innovative pathogen control technologies and ingredients for the food industry. The formation of Ingredient Works, an entity conceived to capitalize on expertise in functional ingredient applications, food industry knowledge, technical service, and an extensive product portfolio, is focused on the comprehensive science of shelf-life, providing customized solutions to both the common and the highly complex issues faced every day by food manufacturers. The ultimate goal for the Hawkins Food Ingredient Group is to re-define the concept of shelf life and become a complete solution provider to the food industry. (Contribution to sponsor the Phi Tau Sigma Founders' Scholarship, and to sponsor the new Phi Tau Sigma – AMSA Research with Impact Scholarship and its endowment.) **Hawkins, Inc. is a Silver level Contributing Partner.**



Food Ingredients Group 

Dr. Daryl and Mrs. Dawn Lund. Dr. Lund is past President of Phi Tau Sigma, Lifetime Member, past Treasurer, current Assistant Treasurer, and an Emeritus Professor, University of Wisconsin-Madison. (Contribution to endow the Dr. Daryl B. and Mrs. Dawn L. Lund Student International Travel Scholarship.) **The Lunds are a Platinum level Contributing Partner.**

Catherine Adams Hutt, Ph.D., RD and Peter Barton Hutt, LL.B., LL.M., Phi Tau Sigma Lifetime Members. Catherine is a food safety and regulatory consultant and expert witness with RdR Solutions, and Peter is an attorney with Covington and Burling. Both are IFT Fellows. (Contribution for the Catherine Adams Hutt, Ph.D., R.D. and Peter Barton Hutt, LL.B., LL.M. Food Regulation Scholarship) **The Huttts are a Platinum level Contributing Partner.**

2021-2022 Sponsors and Donors:

Dr. Fergus Clydesdale, a Lifetime Member of Phi Tau Sigma, is the Distinguished Professor and Director of the UMass Food Science Policy Alliance, University of Massachusetts Amherst and a member of Phi Tau Sigma since the 1960's. (Donation to the General Fund)

The **American Meat Science Association** (AMSA) works to cultivate a global community of professionals and students to discover, apply and communicate meat science and technology. An independent, objective, and credible voice for meat science and technology, AMSA is an organization recognized for its unmatched competence and commitment to attracting and developing meat industry leaders. We are an association that encourages our members' active participation and engagement, welcoming collaborative relationships with other groups and organizations.



Anthony W. Kotula, Ph.D., a Lifetime Member of Phi Tau Sigma, retired in 1992 as a Supervisory Food Technologist after 38 years of service at the Agricultural Research Service, USDA; 25 years of which were as the Leader of the Meat Science Research Laboratory. (Donation towards the endowment for the Phi Tau Sigma-AMSA 'Research with Impact' Scholarship)

Anonymous donation towards the endowment for the Phi Tau Sigma – AMSA 'Research with Impact' Scholarship.

Dr. Rakesh K. Singh is a Past President of Phi Tau Sigma, a Lifetime Member; and is a Professor in the Department of Food Science & Technology at the University of Georgia, where he was department head from 2001 to 2020. He is also a Fellow of IFT, Fellow of IAFoST, Fellow of National Academy of Agricultural Sciences of India, and Editor-in-Chief of LWT – Food Science and Technology. (Sponsorship of a Phi Tau Sigma Student Achievement Scholarship.)

William Benjy Mikel, Ph.D., a Phi Tau Sigma past President and a longtime Lifetime Member. (Recurring donation towards the endowment for the Phi Tau Sigma-AMSA 'Research with Impact' Scholarship)

Kalsec® is the leading global producer of natural spice and herb flavor extracts, natural colors, natural food protection solutions, and advanced hop products for the food and beverage industry. Our mission is to capture the best nature has to offer, allowing us to provide creative solutions to those who seek safer, healthier, more flavorful and more attractive foods, beverages and functional ingredients. Operating for more than 60 years as a family-owned company, Kalsec now covers over 70 countries, with headquarters in Kalamazoo, Michigan, and with facilities in the United States, Europe and Asia. For more information, visit www.kalsec.com. (Sponsorship of the Dr. Daryl B. and Mrs. Dawn L. Lund Student International Travel Scholarship.)



Peter M Salmon, M.S., MBA, a Lifetime Member of Phi Tau Sigma, is the Founder of International Food Network, Inc., currently retired. (Sponsorship of a Phi Tau Sigma Student Achievement Scholarship.)

Dr. Mary K. Schmidl is a Past President of the Institute of Food Technologists (IFT), a Lifetime Member and a past President of Phi Tau Sigma, the Past President of the International Union of Food Science and Technology (IUFoST), and Adjunct Professor, Department of Food Science and Nutrition, University of Minnesota.

Dr. Theodore P. Labuza is a Lifetime Member of Phi Tau Sigma, a Past President of the Institute of Food Technologists (IFT) and an Emeritus Morse Alumni Distinguished Teaching Professor of Food Science and Engineering, Department of Food Science and Nutrition, University of Minnesota.

Dr. Claire Zoellner, Food Safety Scientist at iFoodDS, Associate Newsletter Editor, past Phi Tau Sigma Director, and Past Chair of *ad hoc* Student Relations Committee. (Donation towards a Phi Tau Sigma Achievement Scholarship)

Dr. Rodrigo Tarté, a Lifetime Member of Phi Tau Sigma, and President of Phi Tau Sigma, is an Assistant Professor of Animal Science and of Food Science & Human Nutrition at Iowa State University, and President and President-Elect of Phi Tau Sigma. (Donation towards the endowment for the Phi Tau Sigma – AMSA 'Research with Impact' Scholarship.)

Robert Cassens, Ph.D., Professor Emeritus, University of Wisconsin, and long-time member of AMSA; and **Martha Cassens, M.S.**, a long-time member of AMSA, a Lifetime Member and Director of Phi Tau Sigma, and Vice President of Product Innovation, Development & Quality at ACH Food Co. Inc. (Donation in honor of Dr. Anthony Kotula towards the endowment for the Phi Tau Sigma – AMSA 'Research with Impact' Scholarship.)

Dr. John H. Litchfield, a Lifetime Member of Phi Tau Sigma, is an Adjunct Professor of Food Science and Technology at The Ohio State University and a member of Phi Tau Sigma since the 1970's. (Donation to the General Fund).

Anonymous donation towards an Achievement Scholarship.

Anonymous donation towards the endowment for the Phi Tau Sigma – AMSA 'Research with Impact' Scholarship.