



The Honor Society of Food Science and Technology

## ***Phi Tau Sigma Newsletter*** *May 2022*

### **News:**

#### **Election Results:** *New Phi Tau Sigma Leadership:*

The Election results have been tabulated and the new Phi Tau Sigma Leadership members are:

President-Elect: Terri Bolyston, Ph.D. (Iowa State University)

Directors:

- Adam Baker, Ph.D. (University of Arkansas);
- Elizabeth M. Grasso-Kelley, Ph.D. (U.S. Food and Drug Administration);
- Martha Cassens, M.S. (ACH Food Companies, Inc.);
- Mary K. Schmidl, Ph.D. (University of Minnesota)

We had an extremely good turnout of 59% of members in good standing having voted.

Congratulations to the new members of the Leadership team! We look forward to working with you.

The proposed changes to the Constitution were ratified with 99.2% of the votes.

A record number of members expressed interest in volunteering for the various committees within Phi Tau Sigma. Committee members will be notified once the 2022-23 committee membership lists are finalized. Thank you to all that volunteered for committee work.

### **Students about to Graduate:**

Please remember to forward your new contact information (especially your new or an alternate email address) to the Executive Director ([klkotula@msn.com](mailto:klkotula@msn.com)).

*Thank you, and Congratulations on your graduation!*

## 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 few 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 cm<sup>2</sup> 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 rinseate 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:  $\pm 15.84\%$ ); *L. monocytogenes* attachment reduction (72.06%; 95% CI:  $\pm 14.01\%$ ) was consistent to that of *Salmonella*. Treated oak produced similar results (*Salmonella*  $50.02 \pm 32.75\%$  & *Listeria*  $60.17 \pm 16.90\%$  [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.

## 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 send us your presentation/session information by the deadlines below, or as soon as you have it. (Keep in mind that publication dates are one month after the deadline given below.):

IFT - April 1, 2022

IAFP - May 1, 2022

RMC - April 1, 2022

ACS - June 1, 2022 (for Fall ACS meeting)

Other conferences/meetings - Please provide information at least 2 months prior to the conference or as soon as the information is available.

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](mailto:Lauren.Jackson@fda.hhs.gov)) and copy Dr. Kathryn L. Kotula ([klkotula@msn.com](mailto:klkotula@msn.com)).

## 2022 Reciprocal Meat Conference Registration is Open



AMSA is excited to announce that registration for the 75<sup>th</sup> RMC is open! Please join us **June 12-15, 2022**, in Des Moines, IA, as we come together to celebrate the 75 years of meat science heritage! The AMSA 75<sup>th</sup> 2022 RMC is co-hosted by Iowa State University, Kemin Food Technologies, the National Pork Board, and Hormel Foods Corporation.



AMSA is excited to head back to Iowa for the 75th RMC, who also hosted the 25th RMC and the 50th RMC! "I am looking forward to bringing together meat scientists and industry professionals in Des Moines to highlight the latest scientific and technologic innovations in our field," Dr. Anna Dilger, 2022 RMC Chair.

2022 RMC Technical Program Will Include:

- Automation in the Global Meat Industry
- Meat in the Diet-How do we help get it on the plate?
- Oxidation of Muscle Proteins
- Supply Chain - Untangling the Issues
- New Approaches to Reducing Salmonellosis Across the Food Industry
- Modern Application of Classic Processed Meat Ingredients
- A Deep Dive into US Pork Business
- Pet Food Innovation for Pets and Pet Parents
- Abstract and ePoster Sessions
- And Over 25 Reciprocation Sessions

"The program we have planned spans the entire field of meat science, including basic muscle biology, automation in the meat industry, processed meats, food safety, and even a closer look at recent innovations in pet foods. There is truly something for everyone at RMC," stated Dr. Dilger.

More information regarding the schedule of events, registrations fees, hotels, and more are posted [online](#).

The early bird registration fee is \$675 for AMSA members, \$295 for student members, and \$950 for nonmembers, so register by **May 2, 2022**, to save!

[Click here for more AMSA 75th RMC registration information!](#)



## 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/>

## 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](mailto:tboylsto@iastate.edu)), with a copy to Dr. Kathryn L. Kotula ([klkotula@msn.com](mailto: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](mailto:lilihe@foodsci.umass.edu)) and Executive Director Kathryn L. Kotula, Ph.D. ([klkotula@msn.com](mailto: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](mailto:klkotula@msn.com)), and the AMSA Youth Programs Manager ([scholarships@meatscience.org](mailto: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](mailto: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

**->June 12-15, 2022 - Reciprocal Meat Conference of the AMSA, Des Moines, Iowa**

**->Phi Tau Sigma Annual Meetings and Events:**

2022: To be determined

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

# Student Research Synopsis: Impact of excipient emulsions made from different types of oils on the bioavailability and metabolism of curcumin in gastrointestinal tract



(Contributed by Haiyan Luo, Ph.D. student, and Hang Xiao, Ph.D., Department of Food Science, University of Massachusetts, Amherst)

**Featuring recently published work:** *Food chemistry*, Available online 30 August 2021, 130980  
<https://doi.org/10.1016/j.foodchem.2021.130980>

**Introduction:** Curcumin, a natural yellow-orange pigment, is mainly found in turmeric. It is commonly used as a food ingredient to provide color or flavor to foods, or as a nutraceutical to provide health benefits. However, the efficacy of curcumin as a potential nutraceutical is often limited by its poor bioavailability, and this poor bioavailability of curcumin has been demonstrated in numerous studies using cell models, animal models, and human trials (Cheng et al., 2001; Marczylo et al., 2007; Wahlang et al., 2011). Low bioavailability currently limits the potential of curcumin as a health-promoting dietary compound.

**Purpose:** The aim of this study was to investigate the role of excipient emulsions on the metabolism and bioavailability of curcumin using the Caco-2 cell model.

**Methods:** Oil-in-water excipient emulsions were prepared using different types of oils: corn oil, olive oil, and medium chain triglycerides (MCT). First, excipient emulsions containing three different oils (MCT, corn oil, olive oil) were produced and then submitted to an in vitro digestion model to obtain mixed micelles. Then, curcumin was combined with these mixed micelles and incubated in Caco-2 cell monolayer models to identify and quantify curcumin and its metabolites in the basolateral chamber. A curcumin suspension containing no mixed micelles was used as a control (Fig.1).

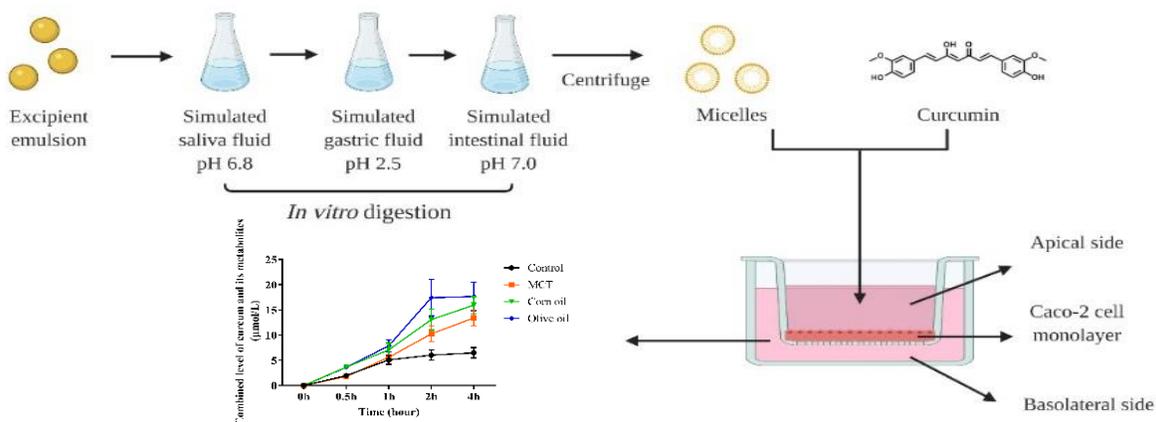


Fig. 1 The graphic abstract of excipient emulsion on the metabolism and bioavailability of curcumin using Caco-2 cell model.

**Results:** The excipient emulsions increased the transportation rate of curcumin across the Caco-2 cell monolayer and showed ability to protect curcumin from metabolism in the enterocytes, with the olive oil-based systems exhibiting the highest efficacy. In addition, most of curcumin metabolites were present as hexahydro-curcumin (HHC) and its conjugates. Our results show that excipient emulsions can improve curcumin bioavailability by increasing its trans-enterocyte absorption and by reducing its cellular metabolism. Moreover, they show that these effects depend on the type of oil used to produce them.

**Significance:** These findings have important implications for the rational design of lipid-based delivery systems to enhance the bioavailability of hydrophobic nutraceuticals like curcumin.

### References:

1. Cheng, A. L., Hsu, C. H., Lin, J. K., Hsu, M. M., Ho, Y. F., Shen, T. S., Ko, J. Y., Lin, J.T., Lin, B. R., Ming-Shiang, W., Yu, H. S., Jee, S. H., Chen, G. S., Chen, T. M., Chen, C. A., Lai, M. K., Pu, Y. S., Pan, M. H., Wang, Y. J., Tsai, C. C., & Hsieh, C. Y. (2001). Phase I clinical trial of curcumin, a chemopreventive agent, in patients with high-risk or pre-malignant lesions. *Anticancer Res*, 21(4b), 2895-2900.
2. Marczyklo, T. H., Verschoyle, R. D., Cooke, D. N., Morazzoni, P., Steward, W. P., & Gescher, A. J. (2007). Comparison of systemic availability of curcumin with that of curcumin formulated with phosphatidylcholine. *Cancer Chemother Pharmacol*, 60(2), 171-177. <https://doi.org/10.1007/s00280-006-0355-x>
3. Wahlang, B., Pawar, Y. B., & Bansal, A. K. (2011). Identification of permeability-related hurdles in oral delivery of curcumin using the Caco-2 cell model. *Eur J Pharm Biopharm*, 77(2), 275-282. <https://doi.org/10.1016/j.ejpb.2010.12.006>

## Lifetime Member Tribute: Gabriel Davidov-Pardo, Ph.D.

Associate Professor, Cal Poly Pomona

### Why did you become a Lifetime Member?

I became a Phi Tau Sigma member because I wanted to network and learn from successful professionals in the realm of Food Science and Technology. I also joined, because I wanted to support the Cal Poly Pomona students that are members of the Honor Society by sharing my expertise and passion for the profession and research. I became a Lifetime Member because in my view this is a lifetime commitment that I am happy to embark on and it made sense to pay the lifetime membership early on.

### Education:

Ph.D. Public University of Navarra, Pamplona, Spain (Food Science and Technology) (2012)

M.S. Public University of Navarra, Pamplona, Spain (Food Science and Technology) (2009)

B.S. Iberoamericana University, Mexico City, Mexico (Food Technology) (2007)



Experience/Accomplishments:

Associate Professor, Cal Poly Pomona (2021-Present)  
Assistant Professor, Cal Poly Pomona (2015-2021)  
Graduate program coordinator, NFS Department (2019-Present)  
Chair Scholarship Committee, SCIFTS (2021-2022)  
Postdoctoral Fellow, UMASS, Amherst. Dr. McClement's laboratory (2013-2015)  
Research Assistant, Public University of Navarra (2017-2013)

Areas of Expertise:

Food Nanotechnology, specifically delivery systems for hydrophobic bioactives and edible coatings. Food Product Development

Awards and Honors (selected list):

Huntley College of Agriculture Advisor of the Year award (2018-19).  
Wall of Cool 2019 (Celebrating Outstanding Opportunities for Learning)  
Huntley College of Agriculture Teacher of the Year award (2016-17)  
IFT Emerging Leaders Network Mentor 2020  
Advisor of research projects that have won first place in the 5th, 6th and 8th Annual Cal Poly Pomona Student Research Conference, the CSU research competition, and IFT.  
Advisor of students' product development teams that have won first, second or third place in the IFT, RCA, ASB, and SCIFTS product development competitions  
Awarded with the "Extraordinary" Ph.D. Thesis award in the field of Agricultural sciences.  
Postdoctoral fellowship. Institute of science, technology, and innovation of Mexico City.  
Winner of the contest Thesis in 3 minutes, Public University of Navarra  
Ph.D. with Cum Laude and international accreditation Public University of Navarra

Personal: Family, Interests, Hobbies:

I am lucky to be the husband of Penny, who has traveled and moved with me around the world. I am the proud father of Alex my six-year-old boy, and Jackie my three-year-old girl. I love spending time with my family, playing board games, watching movies and TV shows, listening to historic fiction novels, hiking, and watching and playing soccer (Go Osasuna!).

Advice to university students and career food scientists and technologists:

Enjoy the ride not just the destination, work to achieve your goals while also having fun.

Get involved in "extra" curricular activities in your department and on your campus.

Build your network while still in college and be professional inside and outside the classroom.

Develop your soft skills such as writing, presenting, and managing time skills.

Get an internship or research position, those experiences will help you guide your professional journey and look really good on your CV.

While conducting research, make sure to read as much as you conduct experiments in the lab or the field. The more you read, the easier will be to understand and explain your results.

## Chapter News: University of Minnesota Chapter

### ***Speedy Science 2022: 3-minute research presentation***

(Contributed by Priyanshi Chaturvedi, M.S. Student. Social Media Chair of University of Minnesota Phi Tau Sigma Chapter)

The University of Minnesota Chapter of Phi Tau Sigma - The Honor Society of Food Science and Technology organized Speedy Science for 2022 which challenged the participants to present their research within 3 minutes with little jargon. Students from North Dakota State University, South Dakota State University, University of Minnesota - Twin Cities, Iowa State University, and the University of Wisconsin - Madison were invited to participate. The competition witnessed a total of 36 participants. After careful consideration, 5 abstracts were selected that made it to the final competition. The participants were judged based on their content, time limit, and presentation skills. The winner of the competition was Holly Husband (M.S. Student) and the second and third places were secured by Radhika Bharathi (Ph.D. Candidate) and Bhaswati Chowdhury (M.S. Student) respectively. From the audience, Aditya Sharma (M.S. Student) and Anto Charles (Ph.D. Student) won the food science trivia organized between the presentations. The link to the event and individual presentations can be found on our YouTube channel [UMN Chapter Phi Tau Sigma](#)

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

Rebekah Miller, B.S. Graduate Student in Food Science and Technology at Virginia Tech



Food has been a primary passion of mine since before my memories begin. Watching Food Network and helping in the kitchen were my favorite activities since grade school. In high school, I entered the culinary program in the Career and Technology Center where I was trained to properly plan, prepare, serve, and clean up from artistically designed, multicourse meals across my sophomore, junior, and senior year. My ultimate goal was culinary school following high school graduation.

My junior year of high school included a mandatory chemistry course. My dread was unimaginable as my lack of ability in science had become apparent during my time in biology the year before and my year of earth science the year before biology. I braced for another year of a challenge but was met with an enjoyable, exciting learning experience. As my confidence continued to bolster, we moved into chemical structures and names. One day, we entered class to find a large chemical structure drawn out on the board, of which the initial discussion was based for the class period. Eventually, it was revealed that the structure was that of vanilla extract. Learning that I was seeing a primary ingredient that I used commonly in baking illustrated at the chemical level brought a realization of the chemistry found throughout cooking and food and hooked my interest in understanding this connection.

By the end of my high school career, my culinary instructor regularly included food science topics and discussion into the culinary projects and lesson plans to hold and foster my

interest and enthusiasm. Looking to college meant continuing to grow into my curiosity of food science. Leaving my plans of culinary school behind did not come easily but became necessary to pursue this newer passion.

As a full-time graduate student with research focused on food chemistry and sensory evaluation, I am grateful for the education and mentors who helped guide me through my schooling, helping me realize and follow my passions. I continue to cook and bake in my free time, always remembering how I found food science and started this journey of higher education.

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](mailto: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](mailto: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](mailto: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](http://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: Upgrade

Uh, oh. You paid your Annual Dues last month, but have decided you want to become a Lifetime Member. What to do? Easy. Pay the difference (\$380 for a student, and \$360 for a professional) and you will be upgraded. You will receive a receipt for your taxes and a Lifetime Member certificate from the President of our Society.

If you haven't paid your 2022-2023 dues yet, please do so right away. Instructions are in every Phi Tau Sigma Newsletter, and in the cover email for this Newsletter if your dues are due.

## About Phi Tau Sigma Communications:

The Phi Tau Sigma Newsletter Committee includes: Kathryn Kotula, Ph.D., Editor-in-Chief, Chair ([klkotula@msn.com](mailto:klkotula@msn.com)); Claire Zoellner, Ph.D., Associate Editor ([cez23@cornell.edu](mailto: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](http://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](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](http://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](mailto:kantha@corvusblue.net)), or the Executive Director, Kathryn L. Kotula, Ph.D.

([klkotula@msn.com](mailto: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 Hutt's 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](http://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.