

ΦΤΣ

The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter April 2021

News:

Message from the President, Rodrigo Tarté, Ph.D.

As the premier honorary society for the Food Science profession, a healthy and vibrant Phi Tau Sigma is very important not only to us but to future generations of food scientists and the millions of food consumers that they will impact. There are two primary components required for the long-term vitality and health of Phi Tau Sigma.

One component is member involvement and participation. We are a very active Society and, as such, encourage and welcome active participation from our members. Please take a look at the committee descriptions on pages 11-12 of the March newsletter, or at: <http://www.phitausigma.org/committees/>, and consider joining one. Your efforts will make a big difference not only to Phi Tau Sigma but to you personally; at least that's been my own experience.

The second component of a healthy Phi Tau Sigma has to do with our financial health. Though we're a volunteer organization, our activities demand financial resources and the best way we can all help in this regard is by staying up to date with our membership dues. Please consider renewing your membership dues on an annual basis, beginning now. If you have lapsed in your dues payments, just pay the current year dues and you will be back as a member in good standing which, in addition to helping Phi Tau Sigma financially, also allows you to vote and have a voice. I would also encourage you to consider becoming a Lifetime Member for a one-time payment of \$400. Lifetime Member dues go straight into the Society's endowment, which means your dues will ultimately go much further as the endowment grows over time. And you will never have to worry about paying annual dues again (even when they increase), which is a benefit in and of itself! If you don't have the time to be physically involved in Phi Tau Sigma, your membership dues will still ensure Phi Tau Sigma remains healthy, vibrant and relevant into the future.

Either way, a healthy Phi Tau Sigma needs you!



Reminder: Phi Tau Sigma – AMSA ‘Research with Impact’ Scholarship

April 19 is the deadline to submit nominations for the Phi Tau Sigma – AMSA ‘Research with Impact’ Scholarship.

Full information can be found at: <http://phitausigma.org/awards/>. Send completed award nomination forms to Phi Tau Sigma Executive Director (klkotula@msn.com) and the AMSA Youth Programs Manager (scholarships@meatscience.org). Please write “Phi Tau Sigma – AMSA Research with Impact Scholarship” in the subject line.

Students about to graduate:

Please remember to:

- 1) Order your Honor Cord and lapel pin in plenty of time for them to be mailed to you before graduation. Store web address: <http://www.phitausigma.org/store/>
- 2) Forward your new contact information (especially your new email address) to the Executive Director (klkotula@msn.com).

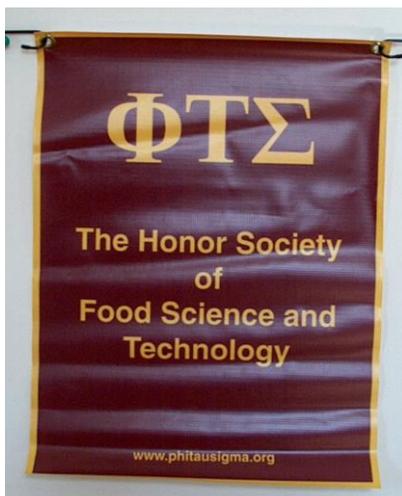
Not having an in-person graduation? Consider getting the Honor Cord and lapel pin anyway. Honor cords look great displayed, and you can use the lapel pin for many years to come.

Thank you, and Congratulations on your graduation!



Banners: Great for Chapter events! And anywhere you want to promote Phi Tau Sigma.

Phi Tau Sigma banners are available in the Phi Tau Sigma Store. There are three types: Podium (18"x24", \$25 each) (photo on left), Outdoor Wall/Table (has wind slits, 30"x48", \$45 each), and Indoor Wall/Table (30"x48", \$45 each) (photo on right). Order through the Phi Tau Sigma Store (<http://www.phitausigma.org/store/>).



Membership Nomination Reminder:

Please use the most up-to-date nomination form when sending in membership nominations. The form comes in two formats: Word and writable pdf. Either format can be used.

The proper form will have '2021' in the title, and a revision date of September 27, 2020 as the footer of the second page.

The most up-to-date forms can always be found on the Phi Tau Sigma website: www.phitausigma.org.

IFT 2021 to be a “Digital Experience”:

The IFT Board has decided to change the annual meeting to a digital experience, which will occur July 19-21, 2021. See details at <https://www.iftevent.org/ift/home/press/press-releases/2021/march/3/ift-transitions-2021-annual-event-to-digital-experience>

Future Phi Tau Sigma Newsletters will provide more details once they come in.

AMSA’s Reciprocal Meat Conference August 2021 in Reno, Nevada

The 74th Reciprocal Meat Conference (RMC) of the American Meat Science Association will be August 15-18, 2021 at the Grand Sierra Resort and Casino in Reno, Nevada. The meeting will be a hybrid of live and virtual options.



For more details go to: <https://meatscience.org/events-education/rmc>

From the Desk of the Treasurer:

Dues Drive 2021 – it’s that time of the year again!

(Contributed by Kantha Shelke, Ph.D., Phi Tau Sigma Treasurer)

As the Treasurer, it is comforting to see your dues coming in smoothly because you have it on your calendars. It is even more gratifying to see a modest donation added to your payment via PayPal or a handwritten check. 2021 will be the year of transition. The effects of Covid-19 are here to stay. The annual meetings of Phi Tau Sigma and the IFT will be held virtually again.



This transition year will greatly affect students who relied on the annual meeting for education and connecting with prospective employers for their careers. Anything we can do to help them will go a long way to advance food scientists in the marketplace. Please do consider adding a bit more when you send in your dues.

Calendar:

->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, and the Phi Tau Sigma Founders' 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 Charlwit Kulchaiyawat, Ph.D. (charlwit.kulchaiyawat@fosterfarms.com) 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 Rachel Adams, M.S. (radams@meatscience.org). (More information: <http://www.phitausigma.org/awards/>)

->December 7: 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>)

->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).

->Election schedule:

- December 15: Nominations due to Nomination and Election Committee (Tom Aurand, Ph.D., Chair, tom.aurand@gmail.com)
- 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

->July 19-21, 2021, Institute of Food Technologists Annual Meeting:

NOTE: IFT has decided to change to a 'Virtual' meeting. See details at <https://www.iftevent.org/ift/home/press/press-releases/2021/march/3/ift-transitions-2021-annual-event-to-digital-experience>

Phi Tau Sigma Annual Meetings and Events:

July 15 Phi Tau Sigma Executive Committee Meeting – Conference call

Dates and times to be determined:

- Phi Tau Sigma Annual Business Meeting and Awards Ceremony
- IFT Awards Celebration, includes the presentation of the Dr. Carl R. Fellers, Ph.D. Award sponsored by Phi Tau Sigma, during the Phi Tau Sigma and IFT Division Competition Awards Ceremony
- Sessions in conjunction with the IFT meeting.

Student Research Synopsis: Protein-rich Product Recovered from Brewery Waste to Replace Fishmeal in Shrimp Feed and Its Techno-economic Analysis

Contributed by Yanhong He, Ph.D. student under the direction of Prof. Haibo Huang, Department of Food Science & Technology, Virginia Tech

Adapted from published/accepted work: Y. H. He et al., Protein-rich product recovered from brewer's spent grain can partially replace fishmeal in diets of Pacific white shrimp, *Litopenaeus vannamei*. Aquac Res, (2020); Y.H. He et al., Protein production from brewer's spent grain via wet fractionation: process optimization and techno-economic analysis. Food Bioprod Process, (2021).

Introduction: Fishmeal has historically been the primary protein source in shrimp feed. However, the increasing price and unstable global supply of fishmeal drive the aquaculture industry to find alternative proteins for replacing this ingredient. Brewer's spent grain (BSG), the main by-product of brewing industries, is one of the most underutilized protein sources. Although some pioneering studies have been carried out to exploit BSG usage in fish feed, the low protein (14 - 30%) and high fiber (50 -70%) contents in BSG limit its use in aquafeed.

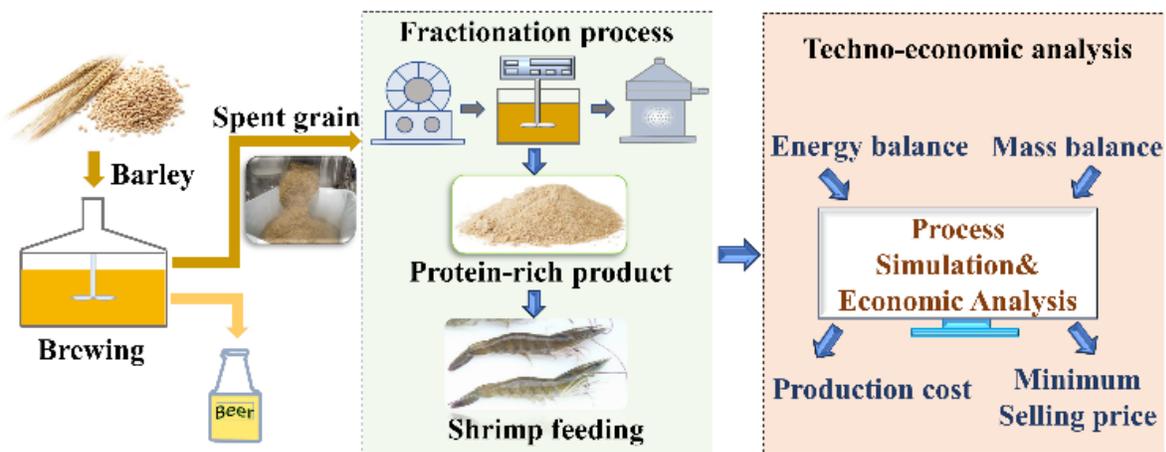
Objectives: The study aimed to 1) produce a protein-rich product (PP) from BSG, 2) assess fishmeal replacement with the PP in shrimp feed, and 3) evaluate the overall process economics of PP production from BSG at a commercial scale.

Methods: The obtained raw BSG was subjected to a wet fractionation process to produce PP using enzyme (Alcalase) at different loadings. The process contributed to the highest protein separation efficiency and protein concentration in the product was selected and



further optimized for scaled-up production. The PP obtained from the optimized process was used to replace 10 – 70% of fishmeal in the shrimp diet. The shrimp feeding trial was conducted for 8 weeks. After getting promising results from the shrimp feeding trial, the techno-economic analysis was conducted to evaluate the economic feasibility of PP production from BSG.

Results: The results showed that the optimal wet fractionation conditions for PP production were 5 µL Alcalase/g dry BSG enzyme loading, 9% w/w solid content, pH 8.0, 60 °C incubation temperature, and 1 h incubation time. The produced PP contained 46% protein and less than 1% fiber. Up to 50% of fishmeal in shrimp feed can be replaced by PP without affecting shrimp growth and feed utilization. For a plant with the processing capacity of 510 tons raw BSG per day, the minimum selling price of PP (MSPP) was \$1044/ton to achieve a 5% return. Sensitivity analysis showed that the protein separation efficiency, the costs of Alcalase and BSG played significant roles in the MSPP determination.



Significance: The outcomes of this study not only provide a low-cost and sustainable protein source to the aquaculture industry, but also create a new way for the brewing industry to manage BSG.

Lifetime Member Tribute: Chinwendu Ozoh, Ph.D. student, Iowa State University

Why did you become a Lifetime Member?

I became a Lifetime Member because I plan on staying in the food science field while contributing and making an impact throughout my career. Becoming a Lifetime Member of a prestigious society like Phi Tau Sigma felt like the best option for me. I have attended the meetings organized by the Iowa State Chapter of Phi Tau Sigma on campus. These discussions drew me to Phi Tau Sigma.

Education:

- Ph.D. Student Food Science and Technology; Iowa State University, Ames Iowa



- MSc Agricultural and Biosystems Engineering; (Minor: Food Science and Technology) Iowa State University, Ames Iowa
- BSc Agricultural Engineering; Obafemi Awolowo University, Ile-Ife Nigeria

Experience/Accomplishments:

Certifications -

SQF Practitioner May 2018
 FSPCA (PCQI) Certification September 2017
 Radiation Safety Officer (RSO) June 2017
 HACCP December 2015

Areas of Expertise:

I am currently a Ph.D. student with Dr. Angela Shaw. My research focus is on food safety and food safety intervention.

Personal: Family, Interests, Hobbies:

When I am not working on school related tasks. I enjoy reading realistic fiction, drawing and constructing garments, and creating fun memories with my partner.

Advice to university students and career food scientists and technologists:

Food science is broad and can expose you to most of your interests. Do not feel pressured to stay in one area of food science; be open to explore your curiosity. This field has a lot to offer at different stages of life or career interests. Also, take advantage of every learning opportunity you come across, and reach out to people that can serve as mentors to you.

Careers: Sensory Scientist

Contributed by Alex Feldmeyer, Ph.D., MANE, Inc., (a Flavor & Fragrance Manufacturer)

Introduction/Background: I began my undergraduate degree in Biology at the University of South Carolina (Go Gamecocks!). I eventually transferred to the University of Illinois (Go Illini!) and finished my undergraduate degree in Food Science in 2013. Then I began what I believed would be a Master's degree under the direction of Dr. Chris Simons in his Psychophysics Lab at The Ohio State University. This lab became very special to me. Within 1 year, I asked Dr. Simons if I could instead pursue a Ph.D. This was one of the best decisions I made and I thank Dr. Simons for his confidence in me. I learned a lot and eventually graduated in 2017 with my Ph.D. in Sensory Science, having conducted research addressing objective and subjective effects of common essential oil components (like linalool in lavender) on stress. Soon after defending my doctoral thesis (about 15 minutes after), I was offered a position at Mane, Inc., a Flavor & Fragrance Manufacturer in Lebanon, OH as a Sensory Scientist. I've been with Mane ever since!



Qualifications: Qualifications will certainly vary depending on the sensory position and the industry (food, beverage, pet food, flavor, cosmetics, non-food, etc.)! However, some skills are applicable to any sensory science position. They would include having a good grasp on

Statistics and/or familiarity with Statistical programming (e.g. R programming). If I could go back to my graduate days, I would definitely get a minor in Statistics.

These positions may hire all levels of collegiate education including B.S., M.S. and Ph.D. These differences will affect the starting salary, years of relevant industry experience they consider you have for the position and potentially how much responsibility you have in your role initially. Having experience in the industry prior to graduating through internships or co-op opportunities is a definite plus! With that being said, every job has a learning curve. There are some things you cannot learn in school, but the years spent specializing and refining your critical thinking skills will not be wasted. As expected, a strong grasp of the traditional and more modern sensory techniques, methodologies and error/bias associated with these will take you far in your career. It would also be important to understand much of the traditional sensory concepts in the context of the position (e.g. sensory testing for cereal would be very different from sensory testing pet food). It's also important to have a grasp on the purpose of the position (e.g. perform research with a focus on benefitting the business).

Positions: Sensory Scientist (3 years)

Duties: I conduct taste and smell research for proactive and long-term objectives related to the flavor industry. I develop methodologies, support R&D and learn about peoples' habits/behaviors. I work cross-functionally on global research teams and present research findings at conferences as well as in publications.

Salaries: This will vary depending on your location, education level and experience. Starting salaries typically start above \$60k.

Benefits: Benefits include Medical (health, vision, dental) insurance, Retirement, paid vacations, and in my experience there have been travel opportunities, conference attendance, interaction and collaboration with global affiliates, a team atmosphere, company bonuses when the business does well and so much more!

Conclusion: I was lucky enough to be offered a position at Mane, Inc. shortly after graduation. Personally, I feel very fortunate to have been offered a Sensory position at a flavor company. This is because a flavor company works with a variety of products and the sensory department has the ability to be much more creative. Anything with a flavor or fragrance can be tested. This means that we are consistently testing highly diverse products, making for an exciting day-to-day job. The diversity of projects also allows for higher exposure to sensory methodologies and increases the ability to adapt methods quickly in accordance with product specifications.

I primarily work on longer term projects that indirectly focus on customers. I have been able to both support internal department research requests as well as develop and test my own hypotheses, which has been quite rewarding. Mane has allowed me to remain research focused while supporting the business, which has allowed for methodology development, internal and external collaborations, all while being able to continue to learn an exponential amount of information! I cannot thank Mane enough for this opportunity and honor to support the business.

This is a great position to be in because it's an excellent balance of creativity and scientific rigor. It's never boring. It's a great career because people need to eat!

Chapter News: University of Minnesota Introducing our webinar series and YouTube channel

(Contributed by: Sonali Raghunath, Ph.D. student, President, University of Minnesota Chapter)

The Phi Tau Sigma Honor Society of Food Science and Technology UMN Chapter organized the first ever webinar series this year on November 19, 2020. It was well received by students from the University of Minnesota, North Dakota State University and South Dakota State University. There were 30 registered participants for the webinar mostly composed of graduate students and professors from all the three universities.

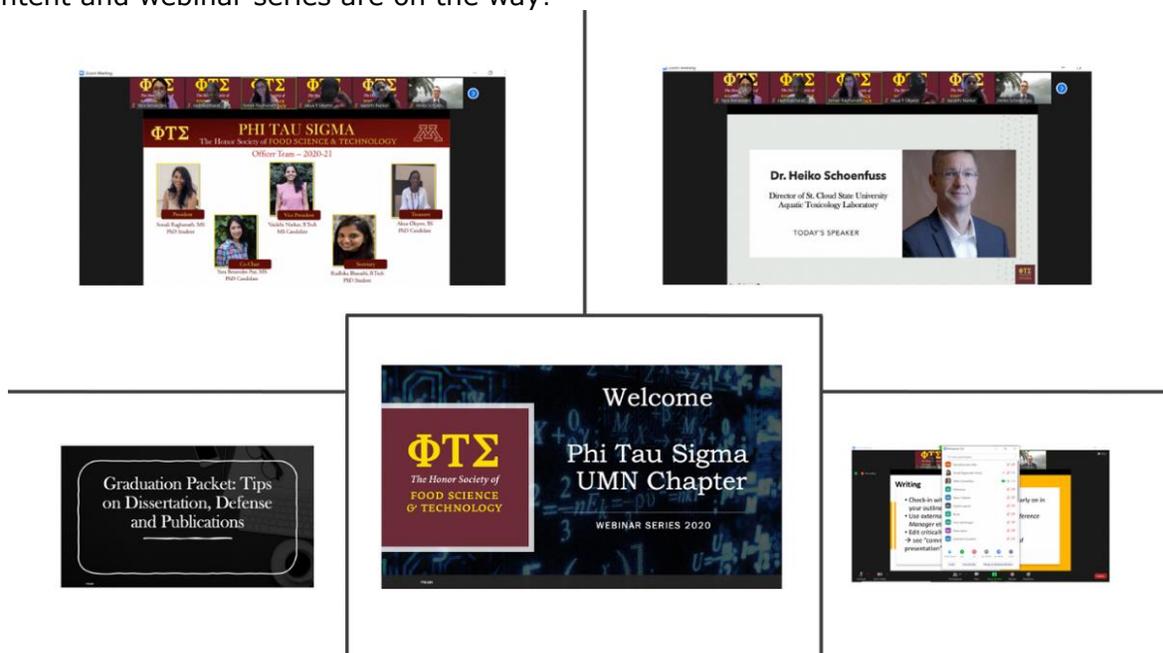
Our topic for the first live webinar session was **"Graduation Packet: Tips on Dissertations, Defense and Publications"**. Many of the students have numerous questions when they begin to think about writing their dissertations. These include: how should a defense presentation be done, what does the committee expect and how am I supposed to write a paper for publication?

As a timely presentation, Phi Tau Sigma-UMN Chapter, took the initiative to answer those questions within the Graduation Packet Webinar series. The impressive presentation was given by, Dr. Heiko Schoenfuss, Ph.D., Director of St. Cloud State University Aquatic Toxicology Laboratory. The presentation was followed by a question & answer session which addressed many of the important questions from students and also had wonderful feedback. The webinar was recorded and is made available for Phi Tau Sigma members as well as potential members.

Link to the channel: [Phi Tau Sigma- University of Minnesota Chapter](#)

Link to our video: [Webinar series: Graduation Packet: Tips for dissertation, defense and publications for food science graduates](#)

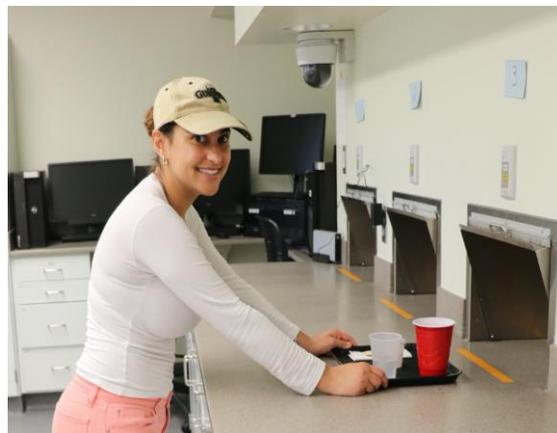
We do encourage all to like, share and subscribe to our channel and videos! More engaging content and webinar series are on the way!



Member News: Phi Tau Sigma Scholarship and Award Recipients

Dr. Daryl B. and Mrs. Dawn L. Lund Student International Travel Scholarship:

Renata Carneiro is a doctoral candidate at the Department of Food Science and Technology (FST) at Virginia Tech (VT) and currently works as research and teaching assistant. Renata's dissertation research is sponsored by the USDA National Institute of Food and Agriculture and combines flavor chemistry, sensory evaluation, and consumer studies to support the development of high-quality edamame (vegetable soybean) varieties for U.S. production. She is affiliated with the VT Water INTERface Interdisciplinary Graduate Education Program and has supported her Ph.D. advisors, Dr. Sean O'Keefe and Dr. Susan Duncan, in additional research projects, as well as in extension and community outreach activities.



Renata is a very engaged student leader and is the current president of the VT chapter of Phi Tau Sigma. She also serves as the president of LAIGSA, the Latin American and Iberian Graduate Students Association at VT, as a Graduate Honor System student panelist, and as graduate student representative for the Diversity and Inclusion Committee of the FST Department. She is often invited to be guest speaker or student panelist of diverse events at the Virginia Tech campus. In 2020, she published one peer-reviewed extension publication on edamame processing, five peer-reviewed manuscripts (4 as leading author), and presented her work in national and international meetings. In May 2021, she is going to present at the 16th Weurman Flavour Research Symposium, which will be held in Dijon, France. In sequence, she will visit several universities in Switzerland, France and Italy and enhance her knowledge of global higher education as part of the Global Perspectives Program (GPP) scholarship that she was awarded in 2020. Renata aims to pursue a career in academia and the GPP is a competitive study abroad opportunity offered by the VT Graduate School that helps to prepare future faculty and global citizens.

Phi Tau Sigma Achievement Scholarships (3 recipients):

Gayathri Gunathilaka, M.S. is a Ph.D. Candidate in Food Science at Michigan State University (MSU), where she is working as a graduate teaching assistant. Her principal research interests lie in the field of food safety.

The goal of her Ph.D. study is to find optimal fresh-cut processing conditions that can be implemented, thereby improving food safety by decreasing the silver nanoparticle (AgNP) levels in fresh produce. Her research findings have been published in five high impact journals related to food safety and food science. Her recent first author research article, "Phages in urban wastewater have the potential to



disseminate the antibiotic resistance,” was published in the International Journal of Antimicrobial Agents, addressing food safety related health aspects. A manuscript is currently under review in the Journal of Environmental Science and Technology. Further, she has presented in nine high-level conferences (oral and poster presentations), including the International Association of Food Protection (IAFP) and the American Chemical Society (ACS). She was also invited as a symposium speaker at the annual meeting of the ACS in San Diego, CA in 2019 which was truly an honor.

In addition to her research accomplishments, she has earned outstanding grades in her Ph.D. course work, with a grade point average of 4.0/4.0. She has received numerous academic recognitions at the university and regional level for her scholarly accomplishments, including the P. Vincent Hegarty Food Science and Human Nutrition Quality in Education Fund Scholarship and the Sara Lee Endowment Scholarship for Food Safety in Food Science & Human Nutrition from MSU, the IFT Great Lakes Section PhD Achievement Scholarship, the Phi Kappa Phi Honor Society- The Love of Learning Award, the FMI Foundation Food Safety Auditing Scholarship from Food Marketing Institute, the IFT Great Lakes Diversity Scholarship, the Vegetable Industry Scholarship from Michigan Vegetable Council, the IAFP Student Travel Scholarship, the Thomas Rumble Fellowship, the IFT Great Lakes Section Master of Science Achievement Scholarship, graduate travel awards, and a DAADs Scholarship from Germany. She was also a recipient of a special scholarship and a travel grant to attend the Balance and Bounty workshop at California State University to enhance her skills for a career in academia.

She was actively involved in establishing a Phi Tau Sigma chapter at MSU and she is currently serving as the president of the MSU Phi Tau Sigma chapter. In addition to that, when she served as the president in the IFT Phi Tau Sigma Chapter at Wayne State University (WSU) and the vice-president of the Food Science and Nutrition club at WSU (2013-2014), she organized several activities for the students in the department, including introducing students to Phi Tau Sigma.

After concluding her studies, she hopes to develop new modes and methods of food safety, through which she will be able to raise the standards of food safety and food quality for people across the world.



Anbukani (Connie) Muniandy, M.S. has done the majority of her college studies in the Department of Food Science at Purdue University. After working in the food industry for two years in R&D, she returned to Purdue and is now pursuing her Ph.D. degree under the guidance of Dr. Dharmendra Mishra. Her research focuses on creating a rapid innovative technology for shelf-life determination and prediction of the shelf life of food products. This novel methodology is aimed to reduce the analysis time for shelf-life determination using the rapid degradation method and estimation of shelf life based on the inverse problems approach. Successful outcomes of this project will provide the food industry with a faster and more accurate method of determining shelf life.

While maintaining her academic and research excellence, Connie has demonstrated great leadership. As the leader of the Hoosier Chapter of Phi Tau Sigma, Connie has made

significant contributions to the growth and recognition of the chapter. She was inducted into Phi Tau Sigma in Spring 2019. After serving as the Chapter Treasurer/Vice President for the academic year of 2019-2020, Connie is currently the President of chapter for the academic year 2020-2021. Under her leadership, the chapter received two awards in 2020, for Chapter of the Year and Chapter of Merit. She was also instrumental in successful nominations and inductions of 18 students into Phi Tau Sigma, with additional nominations expected in Spring 2021. She has helped in planning and organizing various mentorship sessions, seminars and networking events for the chapter. These events provide a platform for the attendees to discuss food science career paths, graduate education, leadership, and networking strategies, as well as to gain exposure to realities of the food industry. These events include mentorship and guidance for undergraduate students at Purdue interested in pursuing advanced degrees, along with and numerous seminars by experts in the food industry to promote the professional development of Phi Tau Sigma Hoosier Chapter members.

Connie has a strong passion for food science, which she has demonstrated by participating in food product development competitions. She has been leading teams to success in national- level product development competitions, including the American Society of Baking and Cereals and Grains Association. Through these involvements, Connie has built a strong network with her colleagues, experts from academia, and professional from the industry. This has enabled her to exchange scientific ideas and initiate collaborations. She hopes to inspire the younger generation of food scientists by sharing her knowledge and expertise. She strongly believes that quality education is the foundation for making better food scientists.

Sonali Raghunath, M.S. is a 2nd year Ph.D. student under Dr. Kumar Mallikarjunan at the University of Minnesota in the Department of Food Science and Nutrition. She has a Master's degree in Food Science from the University of Minnesota (2019) and a Bachelor's degree in Food Technology (2017) from Anna University, India. Her focus includes the use of Design of Experiments in optimizing the parameters of non-thermal processing technology. Currently, her research focuses on using pulsed electric field processing pretreatment for the manufacturing of milk protein concentrates and studying the functionality of the proteins. The impact of her research will be a boon to the growing demand of the economy and also benefit the protein market. Her expertise includes project design, data analysis and interpretation, and the development and implementation of research tools for product development and nonthermal processing.



During three years of her graduate study, she has been the recipient of various outstanding achievement awards and scholarship recipients from multiple organizations, including IFT feeding Tomorrow Graduate Scholarship for her research and winner of various of the product development competitions including National Dairy Council, Ocean Spray® and American Society of Baking. She has been awarded fellowships from the Department of Food Science and Nutrition at University of Minnesota, MN-IFT, Bayer Crop Science Award, Food science and nutrition travel award (2018, 2019) for excellence in research and professional development. She has presented her research in

various national and international conferences like Institute of Food Technologists (2018, 2019, 2020), International Congress on Engineering and Food (2019), Melbourne, Conference of Food Engineering (2018) and American Dairy Science Association (2019, 2020).

Sonali serves as the President of Phi Tau Sigma – University of Minnesota Chapter for a year (2020-21) and was serving as Vice President for the section (2019-2020). Under her leadership, the Chapter won the prestigious honor as “Chapter of Excellence” (2019-2020) from National/International Phi Tau Sigma. As part of Phi Tau Sigma, Sonali has been actively involved in increasing the membership and laid steppingstones to new programs including organizing webinars, virtual meetings and speedy science competition. She is also working closely with the student relations committee and engaging with other Phi Tau Sigma Chapter leaders to increase membership through social media platforms. She introduced Phi Tau Sigma with a whole new level at the department as well as encouraging students from South Dakota State University and North Dakota State University and created a brochure for the Chapter for better reach with students and professionals.

Dr. Gideon “Guy” Livingston Scholarship:

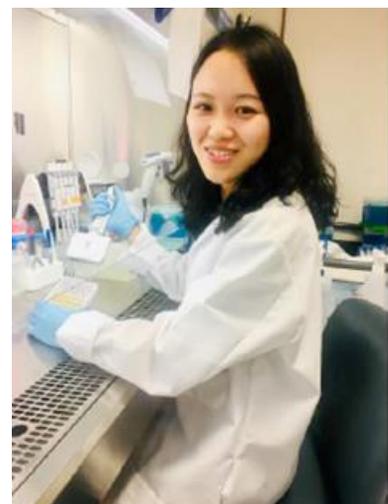


Damla Dag, a Ph.D. Candidate in the Food Science and Technology Department at the University of Georgia, is currently working on radio frequency pasteurization of low moisture foods under the supervision of Drs. Fanbin Kong and Rakesh K. Singh. After completing her B.Sc. and M.Sc. degrees from the Department of Food Engineering at Middle East Technical University with excellence, she is continuing her Ph.D. at the University of Georgia - one of the top-ranking universities in the Food Science area.

In addition to her brilliant academic performance, she is involved in several clubs and organizations such as Phi Tau Sigma, the Institute of Food Technologists (IFT), and the Food Science Club at the University of Georgia. She has been a Vice President in the University of Georgia Chapter in 2020, and recently she is serving as a President for the Phi Tau Sigma University of Georgia Chapter. Meanwhile, she is also volunteering in Student Relations Committee and Chapter Affairs Committee in Phi Tau Sigma.

Phi Tau Sigma Founders’ Scholarship:

Jianan Zhang, Ph.D., is a recently graduated student at UMass Amherst with a major in Food Science. Her research was to investigate the dietary and environmental risk factors for colonic inflammation and colon cancer. Jianan’s research is published in well-respected journals including the Proceedings of the National Academy of Sciences, Cancer Prevention Research, and Journal of Agriculture and Food Science. Her research has a high impact on public health and are featured in the Boston Globe and university media coverage. Jianan has presented 6 poster presentations and 2 oral presentations



during her Ph.D. study. She has received many honors, such as the first place in Herbert O. Hultin Oral Competition, and the Excellent Poster Award from the UMass Life Sciences Graduate Research Symposium. She was invited as a guest speaker at the 23rd Annual UMass Science Industrial Strategic Research Alliance Meeting. The honors she earned and her achievement in food science research with impact as a Ph.D. student make her the ideal candidate for the Founders' Scholarship of Phi Tau Sigma.

Phi Tau Sigma Special Recognition Award:



Dr. Kantha Shelke embodies the criteria of this award: “a professional Member of Phi Tau Sigma who has shown exceptional dedication to Phi Tau Sigma - The Honor Society of Food Science and Technology, as evidenced by significant accomplishments towards the goals and/or administration of Phi Tau Sigma.” Dr. Shelke has been a Phi Tau Sigma Member in Good Standing since 2012. She has been a Lifetime Member since April 16, 2013.

Dr. Shelke has contributed a great amount of her ‘Time’ and ‘Talent’ to Phi Tau Sigma. Her committee memberships over 6 years include 7 different committees, acting as Chair of 3 of them. Dr. Shelke has served as an Alternate At-Large Councilor 2015 to 2018, with the title changing to Director for 2018-19. She has always contributed ideas and concepts generously.

As Treasurer: Usually, people chose committee assignments and other duties based on their strengths. However, Dr. Shelke is exceptional in that she volunteered to learn the duties of Treasurer because it was not her strength and she wanted to grow in this area. She shadowed Dr. Daryl Lund, Treasurer for a year, in 2017-18, before becoming Treasurer (with Dr. Lund as Assistant Treasurer) starting in 2018. Kantha has made the position of Treasurer a very ‘team oriented’ philosophy, relying on not only her newly learned abilities, but trusting in the strengths and input of Dr. Lund, and requesting the input of others who can contribute concepts to the responsibilities of the position.

Besides contributing articles for the Phi Tau Sigma Newsletter from time to time, Dr. Shelke initiated the “From the Treasurer’s Desk” series. This is a well-received periodic addition to the Newsletter which utilizes Dr. Shelke’s open and at times humorous writing style to honestly convey the concepts she wishes to share.

Dr. Kantha Shelke has approached each responsibility with professionalism, tact, and insight. Kantha is a joy to work with. She has contributed extensively to the advancement of Phi Tau Sigma, as well as the day-to-day duties that are so necessary to run an Association. Dr. Shelke exemplifies the intent of the Phi Tau Sigma Special Recognition Award.

In Memoriam: Dawn Kreft Lund, LPN

Silver Contributing Partner to Phi Tau Sigma

Dawn Kreft Lund, aged 78, passed away on Tuesday February 2, 2021, at Boswell Hospital Emergency Room in Sun City, AZ, as she battled pneumonia exacerbated by Covid-19. She was born April 26, 1942, at St. Mary's Hospital to Arthur and Bernice Kreft of Madison, WI. She married the love of her life, Daryl Lund, on June 15, 1963, and they had a wonderful 57 years of marriage before she succumbed.



Following receiving her licensed practical nursing associate degree at Madison College, Dawn worked at clinics and private duty nursing while supporting Daryl in his pursuit of a Ph.D. Her primary professional positions were in pediatric and geriatric nursing at Quisling and Jackson Clinics and private duty nursing in Madison. After 20 years in her profession, she became volunteer extraordinaire. She was a loving and contributing partner with Daryl as they journeyed on their trip through academic life. At Rutgers University she was President of the Women's League of Rutgers and during her presidency was responsible for generating an endowment and eleven annual scholarships. She invited Madison local artist Robin Lauersdorf to come to Rutgers to create a pencil etching of significant campus buildings for the diploma holder and repeated the same at Cornell University.

All those who knew Dawn know that she was born with a wander lust. She and Daryl travelled incessantly visiting all seven continents, more than 150 UN-member countries, and more than 80 independent islands. Among her favorite trips were a cruise to Antarctic and planned trip to Timbuktu, Mali. River and sea cruises were also favorites often taken with close friends. Family trips with children and grandkids included a Kenyan African Safari, with ending trip to Zanzibar; Ecuador and Galapagos with family and friends from the Netherlands; and twice accompanying her beloved UW Badgers to Atlantis Bahamas. Dawn was the life of the party and shared her wonderful and infectious love of life. She also looked forward to riding with Daryl in the golf cart. Daryl always said she has to be the only wife in Sun City who got out of bed in the morning and asked if they were going golfing today.

Although Dawn loved to travel, it did not compare to her love of family. Camping trips, 53 years of Lund Family Reunions, and celebrating all the good fortune of her family were most important. She was so proud of the accomplishments of her children and grandchildren who survive her: Kristine Lund England (Todd) of Fort Atkinson, WI, and Eric Lund (Yael) of Verona, WI, and her five grandchildren; David Lund, Stephen Lund, Ryan England, Kevin England, and Kate England. She is also survived by her brother, Gary Kreft (Christie) Sun City, AZ, her sister, Diane Livermore (Doug) Eugene, OR, and her cousins and families Kreft, Heun, and Kassis.

A memorial service will be planned for later this summer. Memorials may be made to The Dawn Kreft Lund Nursing Scholarship at www.supportmadisoncollege.org/dawn-kreft-lund-nursing-endowed-scholarship and SOS Children's Villages, 1620 I Street NW, Suite 220, Washington, DC 20006 www.SOS-USA.org. Choose Indonesia.

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. 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. Lund 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://www.phitausigma.org/donate/>

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: April is the start of the Annual Dues Drive

What is the importance of paying dues? Not everyone is able to contribute their time and talent to Phi Tau Sigma, but everyone is able to contribute by paying their dues. Dues are the backbone to keep Phi Tau Sigma running. Phi Tau Sigma is able to keep costs very, very low by being run by volunteers, however, there are some costs (postage, PayPal costs, program costs,...). Phi Tau Sigma gives so much by promoting students (scholarships/award, mentoring, leadership opportunities, networking,...), and professionals (awards, leadership opportunities, networking,...). So, please pay your dues right away so we can continue the efforts and programs that make Phi Tau Sigma so effective. Thank you!

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., Hossein Daryaei, Ph.D., Tianxi Yang, Ph.D., Laura Strawn, Ph.D., Diane Schmitt, Ph.D., Gabriela John Swamy, Ph.D., Jennifer Fideler M.S. (Ph.D. Candidate), Tiantian Lin, Ph.D.

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

The Newsletter Committee particularly wishes to share news from Phi Tau Sigma Members and Chapters. Any items for the monthly Phi Tau Sigma Newsletter should be emailed in Word to Editor Kathryn L. Kotula, Ph.D. at klkotula@msn.com or Associate Newsletter Editor Claire Zoellner, Ph.D. at cez23@cornell.edu. Write "Phi Tau Sigma Newsletter" in the subject line. Please provide the information by the 1st of the month. Thanks.

Documents:

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

Phi Tau Sigma Membership Nominations

<http://www.phitausigma.org/phi-tau-sigma-nomination-2021-doc/>

<http://www.phitausigma.org/phi-tau-sigma-nomination-2021-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/>

Every Member Get A Member Campaign

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

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://www.phitausigma.org/donate> 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. Lund 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.

2020-2021 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 support and endow the Dr. Daryl B. Lund Student International Travel Scholarship.) **The Lunds are a Silver level Contributing Partner.**

2020-2021 Sponsors and Donors:

Dr. Catherine Adams Hutt and **Peter Barton Hutt**, Phi Tau Sigma Lifetime Members. Catherine is food safety and regulatory consultant and expert witness with RdR Solutions, and Peter is an attorney with Covington and Burling. Both are IFT Fellows. (Donation for the Dr. Gideon "Guy" Livingston Scholarship)

David K. Park, B.S., Phi Tau Sigma Lifetime Member, is Principal, Food-Defense, LLC, providing expert food safety / food defense, USFDA and USDA-FSIS Process

Authority technical and regulatory consultation for thermal and non-thermally processed low acid canned foods (LACF), acidified foods (AF), and refrigerated extended shelf life foods (ESL) and their packaging systems. (Donation towards a Phi Tau Sigma Student Achievement Scholarship.)

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.

William Benjy Mikel, Ph.D., a Phi Tau Sigma past President and a Lifetime Member who appreciates the field of food science and technology. (Donation towards a Phi Tau Sigma Student Achievement 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.)

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

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

Corvus Blue LLC is a Chicago-based contract food science and research firm retained by food, dietary supplement, and allied enterprises to expedite new product development and commercialization and pave the path for rapid market realization with competitive intelligence and food science communication. The firm works with startups and established entities at the intersection of science and business to maximize opportunity and minimize risk.

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

Dr. Claire Zoellner, Food Safety Scientist at iFoodDecisionSciences, Phi Tau Sigma Director, Associate Newsletter Editor, and Chair of ad hoc Student Relations Committee.

Phi Tau Sigma Development Committee 2020 - 2021

Each and every member of Phi Tau Sigma Development Committee has generously donated to Phi Tau Sigma. The Development Committee is responsible *to develop and implement strategies and mechanisms to raise long range funding to allow Phi Tau Sigma to be funded in perpetuity*. The Committee has made its generous contributions to demonstrate its

unwavering support and to role model the action of making a financial contribution to the Society. (Sponsorship for the Phi Tau Sigma Special Recognition Award)

Phi Tau Sigma Leadership 2020 -2021

Each and every member of Phi Tau Sigma Leadership has generously donated to Phi Tau Sigma. The Phi Tau Sigma Leadership is composed of its Board of Directors and Chairs of its appointed Committees. Its mission is to honor and build excellence in the profession of food science and technology. Besides sharing generously of their time and talent, the Leadership has made a generous financial contribution to set, through example, what our discipline may achieve through its contributions. (Sponsorship for the Phi Tau Sigma Chapter of the Year Award)

Dr. Rodrigo Tarté, a Lifetime Member 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.)

Dr. Liz Boyle, a Lifetime Member of Phi Tau Sigma, is a Professor and Meat Extension Specialist at Kansas State University, and Past-President 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.)

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

Dr. Ogechukwu Tasie, Member, Phi Tau Sigma Membership and Qualifications (M&Q) Committee. (Donation to the General Fund.)

Dr. Lili He, a Lifetime Member of Phi Tau Sigma, is an Associate Professor in the Department of Food Science at University of Massachusetts Amherst. (Donation to the General Fund.)

Lauren Jackson, Ph.D., a Lifetime Member of Phi Tau Sigma, is a Supervisory Food Technologist at U.S. Food and Drug Administration, and Chair of the Membership & Qualifications Committee of Phi Tau Sigma. (Donation towards the endowment for the Dr. Gideon "Guy" Livingston Scholarship.)

Shantrell R. Willis, Ph.D., currently serves as a Research Scientist and Adjunct Faculty at Alabama A&M University, and is a member of the Phi Tau Sigma Membership & Qualifications Committee. (Donation for the General Operating Fund.)

David Anderson, Ph.D., a Lifetime Member of Phi Tau Sigma, retired from Elanco Animal Health R&D. (Donation towards the endowment for the Phi Tau Sigma - AMSA 'Research with Impact' Scholarship honoring longtime friend Dr. Tony Kotula)

Dr. Russell Cross, a Lifetime Member of Phi tau Sigma is a Professor at Texas A&M University, and Past-President of Phi Tau Sigma. (Donation towards the endowment for the

Phi Tau Sigma-AMSA 'Research with Impact' Scholarship) Tony Kotula has had a tremendous impact on my life and career.

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)

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)

Dr. Tommy L. Wheeler, Research Leader of the Meat Safety and Quality Research Unit of the U.S. Meat Animal Research Center of USDA-Agricultural Research Service. A long-time member of AMSA and renewed member of Phi Tau Sigma. (Donation towards the endowment for the Phi Tau Sigma - AMSA 'Research with Impact' Scholarship)