



The Honor Society of Food Science and Technology

## ***Phi Tau Sigma Newsletter*** *May 2021*

### **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: Lauren Jackson, Ph.D., Food and Drug Administration

Directors:

- Terri Boylston, Ph.D., Iowa State University
- Stephen Campano, M.S., Hawkins, Inc.
- Dennis R. Heldman, Ph.D., The Ohio State University
- Amarat (Amy) Simonne, Ph.D., University of Florida

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 Student Relations Committee's question on establishing a membership directory to foster mentoring of students and members received overwhelming positive response with 88% of the voters (324 of voters) supporting the directory.

A record number of members expressed interest in volunteering for the various committees within Phi Tau Sigma. The volunteer's names will be forwarded to the Chairpersons of the various Committees for consideration in filling out the committee's membership. 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!*

## Have you thought about becoming a Lifetime Member (LTM) of Phi Tau Sigma? (Contributed by Adam Baker, Ph.D. and Ravi Kiran Tadapaneni, Ph.D.)

Lifetime membership comes with several advantages: (1) eliminates the hassle of renewing annual membership, (2) covers any increase in future annual membership dues, and (3) all LTMs go directly into the endowment so that  $\Phi\tau\Sigma$  scholarships and awards can be endowed forever. Become a LTM with Phi Tau Sigma today and receive membership benefits for life!

### Benefits of Lifetime Membership:

- Passion and support for Phi Tau Sigma – Bragging Rights of being part of the most recognized and only Honor Society of food science and technology!!!
- No more annual renewals to remember.
- LTM never expires — never have a lapse in membership benefits.
- Pay your one-time fee — protection from future membership dues increases and currency inflation.
- Your LTM is helping build endowments so the scholarships and awards go on forever.
- All you have to do is ensure that the mailing list is accurate with your address, email, and phone number.
- Savings accumulate over time (see below) –

Professional Member Age	Projected Years of Membership	Total Membership Cost for Projected Years at a Current Annual Fee of \$40	Lifetime Membership Fee – <u>One Time Payment</u>	Savings
25	65	\$2600	\$400	\$2200
30	60	\$2400		\$2000
35	55	\$2200		\$1800
40	50	\$2000		\$1600
45	45	\$1800		\$1400
50	40	\$1600		\$1200
55	35	\$1400		\$1000
60	30	\$1200		\$800
65	25	\$1000		\$600
70	20	\$800		\$400
75	15	\$600		\$200

Have you already paid your annual dues, but want to become a Lifetime Member now? No problem. Just make a donation for the balance (\$380 for a student, or \$360 for a professional) in the Donate section of the Phi Tau Sigma Store <http://www.phitausigma.org/store/>. Make a notation on a PayPal page that you are adding for a Lifetime Membership, or sent a note to the Phi Tau Sigma Executive Director ([klkotula@msn.com](mailto:klkotula@msn.com)). You can also send a check for the balance in a 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)).

## **Phi Tau Sigma sponsored and co-sponsored Scientific Sessions within IFT 2021**

### **151.1: Packaging Strategies of Carbon Dioxide Control to Improve Food Preservation under Cultural Dynamics of Globalization**

Dong Sun Lee, Ph.D. (Presenter), Ziyet Boz, Ph.D. (Moderator)

This session features a distinguished lecture from the IFT's Food Packaging Division. The aim of the session is to highlight possible food packaging-related approaches to address the challenge of preserving and delivering quality foods with cultural dynamics by carbon dioxide control.

Packaging is an important component of a food product. An appropriate packaging helps to preserve the quality attributes of food, either fresh or processed, for longer. It also contributes to food safety and is a key element in food distribution and storage, as well as in marketing. With globalization, a variety of foods of different cultural origins are traded and consumed, which requires scientific practices of packaging technology enabling the extended delivery and shelf life with assured safety and quality. Carbon dioxide has been utilized widely in modified atmosphere packaging of foods and has potential to be used for packaging a cultural variety of foods. Food preservative packaging technologies can be devised or adopted to the different foods by controlling carbon dioxide dynamics in harmony with their indigenous or unique characteristics.

In this session, properties of carbon dioxide are going to be scrutinized in perspective of food packaging application. Wide variety of foods covering different cultural backgrounds will be overviewed in terms of carbon dioxide production and dissolution. Packaging elements will also be examined in their properties of altering carbon dioxide concentration in the packages. Finally, ways of harmonizing package variables with food properties will be explored through mathematical modeling and experimental observations. This scientific session is part of a joint three-division symposium featuring distinguished lectures from the IFT's Food Engineering, Nonthermal Processing, and Food Packaging Divisions. The session is co-sponsored by Phi Tau Sigma - The Honor Society of Food Science and Technology.

#### **Key Takeaways:**

- With globalization, there is a need for development and implementation of new packaging strategies taking care of a variety of foods of different cultural origins.
- Improvements in package design by control of carbon dioxide could significantly improve food preservation in global market.
- Packaging technologies need to and can be tuned for improved food preservation taking account of characteristics and uniqueness of the packaged foods.

### **151.2: Food Product Development in the 21st Century – Turning Art into Science – Bernard E. Proctor IFT Food Engineering Division Lecture**

Steve Lombardo, Ph.D. (Presenter)

This session features a distinguished lecture from the IFT's Food Engineering Division. The aim of the session is to highlight the history and innovative food engineering technologies being utilized in the food industry to develop products.

Engineering challenges related to the processing of food have been dynamically changing. The traditional focuses of throughput with food safety and quality remain still important and additional focuses such as energy/sustainability, health, data management, and artificial intelligence are getting more attention.

At this time of dynamic transition, this session aims to highlight the history and innovations in Food Engineering to address global challenges. This session will be presented from the view of the food industry and include topics on how the industry prepares for the new challenges and develop or adopt innovative technologies. The topics include 1) the considerations that couples the characteristics of the raw materials and how they interact with the manufacturing process, 2) the sustainability of the ingredients and how the food industry source these ingredients, and 3) the utilization of artificial intelligence to create and deliver consumer-preferred products to outpace competition, develop speed, and market success.

This scientific session is part of a joint three-division symposium featuring distinguished lectures from the IFT's Food Engineering, Nonthermal Processing, and Food Packaging Divisions. The session is co-sponsored by Phi Tau Sigma – The Honor Society of Food Science and Technology.

Key Takeaways:

- History of innovations in food industry
- Current strategies and innovations in food industry
- Global challenges and how the industry is preparing for the challenges

### **151.3: Advances in Nonthermal Food Processing Technologies that can Help Address the Present and Future Challenges of the Food Sector**

Carmen Moraru, Ph.D. (Presenter), Hosahalli Ramaswamy, Ph.D. (Moderator)

This session features the Nonthermal Processing Division lecture. The nominated leader will focus on the present and future global challenges posed to the food supply based on the effective utilization of nonthermal processing technologies.

The objectives of the Nonthermal Processing Division (NPD) are to: promote communication and interaction among innovative food technologists in industry, government, and academia; provide a nucleus within IFT for organizing symposia and other programs for the dissemination of information pertaining to nonthermal food processing; promote cooperative endeavors with other professional societies concerned with nonthermal food processing and ensure that nonthermal food processing is an integral and essential component of food science and technology curricula. This presentation is given by a leading professional nominated by the NPD and is focused on issues that are relevant to the NPD membership involving academia, industry and regulatory professionals. The following highlights the presentation.

The food sector is facing some of its greatest challenges in history: feeding a rapidly growing population, as the world population is estimated to reach 10 billion by 2050, a continuous depletion of natural resources, and the realities and anticipated aftermath of a global pandemic. This presentation will discuss some of the recent advances and innovations in nonthermal food processing that will enable the food industry to feed the global population in a safe, healthy, and sustainable way. Focus will be placed on processing strategies that result in highly nutritious, tasty and safe foods, combined with an efficient

use of energy and natural resources. Specific case studies will include novel membrane filtration methods for nonthermal concentration of liquid foods (forward osmosis), advances in light based treatments for inactivation of pathogenic viruses and bacteria in foods and food processing environments (i.e. the use of energy efficient LED light sources), as well as hurdle nonthermal approaches for microbial inactivation and removal (i.e., combinations of membrane filtration and UV treatment). The presentation will feature technical data on the effectiveness of these technologies and will also discuss challenges that need to be overcome before the commercial application of these technologies, such as cost, ease of integration in existing processing lines, resource utilization and, in some cases, consumer perception.

The session is co-sponsored by Phi Tau Sigma – The Honor Society of Food Science and Technology

Key Takeaways:

- Presents recent advances and innovations in nonthermal food processing that can help feed the global population in a safe, healthy: and sustainable way.
- Highlights select processing strategies that result in highly nutritious, tasty and safe foods
- Challenges still exist before full commercial adoption of nonthermal technologies; mostly related to cost or incomplete information on their economic feasibility

#### **184: Regulatory Awareness for Food Scientists: A Career Choice Consideration From Global Perspectives**

Bhakti Harp, Ph.D., Douglas Williams, Ph.D., Neal Fortin, J.D. (Presenters), Poulson Joseph, Ph.D. (Moderator)

Food industry innovation and new technologies are well-associated with regulatory landscape globally. Therefore, the proposed session will feature insights into regulatory field as a career choice from three different perspectives-industry, academia, and government, with offering valuable tools and insights!

Food and science and technology is witnessing rapid strides in innovation in multiple avenues. When new technology or ingredients or processes are adopted by industry, regulatory aspects serve as a critical element and deciding factor for successful implementations and product launches. Furthermore, regulatory bodies serve the unique function of safeguarding the quality and safety of food, and therefore become integral parts of food industry services. Given the global scope of the food industry and the resulting trans-national interactions, the scope and relevance of regulatory becomes broader. At present, food scientists may not be aware of regulatory affairs as a global career choice, especially in their early career. In addition, there are a variety of regulatory bodies depending on the type of food/category that they are assigned to. Therefore, it is very relevant and highly useful for food scientists, early career professionals, and even students, to engage in a panel session to listen from experts who walked their way in regulatory affairs - from three different perspectives (industry, academia, and government). This session will additionally feature insights into some of the valuable tools and resources on regulatory affairs that can come in handy for food technologists and product developers to further innovate to ensure a safe, nutritious, and high-quality food supply.

This session is co-sponsored by Phi Tau Sigma (The Honor Society of Food Science & Technology) and the Muscle Foods Division.

Key Takeaways:

- To learn about regulatory affairs as a career pathway for emerging food scientists, students, and early career professionals
- To engage from experts in three different perspectives-industry, academia, and government on the critical elements of regulatory in providing a safe, and wholesome food to consumers
- To feature insights into resources and tools that can enable early career food scientists to be better prepared for undertaking the challenges of innovation and new technology adoption

### **207: What is the Role of Meat in a Healthy Diet and for a Healthy World?**

Robin White, Ph.D., David Klurfeld, Ph.D. (Presenters), Gary Sullivan, Ph.D., Jerrad Lageko, Ph.D. (Moderators)

This session will provide a brief overview of the strengths and weaknesses of scientific support for dietary and environmental recommendations on meat consumption and discuss gaps in knowledge that should be addressed to support better recommendations for dietary choices. The session will feature two speakers, one with a nutritional and health focus and one with an environmental focus.

Meat has a long history in human diets and has even been identified as an important dietary component that enabled the advancement of early humans. More recently, recommendations to reduce or eliminate the consumption of meat products have been made to address concerns with cardiovascular disease, cancer, environment, and sustainability. However, the scientific literature and overall impact of these changes are not definitive, are contradictory, or are challenging to implement due to the complexity of diet. This session will feature two speakers, one with a nutritional and health focus and one with an environmental focus, that will provide a brief overview of the strengths and weaknesses of scientific support for dietary and environmental recommendations on meat consumption and gaps in knowledge that should be addressed to support better recommendations for dietary choices. This roundtable format will allow for time at the end of the session for questions and discussion.

This session is jointly sponsored by the IFT Muscles Foods Division and Phi Tau Sigma.

Key Takeaways:

- Strengths and weaknesses of scientific research used for dietary recommendations for meat consumption.
  - Strengths and weaknesses of scientific research on the environmental impacts of meat consumption.
- Identify gaps in knowledge that should be addressed to provide better science-based recommendations.

### **233: Efficacy of Nonthermal Processing Technologies for Inactivation of Viruses: Gaps and Opportunities**

Brendan Niemira, Ph.D. (Presenter), Kathiravan Krishnamurthy, Ph.D. (Presenter, Moderator), Tatiana Koutchma, Ph.D. (Moderator)

This session will shed light on the efficacy of pulsed light, cold plasma, UV, and LED for inactivation of various viruses including coronaviruses. In addition, the session will explore the gaps and opportunities involved in these technologies for successful implementation in the industry.

The Centers for Disease Control and Prevention estimates that foodborne illnesses result in 47.8 million illnesses, 127,839 hospitalizations, and 3,037 deaths every year in the United States. Out of all the known agents causing foodborne illnesses, viruses are estimated to cause 59% of illnesses, 27% of hospitalizations, and 12% of death in the United States every year. Viruses such as astrovirus, Hepatitis A virus, rotavirus, norovirus and sapovirus had been implicated in foodborne illnesses in the past. Noroviruses are estimated to cause approximately 5,461,731 illnesses every year (CDC).

With the emerging virus outbreaks, it is crucial to evaluate the efficacy of various processing technologies for the inactivation of viruses in foods. Viruses are typically transferred to the surface of food products or food contact surfaces during the handling of the products. Nonthermal processing technologies such as pulsed light, cold plasma, UV, and LED are very promising in inactivating viruses from the surface of the food products and/or food contact surfaces. This session will shed light on the efficacy of pulsed light, cold plasma, UV, and LED for the inactivation of various viruses including coronaviruses. In addition, the session will explore the gaps and opportunities involved in these technologies for successful implementation in the industry.

This session will feature three experts who will share their insights on the efficacy of various novel technologies as follows:

- Tatiana Koutchma, Ph.D. (Agri-Food Canada) - Feasibility of UV LEDs as a novel sanitation treatment to improve safety during pandemics
- Kathiravan Krishnamurthy, Ph.D. (Illinois Institute of Technology) - Efficacy of pulsed light for inactivating viruses from food surfaces and food contact surfaces
- Brendan Niemira, Ph.D. (USDA ARS) - Cold plasma inactivation of foodborne viruses: mechanisms and validation

This session is co-sponsored by the Nonthermal processing division and Phi Tau Sigma, the Honor Society of Food Science and Technology

Key Takeaways:

- Understand the efficacy of pulsed light, cold plasma, UV, and LED for the inactivation of various viruses
- Identify gaps and opportunities for successful implementation of the technologies in the industry

### **234: Seeking Meaningful Significance: Insights into Academic and Industry Statistical Practices and How to Prepare for Both**

Christopher Simons, Ph.D., Frank Rossi, M.A., Jason Parcon, Ph.D. (Presenters), Rodrigo Tarté, Ph.D., Anna Hayes, Ph.D. (Moderators)

This panel discussion will focus on how the use of statistical methods and tools differs between academia and industry. Students and early career professionals will be equipped to recognize, embrace and leverage these differences to become more effective and productive food professionals.

Production of safer, more sustainable and nutritious food requires reliable data analysis and interpretation to guide informed decisions. Statistics provides the data-driven insights needed to address these challenges simultaneously, which means future food science professionals will need to apply statistical methods effectively in commercial or academic environments.

However, exposure to statistical techniques can vary by institution and subdiscipline, and a common denominator emerges statistics is discussed almost exclusively from the perspective of the subdiscipline. Consequently, future food science professionals may be unprepared to manage cross-functional points-of-view typical of corporate settings. Thus, broadening one's statistics arsenal beyond a purely academic lens is easier said than done.

Companies in the food and beverage industry have varying appreciation for the required depth and resources needed for statistical expertise. Some companies depend on external expertise, others invest heavily in building an internal statistics resource, and some only use statistics as an afterthought. Rapid timelines and resource constraints affect the way in which statistical tools are utilized, which can impact study design, data analyses, and interpretation.

Knowledge of the differences between how academia and industry apply statistical methods is useful for food science students and early career professionals, whose careers could include positions in either or both. In this panel discussion, insights into these differences will be revealed and explored. The panelists have extensive experience in both academia and industry, and their experiences will highlight the differences in statistical practices to better prepare attendees to answer some of food science's most pressing questions.

This session is sponsored by Phi Tau Sigma, and the Education, Extension and Outreach Division.

Key Takeaways:

- This session will reveal and explore differences in the way statistical methods are applied in industry and academia.
- Students and early career food science professionals will learn how to better leverage the use of statistical methods, whether in an academic or a commercial setting.

### **319: The Pandemic, Processed Food, Nutrition, and Immunity**

Julie Miller Jones, Ph.D., Kantha Shelke, Ph.D., Susana Socolovsky, Ph.D. (Presenters), Roger Clemens, DrPH (Moderator)

The pandemic-related shelter-in-place and restricted shopping is a call for educating consumers and the food industry on the value of nutritious shelf-stable processed foods for public health and immunity. This session will ensure there is no ambiguity about the fact that widespread food processing has made our food supply safer, more robust, and of greater nutritional value.

Never before has food processing and its effect on food safety, health and nutrition been more misunderstood and blamed for the chronic health issues that are on the rise. Practically every sector of the food industry is being challenged because of unfounded skepticism of the value of processed foods and a misguided belief that these so-called "ultra-processed foods" contribute to chronic non-communicable diseases, and even cancer.

Several investigators have advanced the hypothesis that ultra-processed foods contribute to excess energy, sugar, and sodium intake and question the nutritional quality of packaged foods. The notion of NOVA— originally introduced in South America—classifies foods according to degree of food processing, when it is nutritional value that matters most to health and wellness. These food processing categories have been endorsed by the World Health Organization and the Pan American Health Organization, and in Europe, SIGA and markers of ultra-processing have further exacerbated the food processing and health controversy. The prevailing general ignorance of various forms of food processing, including nonthermal and filtration technologies, further confounds the controversy and international debate.

The session is a call-to-action for food scientists and to all stakeholders in the food industry to recognize the importance of the right mix of fresh processed foods including and enriched/ fortified ones in meeting the shelter-in-place needs for food. It will review principal components of the immune system, the nutrient needed, and how processed foods can be made to deliver these nutrients. This session will ensure there is no ambiguity about the fact that widespread food processing has made our food supply safer, more robust, and of greater nutritional value.

This session is sponsored by Phi Tau Sigma – The Honor Society of Food Science and Technology.

**Key Takeaways:**

- The audience will understand the value of nutritious shelf-stable processed foods for public health and immunity.
- The importance of the right mix of fresh processed foods including and enriched/ fortified ones in meeting the pandemic and post-pandemic needs for food.
- The audience will gain insights on product development, food health claims, and consumer demands and how to counter them with science and sensibility

## **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 74<sup>th</sup> 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, bringing together the best of both.



“The 2021 RMC is going to be a time for friends and family in the meat world to reconnect after being apart for so long. There will be a world class technical program, student activities, networking opportunities, and the finest group of people that you can be a part

of. Come make history in the biggest little city in the world when meat scientists come back together in person. See you at RMC!"

*-Wes Schilling, Ph.D., AMSA RMC Chair and Professor, Mississippi State University*

This year's Technical Sessions will include:

- Navigating the Future of Meat
- Ingredient Technology in Processed Meats
- Meats Role in the Diet and our World
- Pre-harvest effects on Meat Quality
- Addressing food insecurity through Preventing Food Waste
- Meat Industry Innovations in Quality and Safety
- Meat Processing vs Alternative Protein Processing
- Abstract and ePoster Sessions
- Reciprocity Sessions
- And More!

[Register Now!](#)

For more details on the full RMC technical program please visit [www.meatscience.org/rmc/](http://www.meatscience.org/rmc/)

## **From the Desk of the Treasurer: The Annual Meeting is on its Way**

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

The Annual Meeting of the IFT will once again be held in a virtual, web-based format as it was in 2020. This applies to Phi Tau Sigma sponsored lectures and the Awards Ceremony too.



While this means we cannot rub elbows with our peers and mentors and celebrate our membership, it also means significant opportunities.

Phi Tau Sigma members from around the world will now be afforded easier access without the time and financial hurdles that conventional meetings pose. People with schedule conflicts will be able to view recorded programs at their convenience and get the feeling of connectedness with those devoted to advancing food scientists in their professions and food science in the marketplace.

Please think about adding a donation to your membership dues to further bolster Phi Tau Sigma sponsorships, scholarships, and awards. Your membership dues and donations can help Phi Tau Sigma become a powerful platform for connecting, supporting, and celebrating professionals who are passionate about advancing the realm of food science and technology. I truly look forward to seeing additional support when you renew your membership in Phi Tau Sigma.

## **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](mailto:charlwit.kulchaiyawat@fosterfarms.com)) 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 Rachel Adams, M.S. ([radams@meatscience.org](mailto: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](mailto:tboylsto@iastate.edu)), with a copy to Dr. Kathryn L. Kotula ([klkotula@msn.com](mailto:klkotula@msn.com)).

**->Election schedule:**

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

**->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
- Sessions in conjunction with the IFT meeting.

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

**NOTE: IFT will again be 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>

**->August 15-18, 2021, Reciprocal Meat Conference of the AMSA:**

August 17, 7:30pm PDT

Awards Banquet

## **Student Research Synopsis: Consumer acceptability and monetary value perception of iced coffee beverages vary with drinking conditions using different types of straws or lids**

Contributed by Thadeus L. Beekman<sup>a</sup>, Lydia Huck<sup>b</sup>, Benjamin Claire<sup>a</sup>, Han-Seok Seo<sup>a</sup>

<sup>a</sup>Department of Food Science, University of Arkansas; <sup>b</sup>Department of Biological and Agricultural Engineering, University of Arkansas

*Adapted from published work: Beekman, T.L., Huck, L., Benjamin, C., & Seo, H-S. (2020). Iced coffee perception is modulated by drinking conditions using straw or lid. Food Research International, In Press. doi: <https://doi.org/10.1016/j.foodres.2020.109849>*

**Introduction:** Within the beverage industry, there is a growing trend of cold or iced coffee products to be offered to consumers to meet their changing demands <sup>[1]</sup>. In particular, environmental concerns have been raised regarding plastic straws, which has caused coffee businesses to serve their cold coffee samples with a greater variety of lids and straw conditions <sup>[2]</sup>. As these changes have been implemented for consumers, there has been little research available that details how the different lid or straw conditions can impact the consumer perception of coffee.

**Purpose:** A primary goal of this study was to best understand how the drinking conditions can modify the consumer experience with two specific aims to (1) identify how iced coffee beverages (without ice cubes) <sup>[3]</sup> are perceived differently among various drinking conditions and (2) offer insight on the best alternative to plastic straws for iced coffee beverage consumption.



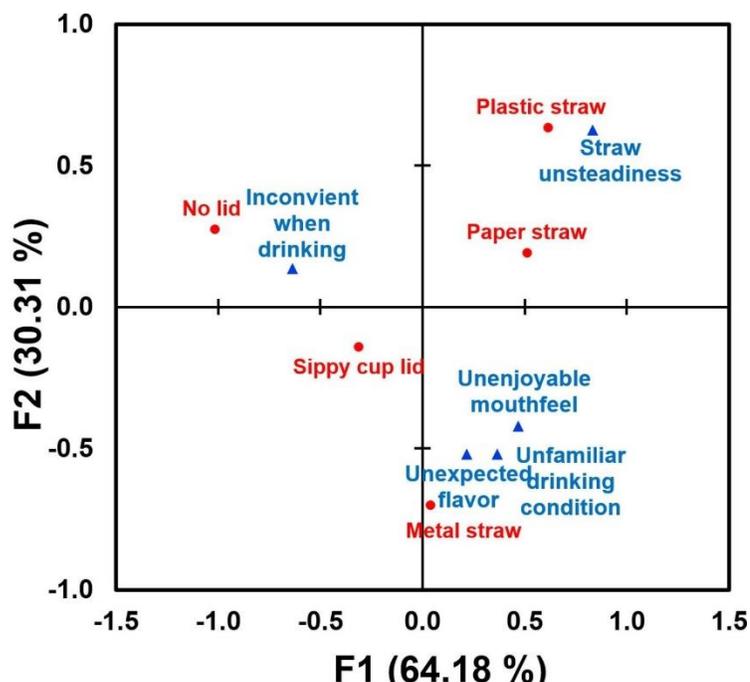
**Methods:** 75 adults participated in the study and tasted the same coffee in five different conditions: stainless steel straw, plastic straw, sippy-cup lid, no lid, and paper straw. Participants were asked to rate their perception of the bitterness, sweetness, sourness, and coffee flavor intensities, in addition to rating their flavor liking, mouthfeel liking, overall liking, and monetary value of each of the samples. They were also asked how familiar they were with each straw or lid condition and open-ended questions about what they liked and disliked about each of the drinking conditions. A three-way analysis of variance (ANOVA), treating “drinking condition” as a fixed effect and “serving order” and “participant” as random effects, was conducted to test the effects of drinking condition on the quantitative variables, while the qualitative data was inductively coded and analyzed using chi-square analyses and Monte Carlo simulations [4].

**Results:** The results showed that both the mean hedonic ratings of flavor, mouthfeel, or overall impression and the mean amount consumers were willing to pay (US\$) for iced coffee beverages were greater ( $P < 0.05$ ) in the sippy-cup lid condition than in the paper straw condition. It was also found that the sippy-cup lid condition induced the most pleasant drinking experience, based on consumer comments (Fig. 1).

**Significance:** This study shows that consumer experience and acceptability of iced coffee beverages can vary with drinking conditions. Therefore, the coffee industry and sensory professionals should consider not only sensory aspects of coffee, but also drinking conditions to improve consumer experience with coffee beverages, with sippy-cup styled lids offering a potential enhancement of the drinking experience.

**References:**

- [1] Mintel. (2018). *Iced coffee accounts for 1 in 5 global coffee launches*. Retrieved February 3, 2020, from <https://www.mintel.com/press-centre/food-and-drink/brewed-for-success-iced-coffee-accounts-for-one-in-five-global-coffee-launches>.
- [2] Walker, T. R., & Xanthos, D. (2017). A call for Canada to move toward zero plastic waste by reducing and recycling single-use plastics. *Resources, Conservation and Recycling*, 133, 99–100. <https://doi.org/10.1016/j.resconrec.2018.02.014>.
- [3] Choi, Y.-M., & Yoon, H.-H. (2010). Sensory characteristics of espresso coffee in relation to the classification of green arabica coffee. *Korean Journal of Food and Cookery*



**Figure 1.** Bi-plot drawn by the correspondence analysis in the associations of drinking condition (red circle) and participant comment categories (blue triangle) highlighting what consumers disliked.

*Science*, 26, 839–847.

[4] Sigal, M. J., & Chalmers, R. P. (2016). Play it again: Teaching statistics with monte carlo simulation. *Journal of Statistics Education*, 24, 136–156. <https://doi.org/10.1080/10691898.2016.1246953>.

## **Lifetime Member Tribute: Shankaralingam Pitchiah, M.S.** Quality Assurance Manager, Food Land Supermarkets Ltd., Honolulu HI

### Why did you become a Lifetime member?

Phi Tau Sigma is the one and only honorary society for Food Technologists, and I always wanted to be part of it because it connects both students and professionals. This will allow me to facilitate the knowledge I received through my experience as well as to connect with fresh minds.

Education: I have completed my masters degree in Hotel Management, Food Science with emphasis in food microbiology from Texas Tech University.

### Experience/Accomplishments:

- 15 years of experience in developing, monitoring, and implementing a HACCP and quality system program which includes dealing with regulatory agencies such as USDA, FDA, FSIS inspection and State Department of Health.
- 10 years of experience in supplier quality auditing & customer audits
- 10 years of experience in analyzing root cause of the problem in food plant & troubleshooting
- 9 years of experience resolving technical issues with purchasing ingredient supply
- Expert in handling critical food quality processes, equipment, and food safety related software
- Published 4 papers in reputed journals with 70+ citations
- Peer reviewed more than 10 articles for peer reviewed scientific journals



Areas of Expertise: Food Safety, Regulatory Compliance, Quality Systems and Food Safety auditing

### Awards and Honors:

- Member – International - IFST – Fellow membership
- Current member of HIFT – Local - Hawaii Institute of Food Technologists.
- Member – National - IAFP -2005-2007.
- Conducted training for Department of Health – State of Hawaii at So Ono Food products Facility – Model facility -2011.
- Invited to conduct food safety audit for Upcountry Jam and Jellies -Maui, Aloha Edibles – Beef Jerky plant, Hawaii Meat LLC.
- Recipient of Helen Devitt Jones Scholarship, College of Human Sciences, TTU
- Recipient of competitive scholarship awarded by Department of Nutrition, Hospitality, and Retailing, TTU
- Recipient of the Summer Thesis Scholarship from Graduate School, TTU
- Awarded outstanding student in University Examinations in Bachelors degree program

Personal: Family, Interests, Hobbies: My wife, Nagasundaravalli, and I have a 4 year old daughter. My new interest has developed to entertain kids and their activities. I love to cook and try new recipes. Learning new things and travelling always fascinates me.

Advice to University students and career food scientists and technologists:  
Always learning and updating is the key to success.

## **Careers: Food Scientist**

Contributed by Natalie Haag, B.S. Food Science, Minor in Culinary Science, Griffith Foods

Introduction/Background: Watching Good Eats on Food Network growing up sparked my interest in food science and got me experimenting with baking and cooking in the kitchen. I received a Bachelor of Science in Food science and minor in Culinary Science from Iowa State University. I was involved in the Food Science club, Culinary Science club and Product Development teams. My internships at OSI Industries and GPC helped guide me to a career in R&D. I am currently a Food Scientist in Research and Development at Griffith Foods.



Qualifications: B.S. in Food Science, Food Technology, Food Chemistry or related technical degree and 3 years' minimum experience of Research & Product Development or Quality Systems within the food industry.

Positions: Food Scientist (Griffith Foods), Associate Food Scientist (Griffith Foods), Technical Services intern (Grain Processing Corporation), Research Assistant (Iowa State University), Quality Assurance Intern (OSI Industries), Chef's assistant (ISU Dining)

Duties: Work cross-functionally with our regulatory, purchasing, production, quality, and sensory teams for commercialization of custom seasoning blends. Most of my time is spent in the lab formulating and screening seasonings on intended substrates to ensure flavor delivery and customer expectations are being met. I am also responsible for contacting suppliers for new raw materials, obtaining paperwork and formulating against customer requirements. I typically manage 4-8 projects at a time, which can vary from sending out finished products or seasoning samples to supplying technical support through working with our analytical team.

Salaries: For Food Scientist position, \$60,000- \$75,000 depending on education level, location, and experience.

Benefits: Medical, Dental, Vision, Life Insurance; 401k; Flexible work schedule; Summer Hours; casual dress code

Conclusion: Griffith Foods is a family-owned global company with a purpose of blending care and creativity to nourish the world. Being encouraged and supported by our organization to find my own purpose within Griffith makes me feel proud of what I do. My advice would be to intern at different companies to find a job that is fulfilling. Creating unique and delicious

food has always been my passion. Working in R&D gives me a platform to continue to learn and do what I love.

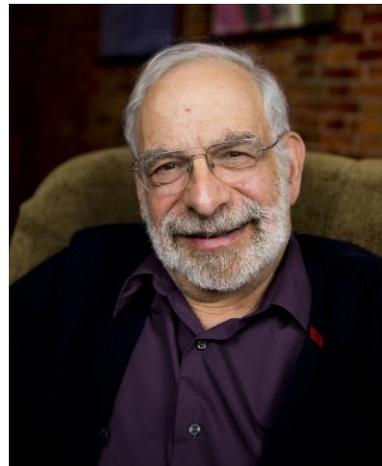
## Member News: 2021 IFT Achievement Awards

### Distinguished Career Award in Honor of Dr. Carl R. Fellers

*Honors an IFT member and Phi Tau Sigma member for their distinguished career in the food science and technology profession, and who has displayed exemplary leadership, service, and communication skills.*

**Joe Regenstein, Ph.D., ΦΤΣ** Lifetime Member  
Cornell University

Joe Regenstein is the 2021 recipient of the Distinguished Career Award in Honor of Carl R. Fellers. He is professor emeritus in the Department of Food Science at Cornell University and heads the Cornell Kosher and Halal Food Initiative. He teaches kosher and halal food regulations at Cornell and Kansas State (remotely). He is a distinguished foreign expert at Jiangnan University (China), adjunct professor at Chiang Mai University (Thailand), and guest faculty at Southwest University (China). Regenstein was IFT's first Congressional Science Fellow. He wrote *Food Protein Chemistry, An Introduction for Food Scientists* and *An Introduction to Fish Technology* with his wife, Carrie, and *Genetic Modification and Food Quality* with Robert Blair. An IFT Fellow, Regenstein is also an IFST Guest Fellow in New Zealand. Previously he received IFT's Bor S. Luh International Award and the Elizabeth Stier Humanitarian Award; he is the current recipient of IUFoST's Lifetime Achievement Award. Regenstein is on advisory boards for the Food Diversity Innovation Program, Texas A&M, and the Global Harmonization Initiative.



### Lifetime Achievement Award in Honor of Nicolas Appert

*Honors an individual for contributions to the field of food technology.*

**Eric Decker, Ph.D., ΦΤΣ** Lifetime Member  
University of Massachusetts, Amherst

Eric Decker is the recipient of the 2021 Lifetime Achievement Award in Honor of Nicolas Appert. He is professor in the Department of Food Science at the University of Massachusetts, Amherst, and an internationally recognized expert for his pioneering research on lipid chemistry and foods. A highly cited scientist, he has over 440 publications and numerous chapters, books, and patents to his credit. Decker has also received numerous honors for his research, including awards from the American Oil Chemist Society, the Agriculture and Food Chemistry Division of ACS, the International Life Sciences Institute, and IFT.



### **Achievements in Microbial Research for Food Safety Award in Honor of Gerhard J. Haas**

*Honors an IFT member for creative research in microbial aspects of food safety.*

**Yaguang (Sunny) Luo, Ph.D., ΦΤΣ** Lifetime Member  
*U.S. Department of Agriculture, ARS, NEA, BARC, FQL, EMFSL*

Yaguang (Sunny) Luo is the 2021 recipient of the Achievements in Microbial Research for Food Safety Award in Honor of Gerhard J. Haas. Luo is an internationally recognized authority on food safety in fresh and fresh-cut (minimally processed) fruits and vegetables. She joined the U.S. Department of Agriculture, Agricultural Research Service in 2001 with more than five years of research and management experience in the fresh-cut produce industry. Luo has served on the Inter-Agency Food Safety Task Force of the White House's Office of Science and Technology Policy, and consulted for the United Nations' Food and Agriculture Organization and the World Health Organization on food safety in leafy green vegetables. Her research centers on creative solutions to food safety challenges, and her findings have significantly impacted food safety policies and industry practices internationally and in the United States, where she has helped to enhance the safety of our nation's food supply.



### **Distinguished Service Award in Honor of Calvert L. Willey**

*Honors an individual who has provided continuing, meritorious, and imaginative service to IFT.*

**Leslie Herzog, M.S., ΦΤΣ** Lifetime Member  
*The Understanding & Insight Group LLC*

Leslie Herzog is the recipient of the 2021 Calvert L. Willey Distinguished Service Award for his lifelong, innovative, and passionate service to IFT and the advancement of food science and technology. Herzog has been a dedicated volunteer to IFT for over 45 years, working with the New York Section and contributing through his philanthropy, leadership, and mentorship to food science students at Cornell University, the University of California, Davis, Rutgers University, and the University of Massachusetts. Herzog has served on numerous IFT task forces, the Executive Committee (now called Board of Directors), and award juries, as a member and chair, as well as numerous IFT committees. An IFT Fellow, Herzog loves coaching student teams in IFT competitions, helping them to utilize his knowledge of product development and food product commercialization learned during his career at Lipton / Unilever.



### **Excellence in Education Award in Honor of William V. Cruess**

*Awarded for achieving excellence in teaching food science and technology.*

**John Coupland, Ph.D., CFS, ΦΤΣ** Lifetime Member  
*The Pennsylvania State University*

John N. Coupland is the 2021 recipient of the Excellence in Education Award in Honor of William V. Cruess. He is a professor of food science at The Pennsylvania State University, where he serves as the undergraduate program coordinator. Coupland's research relates the physical structure of foods to functional properties, using theories and methods adapted from physical chemistry. He also uses this approach in his "Food Physical Chemistry" graduate course and in his textbook, *An Introduction to the Physical Chemistry of Foods* (Springer, 2014). Coupland is interested in the social context of food science and in advancing the food science profession. In his course "Arguing About Food," he uses modern controversies to help food science students explore the roles science can play in society, while in his large general education course "Food, Facts and Fads," he takes a historic approach to teach a general audience the ways our food system developed. Coupland is a Fellow and former president of IFT.



### **Outstanding Partnership Award in Honor of Myron Solberg**

*Honors leadership in industry/government/academia cooperative organization.*

**Aurora Saulo, Ph.D., ΦΤΣ** Lifetime Member  
*Food Science Interests LLC*

Aurora Saulo is the recipient of the 2021 Outstanding Partnership Award in Honor of Myron Solberg. An emeritus professor and specialist with the University of Hawaii and a principal of Food Science Interests LLC, Saulo has a record of world-class excellence and leadership across industry, government, and academics. She was a flavor chemist for United Brands, a senior food technologist for Hunt-Wesson, a technical advisor to Orchards Hawaii Ltd, chair of the Food Science and Human Nutrition Department at the University of Hawaii at Manoa, and committee clerk to the Higher Education Committee for the Hawaii State Legislature. Saulo was also the force behind the certification of a Better Process Control School (BPCS) when conducted outside the United States, and taught the first BPCS under the new Food and Drug Administration BPCS course requirements. Her exemplary leadership and originality on all food frontiers led to her election as an IFT Fellow in 2006.



## Research and Development Award

*Awarded for significant research and development contribution to the understanding of food science, food technology, or nutrition.*

**V.M. Balasubramaniam, Ph.D., ΦΤΣ** Lifetime Member  
*The Ohio State University*

V.M. "Bala" Balasubramaniam is the 2021 recipient of the Research and Development Award. Balasubramaniam's integrated multidisciplinary approach to research and industrial outreach has advanced knowledge about innovative food manufacturing technologies and resulted in a significant impact on the thermal and nonthermal processing of foods. In particular, his work in the area of high pressure processing has opened new pathways for product offerings by developing safe, clean label, high-quality alternatives to traditional processes. The award reflects a career of prolific basic and applied research, including 115 journal papers, 22 book chapters, two books, five webinars, and four invention disclosures. Balasubramaniam was previously a recipient of the IFT Calvert Wiley Distinguished Service Award.



## 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](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. 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](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: May = New Starts (but please keep in touch)

May (sometimes early June) is when most graduations occur. We congratulate our graduates and wish them the best as they head off to the next phase of their lives, whether it be more education, a career, or something else along the path of life.

But PLEASE be sure you send me your new Contact Information so the we do not lose you as your life changes. ([klkotula@msn.com](mailto:klkotula@msn.com))

Thank you! And Congratulations!

## 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., 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](mailto:klkotula@msn.com) or Associate Newsletter Editor Claire Zoellner, Ph.D. at [cez23@cornell.edu](mailto: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](http://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](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](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.

## 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



Food Ingredients Group 

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.**

**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.)

**An anonymous** donation "In loving memory of Ana Lee (Biyen Chen). May you live on in those you've left behind." (Donation towards the General 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)

**R. Bruce Tompkin, Ph.D.**, Food Industry Microbiologist and long-time member of AMSA. (Donation towards the endowment for the Phi Tau Sigma - AMSA 'Research with Impact' Scholarship.)