



The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter *May 2020*

News:

Election Results: *New Phi Tau Sigma Leadership:*

President-Elect: Rodrigo Tarté, Ph.D., Iowa State

Directors:

- Navam Hettiarachchy, Ph.D., University of Arkansas
- Poulson Joseph, Ph.D., Kalsec, Inc
- Fanbin Kong, Ph.D., University of Georgia
- Matthew (Matt) Taylor, Ph.D., Texas A&M University
- Ravi Chermala, M.S., M.J., MBA, Beech-Nut Nutrition, will serve out the term of Dr. Rodrigo Tarté who moves to President Elect (one year term)

We had an extremely good turnout of 57% of members in good standing having voted. Congratulations to all! We look forward to working with you.

Phi Tau Sigma Symposia during the IFT meeting

(Contributed by Martin Sancho Madriz, Ph.D., Program Committee Chair)

The following symposia are sponsored and/or organized by Phi Tau Sigma at the 2020 IFT Annual Meeting (July 12-15, 2020). [NOTE: The IFT meeting this year will be a virtual meeting, so dates and times are tentative.](#)

Advancements in novel processing and packaging technologies for shaping the future of food manufacturing and consumption

Tuesday, 7/14/2020, 2:00 to 3:30 pm

Session organizers: Bala Balasubramaniam, Ph.D. (Professor, Ohio State University), Tatiana Koutchma, Ph.D. (Research Scientist, Agriculture and Agri-Food Canada), and Maxine Roman, Ph.D. (Principal Scientist, The Kraft Heinz Company)

Session Moderators: Bala Balasubramaniam, Ph.D. (Professor, Ohio State University), Tatiana Koutchma, Ph.D. (Research Scientist, Agriculture and Agri-Food Canada), and Maxine Roman, Ph.D. (Principal Scientist, The Kraft Heinz Company)

Session Description:

Advances in food processing, packaging, and digital technologies are enabling the food manufacturing industry to satisfy consumer demand for convenient, safe, sustainable, and healthy processed foods. This symposium will highlight how the research advances and

innovations in food engineering, nonthermal processing, and packaging technologies help to shape the future of the food manufacturing industry. For example, consumer demand for healthy food and beverage products has spurred a growth in the plant-based protein foods. This symposium features the highly coveted division lecturers from the IFT's "food engineering", "nonthermal processing", and "food packaging" divisions.

Nonthermal processing division lecture will highlight how nonthermal technologies, particularly high-pressure pasteurization technologies enabled the food industry to develop innovative food and beverage products for satisfying consumer demand. Food engineering division lecture will discuss the role of computer-aided manufacturing and mathematical modeling tools for reducing experimentation and improving food product and process designs. Food packaging distinguished lecture will highlight top 10 technology fusions applicable for food packaging.

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

Presentations:

Ashim Datta, Ph.D. (Professor, Cornell University): "Mechanistic Modeling in Food Product/Process Design: Coming of Age?"

Claire Koelsch Sand Ph.D. (Owner, Packaging Technology and Research): "Top 10 Science Fusions That Will Shape Food Packaging in the Next Decade"

Marcia Walker, Ph.D. (Vice-president of research and development and quality assurance, The Tofurky Company): "Plant Based Protein Product Innovation and the Use of Nonthermal Processing"

What's in a Name? The Rules and Regulations Surrounding Labeling Foods.

Monday July 13, 2020, 12:00 - 1:30 pm

Session Description: In the news today, we hear about such products as lab-based meat and dairy, plant-based burgers that bleed, insect pasta, algae, super mushrooms, and a host of dairy products that are made from non-traditional sources. Consumers are pressuring the industry to deliver "transparent" labels, and purposeful claims impacting their own human health. Truthful and non-misleading labels are important to the consumers and industry, but this has not come without some pushback on the language that is required for certain claims and product standards. Experts will discuss current technologies and how they fit into the current labeling regulatory scheme; current challenges to standards of identity; and the issues of how competitors may challenge your product and your labeling; and why the public perception may be both your friend or your enemy.

Collaborating Divisions: Muscle Foods and Food Laws and Regulations. This session is co-sponsored by Phi Tau Sigma - The Honor Society of Food Science and Technology.

Presentations:

Kris DeAngelo, JD, LL.M (Michigan State University): "Historical Laws and Regulations Relating to Naming and Claims and Why They Don't Work for New Products"

Debbie Nece, B.S., (Cargill Incorporated): "Regulations and Insights into USDA-FSIS Product"

KatieRose McCullough, Ph.D., MPH: "What's in a name? Understanding differences between marketing and regulatory label claims on meat packaging"

Adam Ekonomon, JD, LL.M (Vice President and Deputy General Counsel at The JM Smucker Company): "Advertising and Regulation of Future Foods"

Trevor Findley, JD, LLM (Deputy Director of the Food Disclosure and Labeling Division, USDA): "Old Foods and New: What the National Bioengineered Food Disclosure Standard Means For You"

Leveraging protein waste with novel products, processing and packaging solutions

Monday July 13, 2020, 12:00 – 1:30 pm

Session Organizer: Sergiy Smetana, Ph.D.

Session Moderator: Jing Zhao, Ph.D.

Session Presenters: Clyde Don, Ph.D., Claire Sand, Ph.D., Gerardo Morantes, Daniel Pleissner, Ph.D., Jesus Fernandez-Bayo, Ph.D.

Session Description:

The world population is growing and in the next 30 years food production must double to support the increasing demand. The existing food system will not be able to cope with the situation due to low efficiency of the food production system and high loss rates. At the same time there are several efficient solutions oriented towards effective processing and preservation of foods with valuable proteins, utilization of side-streams for food and feed, upcycling of low value nitrogen sources to high value protein sources. Holistic combination and effective joining of the solutions along the production chains could lead to substantial improvements in protein supplies.

One first solution, which might have an enormous impact, is the direct upcycling of food proteins in food and feed that were considered as disregarded products (wasted biomass) previously. Emerging processing technologies allow for targeted extraction and purification of valuable proteins, making them possible to be used for food and feed. At the same time, modern packaging and processing technologies help achieve better preservation of food, allowing for longer storage time and better nutritional properties. Longer preservation can also assure further upcycling by processing technologies, when food is suitable for consumption but "is not appealing". It leads to the analysis of a second solution dealing with packaging-preservation of newly derived proteins that stem from food system by-products and novel protein sources.

Thirdly, microalgae and insects are sustainable production options due to the highly efficient biomass productivity, ability to rely and process protein wastes, no competition with crops for agricultural land, minimal water consumption and the possibility of growing on low value side streams. Even though wasted food is no longer applicable as a food source, nitrogen compounds can be recovered and used for other purposes. Proteolytic hydrolysis of proteins in food waste releases amino acids. Amino acids serve as a nitrogen source which could be converted by heterotrophic microalgae to high nutritional proteins. Thus, compounds from food waste are "upcycled" to new nutritional compounds. Insects, similar to heterotrophic microalgae, can utilize nutrients and upcycle low value agri-food side-streams, but with minimal preprocessing of feed materials. The black soldier fly, *Hermetia illucens L.*, is an emerging technology that has been used to "upcycle" agri-food side-streams and food waste. Larvae can be utilized for animal feed and human consumption, representing a relatively new source of proteins. If safety and hygiene standards are fulfilled, the upcycling of nitrogen compounds can make alternative protein sources available and contribute to the solution of the "lack-of-protein" problem.

The symposium will cover multiple aspects, allowing to preserve, efficiently process and return proteins in the food system.

The session is a collaboration between Packaging Division, Protein Division, International Division and sponsored by Phi Tau Sigma.

Presentations:

Regine Stockmann, Ph.D.: "Food Loss and Waste Reduction: Technological Innovations Across the Value Chain"

Jonathan Cammack, Ph.D.: "Saving the World With the Black Soldier Fly: Current and Future Aspects of an Emerging Waste Processing Technology"

Iris Haberkorn, Ph.D.: Value Creation Through Food Loss Mitigation: Potential of Microalgae for Creating Circular Bioeconomy Concepts

Sergiy Smetana, Ph.D.: "Environmental Price of Innovative Circular Economy Concepts: LCA of Microalgae- and Insect-Based Biorefineries

Where Science and Inspiration Meet – More information about the ICoMST (contributed by: Deidrea Mabry, M.S. and Morgan Pfeiffer, Ph.D., American Meat Science Association)

The 2020 International Congress of Meat Science and Technology (ICoMST) and the Reciprocal Meat Conference (RMC), August 2-7, 2020 in Orlando, Florida, will include six days of intensive technical and educational sessions from leading industry experts, both nationally and internationally, on a variety of topics. The program will include headliner presentations, keynote sessions, concurrent sessions, and reciprocation sessions, offering the opportunity to dialogue on important world meat industry topics.



**Join us in the most magical place on earth,
where science and inspiration meet.
Register Today for the AMSA ICoMST/RMC
www.icomst2020.com**

Besides this, there are several activities that begin prior to the opening Welcome Reception kickoff of the 2020 ICoMST and RMC on Sunday evening, August 2. These events are created to engage student participation and give students the chance to compete, gain leadership skills, build a network of lasting relationships, and position themselves for successful careers. Undergraduate and graduate students are given the opportunity to compete in research competitions that require the students to prepare both a visual aid and a short oral presentation on their research, a product development contest where their culinary skills will be put to the test and students are given the opportunity to showcase their knowledge in the quiz bowl competition.

Wednesday of the conference will be dedicated to tours allowing attendees to explore all that Florida has to offer, such as Dessert Ranch a world class cattle ranch in central Florida, Babcock Ranch a diversified eco-tour featuring alligators, birds, perhaps deer, wild hogs, wild turkeys, sandhill cranes and much more, the University of Florida athletic facilities, along with many other options. Additionally, there will be opportunities to visit beautiful St. Augustine, NASA space center, and any of the Disney parks.

As attendees reconvene the morning of August 6, they will hear from Ronnie Green, Ph.D., Chancellor at the University of Nebraska, who will dive into the challenges and professional

skills that are needed to address global scientific challenges for agriculture, natural resources and food systems, with specific emphasis on animal protein fulfillment, in the 2030 era and beyond. As attendees come together for the final morning on August 7, they will have a unique opportunity to hear from two outstanding speakers: Jeff Simmons, President and CEO Elanco Animal Health and Donnie Smith, retired Tyson Foods CEO. Together they will address how leaders in the industry can influence and address the issue of global nutrient security and how animal protein will play a key role in this effort.

Throughout the week attendees will also participate in culinary events that take advantage of the unique venue, enjoy world class social events and have the chance to view over 500 scientific digital poster presentations on cutting edge research.

This is a once-in-a-generation opportunity to attend and even showcase your organization to over 1,200 of the top meat scientists working in research and development, food safety, quality assurance, and other aspects of meat production from industry, academia, and allied organizations. For more information about the programming, lodging and registration please visit: <http://www.icomst2020.com/>. (The "early bird registration" ends July 21, 2020.)

For opportunities for your company to have exposure to the international meat science community via sponsorships, please contact Deidrea Mabry, dmabry@meatscience.org or 773-913-2021.

We hope to see everyone at Walt Disney World in 2020, **Where Science and Inspiration Meet!**

IUFoST 20TH World Congress of Food Science and Technology Is Postponed (Contributed by Mary Schmidl, Ph.D.)

Kia ora koutou | Greetings from New Zealand

On March 11, 2020, the World Health Organization (WHO) changed the status of the current outbreak of the coronavirus disease (COVID-19) from a 'public health emergency of international concern' to a pandemic. Since then, this outbreak has had a significant impact on business-as-usual activities and the world is in a very different place from when we last communicated!

Planning for IUFoST 2020 has been underway for over two years and the programme is almost complete. After careful consideration, NZIFST and the IUFoST board have decided to postpone this Congress and are considering a range of options at this time. We remain excited to host the Congress at a later date and expect to be able to provide an update before the end of June 2020.

Sending our best wishes during this challenging time.

Calendar:

->Phi Tau Sigma Scholarship and Awards Schedule:

- November 30: Deadline to submit nominations to the Awards Committee for the Dr. Daryl B. Lund 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 Ravi Chermala, M.S., Chair, (ravichermala@gmail.com) and Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com). (More information: <http://www.phitausigma.org/awards/>)

->December 9: 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:

- November 1: 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
- May 1: First call for Chapter annual reports
- June 1: Second call for Chapter annual reports
- July 1: Final call for Chapter annual reports
- 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, Claire Koelsch Sand, Ph.D., Chair, (clairekoelschsand@gmail.com) 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
- July 12: Phi Tau Sigma President will present the newly elected individuals to the Membership at the Annual Business Meeting of Phi Tau Sigma

->July 12-15, 2020, Institute of Food Technologists Annual Meeting, Chicago, IL:
July 12 (Sunday): (times tentative)
NOTE: IFT has decided to change to a 'Virtual' meeting. See details at
<https://www.iftevent.org/register/ift20updates>

Meetings and Events:

July 9 Phi Tau Sigma Executive Committee Meeting – Conference call
Dates and times to be determined:

- Phi Tau Sigma Leadership Council Meeting and Annual Business Meeting
- 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:

Dates and times to be determined:

- Leveraging protein waste with novel products, processing and packaging solutions
- Advancements in novel processing and packaging technologies for shaping the future of food manufacturing and consumption
- What's in a Name? The Rules and Regulations Surrounding Labeling Foods

Student Research Synopsis: Subcritical hydrolysis: an approach to valorize ice cream wastewater

(Contributed by Maryam Enteshari, Ph.D. student advised by Dr. Sergio Martinez-Monteagudo, Dairy and Food Science Department, South Dakota State University)



Previously published work featured here:

- **Enteshari, M.** and S. Martínez-Monteagudo. Subcritical hydrolysis of ice-cream wastewater: modeling and functional properties of hydrolysate. *Journal of Food and Bioprocess Technology*; 2018, 111; 104-113.
- **Enteshari, M.** and S. Martínez-Monteagudo. Subcritical hydrolysis: an approach to valorize ice-cream wastewater. Poster presentation, ADSA annual meeting, Cincinnati, Ohio, June 24-26, 2019.
- 1st place award, Ph.D. Student Poster Competition by Gamma Sigma Delta, South Dakota State University. April 2018.

Introduction: Ice cream manufacturers generate large volumes of wastewater (WW) through their daily cleaning programs.

Identifying profitable valorization methods for WW treatments are playing a decisive role in sustainability of the dairy and food industries. Water at elevated temperature and pressure (>100°C and 0.2-21 MPa) referred as pressurized hot water or subcritical water which reacts as a suitable environment-friendly solvent with extraction and hydrolysis purposes. Treatment of ice cream WW through subcritical hydrolysis is one promising method to not only overcome the environmental concerns derived from dairy effluents but also convert them for further utilization as valuable industrial feedstock.

Purpose: Hydrolysis as a result of subcritical water presents unique advantages in valorizing WW streams. The water content of the waste stream acts as a reaction agent and

solvent, meaning that streams of wastewater can be directly treated without any pretreatment. The objectives of this research were: (1) to investigate efficiency of subcritical water in hydrolysis protein fractions from WW of ice cream manufacturing, and (2) to evaluate the antiradical and antihypertensive ability of the recovered hydrolysate.

Methods: In this study, samples of ice cream WW were collected from a university dairy plant during six weeks of production. First, physicochemical properties of WW samples were analyzed as follows: total solids (0.64 ± 0.01 to 2.05 ± 0.01 g 100g^{-1}), total protein content (6.81 ± 0.81 and 9.67 ± 0.35 g 100g^{-1} on dry matter basis), and pH values (from 2.99 ± 0.02 to 6.99 ± 0.03). Untreated WW samples also possessed high organic load (biological and chemical oxygen demands of 38.2 ± 0.57 g L^{-1} and 30.01 ± 0.16 g L^{-1} , respectively). The hydrolysis of ice cream WW was carried out in a continuous-stirred tank at nitrogen flow of 40 bar and operating temperature of 230°C . After a 200 min subcritical hydrolysis reaction, the recovered WW hydrolysates were characterized by measuring the degree of hydrolysis (DH), antioxidant activity via measuring free radical scavenging (2,2-diphenyl-1-picrylhydrazyl or DPPH) method, as well as determining antihypertension (ACE) activity. Additionally, the peptide fractions of recovered hydrolysates were determined to attribute their proportions to relevant functional activities.

Results: The maximum value of DH ($31.75 \pm 0.53\%$), and percentage of remained DPPH ($15.21 \pm 0.44\%$) as well as ACE inhibition ($96.38 \pm 1.17\%$) showed the efficiency of subcritical hydrolysis to valorize ice cream WW and convert it to value-added materials. The amino acid profile showed a high ratio of glutamic acid and proline which confirmed the relevant antiradical and antihypertensive activities of recovered hydrolysates. From environmental aspects, subcritical water hydrolysis effectively removed around 97% of the biological organic loads.

Significance:

The outcomes reveal the potential of subcritical hydrolysis to convert ice cream WW into nutraceutical compounds which can be utilized as functional food ingredients and pharmaceuticals.

References:

- Brunner, G., 2009. Near critical and supercritical water. Part I. Hydrolytic and hydrothermal processes. *J. Supercrit. Fluids* 47,373–381.
- Davarnejad, R., Nikseresht, M., 2016. Dairy wastewater treatment using an electrochemical method: experimental and statistical study. *J. Electroanal. Chem.* 775, 364–373.
- Esteban, M.B., García, A.J., Ramos, P., Márquez, M.C., 2008. Kinetics of amino acid production from hog hair by hydrolysis in sub-critical water. *J. Supercrit. Fluids* 46, 137–141.
- Möller, M., Nilges, P., Harnisch, F., Schröder, U., 2011. Subcritical water as reaction environment: fundamentals of hydrothermal biomass transformation. *ChemSusChem* 4,566–579.
- Nielsen, P.M., Petersen, D., Dambmann, C., 2001. Improved method for determining food protein degree of hydrolysis. *J. Food Sci.* 66, 642–646.

Lifetime Member Tribute: Cordelia Selomulya, Ph.D.

Professor, University of New South Wales - Sydney

Why did you become a Lifetime Member? Phi Tau Sigma has a range of great programs for students and professionals in food science and technology and has an important role in shaping the profession for the future. I am proud to be a part of this Society and contribute to their ongoing activities to achieve this mission.

Education: Ph.D. in Chemical Engineering, UNSW (2002), Bachelor in Chemical Engineering (1st class honours & medal), UNSW (1998)



Experience/Accomplishments: I recently joined UNSW after almost 14 years at Monash University in Melbourne, where I was the director of the Australia-China Joint Research Centre in Future Dairy Manufacturing, and also the director of the Food and Dairy Graduate Research Industry Partnership – both of which involved extensive collaboration with industry for our research and Ph.D. programs. At UNSW, I am currently the Research and Commercialisation Director for the Future Food Systems CRC, a collaborative research program funded by industry and government, to help support the growth of Australia's agricultural industry for provenance protected, value-added healthy foods across the supply chain. I am also a Professor in Food and Health at the School of Chemical Engineering, UNSW.

Areas of Expertise: functional particles / powders, spray drying, microencapsulation.

Awards and Honors (selected list):

- IChemE Global Awards in Food and Drink category (2018)
- BHERT (Business & Higher Education Round Table) Award for outstanding collaboration in R&D for the Monash Program for the Food and Dairy industries (2018)
- Fonterra Award for outstanding contribution in the industrial application of a novel technology in the field of bioprocessing (2017)
- Judy Raper Award for Leadership in recognition of sustained and significant contribution through demonstrated leadership within the discipline/profession in Australia (2017).
- Young Food Engineer Award at the 12th International Conference on Engineering and Food (2015) in Québec City, Canada.

Personal: outdoor activities (hiking, kayaking, paddle boarding, etc), travelling and experiencing different cultures, eating out / trying unique cuisines – I'm an adventurous foodie!

Advice to university students and career food scientists and technologists: Food is an integral part of life and so what we do, whether in developing new products or in conducting any food-related research, matters now and in the long run. With the contemporary challenges of sustainable food supply and accessibility of nutritious food for everyone, our profession stands in the forefront to tackle these issues. We have the responsibility to correct any misconceptions that are not based on scientific facts and should be more proactive in communicating with the general public. We should aim to have a positive impact on society through our work, and have fun doing it!

Careers: Food Scientist

(Contributed by Elissa Prout, B.S., Beech-Nut Nutrition Company)

Introduction/Background: Hello fellow Phi Tau Sigma members! My adventures in food science started in high school when I took a trip to Cornell University to meet with the food science department. I fell IN LOVE! In high school, I was always excelling in math and science and I was passionate about health and nutrition, so food science seemed like the perfect combination of both.



In 2014, I graduated with a B.S. in Food Science. Prior to graduation, I explored internship opportunities and after my sophomore year of college I landed my first internship with Beech-Nut Nutrition Company (BNN). From that moment on I never looked back. My first experience turned into a second opportunity which then evolved into a full time offer upon graduation. Upstate NY has always been home for me, and I love every minute of being here!

Qualifications: Most food scientist positions require a B.S. in Food Science of a related field with 3-5 years of experience or a M.S. in Food Science or a related field. I received my B.S. Food Science from Cornell University. As a food scientist it is important to continue to learn and develop. I have completed many food safety trainings over the years and in 2019 I completed the Certificate in International Food Law from Michigan State University.

Positions: Food Scientist - November 2018 - Current
Food Technologist - June 2014 - November 2018
R&D Intern - May 2013 -August 2013
Quality Intern - June 2012 - August 2012

The main difference between a food technologist and food scientist is increased responsibility. As my first job in the industry I learned a lot about processing, ways of working within Beech-Nut Nutrition and systems and processes in place. I quickly grasped concepts and was given more responsibility over time to prove my abilities and receive the promotion to food scientist. I am currently on a career path to become a product development project manager which again comes with increased responsibilities. I am currently managing a few innovation projects as a food scientist in order to gain experience to be able to reach the next level.

Duties: My primary responsibilities are in product development and innovation, managing projects for new product innovation and working with internal and external teams to launch new and exciting infant foods and toddler snacks. Other responsibilities include formula management and manufacturing support, certification management for Non-GMO Project Verification, Organic Certification and Gluten-Free Certification and I assist in supplier approval and management and well as Beech-Nut's Food Safety Culture initiatives.

Salaries: The salary range varies by geographic location and experience. According to a search of the internet, the average salary ranges from \$60k-\$70k. Some companies also offer bonuses based on company and/or individual performance.

Benefits: Company benefits may vary, but some BNN highlights include:

- Continuing Education Opportunities (Tuition Reimbursement Programs)

- Vacation Time and Holidays
- Employee's Birthday Off, Child's first birthday off.
- Travel to new location for manufacturing and supplier audits
- Health and Wellness Programs and Incentives
- 401K and Employer Matching Contributions

Conclusion: As a food scientist, I have been able to embrace new experiences, meet many talented and smart individuals in the industry and explore different areas as I create my own unique career paths. Every day presents new challenges and opportunities and with the support of my amazing coworkers and managers I can collaborate with a team and overcome the daily challenges. My advice to students is to gain as much experience as possible and begin to build a network early. As scientists, networking is not usually a strength, but it is a good skill to have. As you build your network, you gain the opportunity to develop personally and professionally.

Member News:

Dr. Brashears Confirmed as Food Safety Undersecretary, USDA

The U.S. Senate has confirmed Dr. Mindy Brashears for USDA Undersecretary for Food Safety on Monday, March 23, 2020. Because of the lengthy confirmation delay, Dr. Brashears had been serving as Deputy Undersecretary for Food Safety, a position that does not require Senate confirmation. Dr. Brashears will oversee the policies and programs of the Food Safety and Inspection Service (FSIS).



[From: NAMI Lean Trimmings, March 30, 2020, Volume 6, Issue 13]

Chapter News:

Phi Tau Sigma Outstanding Chapter of the Year Award: Purdue University "Hoosier" Chapter

Phi Tau Sigma Hoosier Chapter has continued to expand its activities and commitment to excellence. Currently, there are 27 members (8 new initiates; 18 students, 4 post-docs, 5 faculty members) in the Hoosier Chapter. Our members have been recognized for a diverse array of achievements, such as being named recipients of the Phi Tau Sigma Student Achievement Scholarship, advancing to the national competition for IFT College Bowl, being named recipients of student mentorship awards and the 150th Anniversary Professor at Purdue University, among others. Each year, the Phi Tau Sigma Hoosier Chapter has held an Annual Luncheon, one or more lunch seminars with guest speakers from the food industry and academia, as well as mentorship events bridging graduate students with undergraduates and volunteering activities. Unfortunately, COVID-19 has forced a cancellation of many of our professional and annual events in early 2020, but we are eager to resume our activities once this difficult time passes.

In the future, the Hoosier Chapter aims to continue organizing and improving upon our events, with a special focus on encouraging increased membership in Phi Tau Sigma and implementing more service-related events. Through these efforts, the Phi Tau Sigma Hoosier Chapter will continually strive to fulfill the mission of Phi Tau Sigma – *to raise the stature and recognize scholarly achievements of the Food Science and Technology profession.*



Phi Tau Sigma Hoosier Chapter members during our 2019 Annual Luncheon and new member Induction Ceremony.

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 Program Fund, or the General Fund.

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, Claire Koelsch Sand, Ph.D. at: clairekoelschsand@gmail.com, 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.

Editorial:

Many of the greatest innovations in history were made because of situations that were thrust upon us. The COVID-19 situation will result in many innovations that will be continued to be used in the future. It is just very pressured now, and very sad. We will come to the end of this, and have great advancement to show for it. (As you probably have noticed, I am an optimist and try to find the silver lining in every cloud.)
In the meantime, stay safe, stay well, and innovate.

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., Yiren Yue, Ph.D., Laura Stawn, Ph.D., Diane Schmitt, Ph.D., Gabriela John Swamy, Ph.D., and Jennifer Fideler, Ph.D. candidate. 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/membership-nomination-2020-pdf-2/>
<http://www.phitausigma.org/membership-nomination-2020-doc/>

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/>

Why I Contribute to Phi Tau Sigma:

Noblesse Oblige. Those who have, give.

I donate to Phi Tau Sigma to future proof the health and wellness of future generations with food science research, mentors, awards, and education on what matters most in the real food science and technology. It is not important to know who I am, but it is important to take the cue and help bolster what's ahead for humanity with food science and technology.

An Anonymous Donor



Donors, Sponsors, and Contributing Partners:

Phi Tau Sigma accepts donations and has a variety of available sponsorship opportunities.

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.

Donations and sponsorships 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/sponsor/>). Donations by check can be made by contacting: Treasurer Kantha Shelke, Ph.D. (kantha@corvusblue.net), 33 West Ontario, Suite 57F, Chicago, IL 60654. Please write "Donation" or "Sponsorship" in the subject line. 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 Phi Tau Sigma monthly Newsletter. Sponsorships of awards and scholarships are also available at levels of contribution sufficient to cover the associated cost of the award or scholarship. Endowments are also accepted.

Sponsorship opportunities are available for the Phi Tau Sigma Annual Recognition Event, 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, as well as the Program fund and the General fund. There are also endowment opportunities for student scholarships named for the sponsoring company.

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.

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 "Donation" or "Sponsorship" in the subject line.

2019-2020 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 support the Phi Tau Sigma Founders' Scholarship, and the Phi Tau Sigma general fund.) **Hawkins, Inc. is a Bronze level Contributing Partner.**

2019-2020 Sponsors and Donors:

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.

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.

Dr. Rakesh K. Singh is the Past President of Phi Tau Sigma, a Lifetime Member; and is Professor and Head of Department of Food Science & Technology at the University of Georgia. He is also a Fellow of IFT and Editor-in-Chief of LWT – Food Science and Technology. (Sponsorship of a Phi Tau Sigma Student Achievement Scholarship.)

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. (Sponsorship of the Dr. Daryl B. Lund Student International Travel Scholarship.)

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. (Sponsorship towards a Phi Tau Sigma Student Achievement Scholarship.)

Elsevier Publishing Company. Elsevier books have an established reputation for providing ground-breaking and expansive content; written by world renowned, award-winning authors and reviewed by an expert team of editors. Elsevier Food Science content covers aspects of food from chemical composition, to growth and production to distribution and consumption – from farm to fork. Our extensive collection includes eBooks, print books, series, handbooks, and major reference works, all complementing our expansive collection of food science journals and designed to help food science professionals continue to be innovative and make evidence-based contributions to the communities, translating knowledge into applications for the world. Our wide variety of books and eBooks reflects our



passion for empowering early career researcher development, initiating innovation, and sharing established expertise in the Food Science field. (Donation towards a Phi Tau Sigma Student Achievement Scholarship.)

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.)

Nina Teicholz, M.Phil. is an adjunct professor at New York University, investigative science journalist and author. Her international bestseller, *The Big Fat Surprise* has upended the conventional wisdom on dietary fat—especially saturated fat. The executive editor of “The Lancet” wrote, “this is a disquieting book about...ruthless silencing of dissent that has shaped our lives for decades ... researchers, clinicians, and health policy advisors should read this provocative book.” *The Big Fat Surprise* was named a 2014 *Best Book* by *The Economist*, *the Wall Street Journal*, *Forbes*, *Mother Jones*, and *Library Journal*. Teicholz is also the Executive Director of The Nutrition Coalition, a non-profit group that promotes evidence-based nutrition policy. She is a graduate of Stanford and Oxford Universities and previously served as associate director of the Center for Globalization and Sustainable Development at Columbia University. Teicholz is the only journalist to date to be elected to Phi Tau Sigma. (Sponsorship of the Phi Tau Sigma Special Recognition Award, and Phi Tau Sigma programs.)

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 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. 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)

A donation was made towards a Phi Tau Sigma Scholarship by a Phi Tau Sigma Lifetime Member who wishes to remain anonymous.

A donation was made to Phi Tau Sigma by another Phi Tau Sigma Lifetime Member who wishes to remain anonymous.

Dr. Yaguang (Sunny) Luo, a Lifetime Member of Phi Tau Sigma, is a Food Scientist with the US Department of Agriculture, Agricultural Research Service. Her work focuses on food quality and safety of fresh and fresh-cut produce. Dr. Luo is the Past Chair of the IFT’s Fruit and Vegetable Product Division, and is also the Past President of Chinese American Food Society. (Donation towards the Phi Tau Sigma Outstanding Chapter of the Year Award.)

The **Southern California Institute of Food Technologists Section (SCIFTS)** is one of the largest sections of the international society of professional food personnel involved or interested in any of the various aspects of the field of food. Whether you are a food technologist, researcher, scientist, engineer, executive, administrator, educator, author, marketer, consultant, student, or salesperson, there is a place for you in this multi-faceted

organization. "To fulfill human needs for a quality food supply through science, technology and education." This is the mission of the SCIFTS and of its members. In keeping with this mission, SCIFTS is proud to bring you the latest advances in OUR journey toward its fulfillment. (Donation towards the Phi Tau Sigma Outstanding Chapter of the Year Award.)



**Southern California
Institute of Food Technologists Section**

The **American Meat Science Association** is a broad-reaching organization of individuals that discovers, develops, and disseminates its collective meat science knowledge to provide leadership, education, and professional development. Our passion is to help meat science professionals achieve previously unimaginable levels of performance and reach even higher goals. We accomplish this by fostering a learning community of meat scientists, industry partners, outside thought leaders and other stakeholders who embrace this vision. AMSA is an individual membership organization of more than 1000 meat scientists representing major university research and teaching institutions and meat processing companies in the United States and internationally. Its members conduct basic and applied research and education programs in muscle growth and development, meat quality, food safety, processing technology and consumer and marketing issues relevant to the international meat industry.



AMSA is the premier provider of learning and knowledge for the meat science discipline. The association delivers innovative learning experiences, opportunities for peer-to-peer collaboration and leadership development programs designed to advance the meat science discipline. (Donation towards the refreshments at the Phi Tau Sigma and IFT Division Competition Awards Ceremony.)