



The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter *February 2019*

News:

Get Ready for a Campaign!

(Contributed by the Member Recruitment Committee: Daryl Lund, Ph.D., Chair, Claire Zoellner, Ph.D., Steve Campano, M.S., Liz Boyle, Ph.D., Ruth McDonald, Ph.D., and Rodrigo Tarté, Ph.D.)

No, this is not going to be an election for the Board of Directors (that information is below). This is a campaign to seek out our colleagues who should be members of Phi Tau Sigma. We all know colleagues and friends who deserve to be a member of the Honor Society of Food Science and Technology. As a result, President Rakesh Singh appointed a Member Recruitment Committee to design and execute an "Every Member Get A Member" campaign. The campaign will start in April and continue through August with the goal being to grow the non-student membership by specifically targeting our worthy colleagues.

In addition to reaching out to our current non-student members to recruit their colleagues and friends, we are working with the Chapter Affairs Committee to encourage Chapters to nominate non-student members including student mentors, industry advisory boards, faculty, and staff. Keep your eyes open for an email in April that provides additional information on the campaign, the value proposition, and a nomination form.

[Editor's Note: Want to start now? The membership nomination form can be found at: <http://www.phitausigma.org/phi-tau-sigma-nomination-2019-3/>]

Outstanding Chapter of the Year Award Deadline Approaching

(Contributed by Dr. Poulson Joseph, Awards Committee Chair)

Remember to submit your nominations by **April 1** to the Awards Committee for the Phi Tau Sigma Outstanding Chapter of the Year Award. *The award includes an honorarium of \$1000 and a plaque.*

Send completed nomination forms to Poulson Joseph, Ph.D., Awards Committee Chair, at: pjoseph@kalsec.com with a copy to the Executive Director (klkotula@msn.com). Full information can be found at: <http://www.phitausigma.org/awards/>.

However, a short description is offered below:

"The **Phi Tau Sigma Outstanding Chapter of the Year Award** shall be given to honor a Chapter of Phi Tau Sigma that has achieved excellence in the areas of research, scholarship, leadership and service. The award comes with a plaque and a \$1000 honorarium to be used by the Chapter to advance distinction in the food science discipline."

Upcoming Election – Two areas requiring your vote

1) The election for Phi Tau Sigma Leadership: President Elect and four Directors will start March 1. **You MUST be a "member in good standing" (have paid your dues) before February 20 to be able to vote.** If you have not paid your dues, follow the instructions in the "Dues Reminder" section below. Your membership status is listed in the cover email of this Newsletter. If you have any questions, feel free to contact Executive Director Kathryn L. Kotula, Ph.D. at klkotula@msn.com.

2) As usual, you will have the opportunity to show your interest in membership on one of Phi Tau Sigma's Committees. The opportunities include: Awards, Chapter Affairs, Constitution & By-Laws, Membership & Qualifications, Newsletter, Nominations & Elections, Program, Development, Strategic Relations, Student Relations, Website & Wikipedia, and Internship Organization.

Calendar:

->Phi Tau Sigma 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 Poulson Joseph, Ph.D., (pjoseph@kalsec.com) and Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com). (More information: <http://www.phitausigma.org/awards/>)

->December 18: Deadline to submit Nominations for the **Dr. Carl R. Fellers Award**, and other IFT Achievement Awards.
(More information: <http://www.ift.org/membership/awards-and-recognition/achievement-awards.aspx>)

->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, Amy Simonne, Ph.D. (asim@ufl.edu) with a copy to Dr. Kathryn L. Kotula (klkotula@msn.com).

-> Election schedule:

December 15: Nominations due to Nomination and Election Committee
(Jamie Valenti-Jordan, M.S., Chair (jamie@catapultserv.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 1: List of candidates will be emailed to the Members for balloting
March 31: Deadline for casting ballots
April 8: Deadline for tabulation of ballots
July 15: Phi Tau Sigma President will present the newly elected individuals to the Membership at the Annual Business Meeting of Phi Tau Sigma

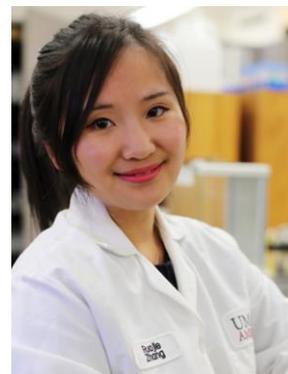
-> June 2-5, 2019, Institute of Food Technologists Annual Meeting, New Orleans, LA:

June 2 (Sunday): (times tentative)

11:00am-12:15pm Phi Tau Sigma Executive Committee Meeting
12:15pm-1:30pm Lunch Break
1:30pm-3:00pm Phi Tau Sigma Leadership Council Meeting and Annual Business Meeting
12:30pm-1pm Student Competition Poster Set-up
1:00pm-2:30pm Student Poster Competition Judging
3:30pm-4:20pm Phi Tau Sigma and IFT Division Competition Awards Ceremony
6:00pm-7:00pm IFT Awards Celebration, includes the presentation of the Dr. Carl R. Fellers, Ph.D. Award
(Meet the Award winners at the IFT Networking Reception immediately following.)

Student Research Synopsis: Effect of the Composition and Structure of Excipient Emulsion on the Bioaccessibility of Pesticide Residue in Agricultural Products

(Contributed by: Ruojie (Vanessa) Zhang, Ph.D. Student under the direction of Prof. D. Julian McClements, Department of Food Science, University of Massachusetts-Amherst; Research Group website: <https://www.umass.edu/cbd/people/d-julian-mcclements>)



Introduction: Oil-in-water emulsions, such as dressings, dips, sauces, and creams, are commonly co-ingested with fruits and vegetables.[1] Previous studies have shown that co-ingestion of emulsions with fruits and vegetables may substantially increase the oral

bioavailability of lipophilic nutraceuticals present within these natural products.[2] For instance, emulsions have been shown to increase the bioaccessibility of carotenoids in carrots, tomatoes, mangoes, and yellow peppers. Emulsions may enhance oral bioavailability through a number of mechanisms related to their impact on the bioaccessibility, absorption, and/or transformation of nutraceuticals in the gastrointestinal tract (GIT).[3] This phenomenon has led to the development of excipient emulsions whose compositions and structures are specifically designed to enhance the bioavailability of nutraceuticals in foods.[1] However, many natural products also contain potentially detrimental bioactive agents that may be introduced during crop production and storage, such as pesticides.[4, 5] It is therefore possible that co-ingestion of emulsions with these products could also increase the bioavailability of these undesirable substances.

Purpose: The purpose of the current study was therefore to examine the potential impact of co-ingestion of emulsions with natural produce on the bioaccessibility of a lipophilic pesticide. The impact of the composition and structure of the emulsions on the bioaccessibility of the pesticide was also studied, including lipid droplet concentration, composition, and size. The results from this study will provide valuable insights into the potential impact of food matrix effects on the bioavailability of pesticides in the human diet.

Methods: Chlorpyrifos was used as a representative pesticide, because it has been widely used for controlling agricultural and household insects and is commonly detected in foods. Tomato was used as a model natural product since chlorpyrifos is widely used to control insect pests on this commonly consumed fresh product. A simulated GIT, consisting of mouth, stomach and small intestine phases, was used to study the potential gastrointestinal fate of the tomato-emulsion mixtures. After passing through the GIT model, the amount of chlorpyrifos solubilized in the mixed micelle phase was used as a measure of its bioaccessibility. [¹⁴C]Chlorpyrifos was used in this study to make the detection fast, accurate, and without interference from food matrices. The chlorpyrifos concentration in the samples was determined by measuring the intensity of the ¹⁴C-radioactive signal using liquid scintillation counting (Bechman LS6500).

Results: The bioaccessibility of chlorpyrifos (a highly lipophilic pesticide) was shown to depend on the type and amount of co-ingested lipids in the model food emulsion. Pesticide bioaccessibility increased as the lipid content of the emulsions increased [Figure 1] and was higher when the lipid phase consisted of long chain rather than medium chain triacylglycerols. These effects were attributed to the impact of the ingested triacylglycerols on the number and size of the mixed micelles formed in the small intestine phase after lipid digestion. Presumably, the lipophilic chlorpyrifos molecules were solubilized within the hydrophobic interiors of the mixed micelles. Surprisingly, the bioaccessibility did not depend strongly on lipid droplet size, suggesting that the total quantity of mixed micelles formed was more important than the rate of their formation. Overall, these results suggest that emulsions might increase the bioavailability of undesirable pesticides, which may increase their risks to human health.

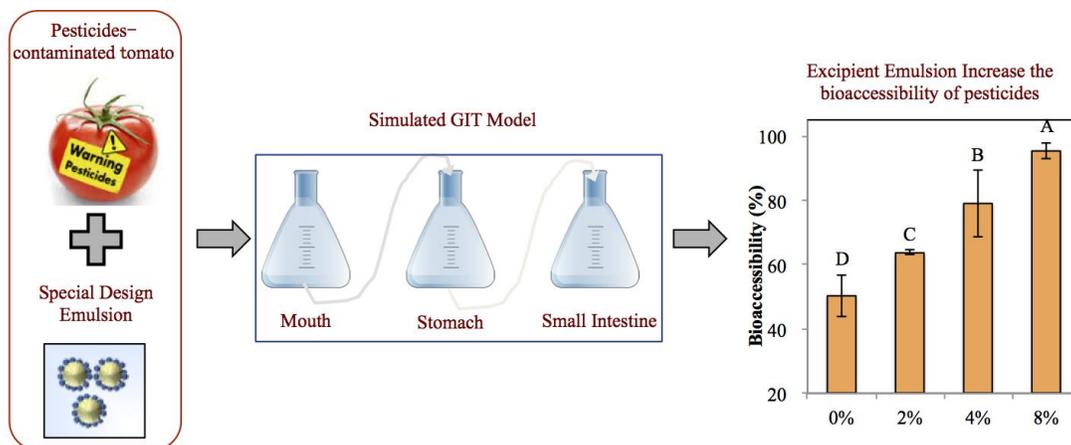


Figure 1. Food matrix effects may influence the bioaccessibility of lipophilic pesticides present on natural produce

Significance: This study has shown that food matrix effects may influence the bioaccessibility of lipophilic pesticides present on natural produce. Moreover, food matrix effects should be taken into account when assessing the potential toxicity of pesticides.

References:

- [1] D.J. McClements, H. Xiao, Excipient foods: designing food matrices that improve the oral bioavailability of pharmaceuticals and nutraceuticals, *Food & function*, 5 (2014) 1320-1333.
- [2] D.J. McClements, F. Li, H. Xiao, The nutraceutical bioavailability classification scheme: classifying nutraceuticals according to factors limiting their oral bioavailability, *Annual review of food science and technology*, 6 (2015) 299-327.
- [3] D.J. McClements, Enhancing nutraceutical bioavailability through food matrix design, *Current Opinion in Food Science*, 4 (2015) 1-6.
- [4] N. Simon-Delso, V. Amaral-Rogers, L.P. Belzunces, J.M. Bonmatin, M. Chagnon, C. Downs, L. Furlan, D.W. Gibbons, C. Giorio, V. Girolami, D. Goulson, D.P. Kreutzweiser, C.H. Krupke, M. Liess, E. Long, M. McField, P. Mineau, E.A.D. Mitchell, C.A. Morrissey, D.A. Noome, L. Pisa, J. Settele, J.D. Stark, A. Tapparo, H. Van Dyck, J. Van Praagh, J.P. Van der Sluijs, P.R. Whitehorn, M. Wiemers, Systemic insecticides (neonicotinoids and fipronil): trends, uses, mode of action and metabolites, *Environmental Science and Pollution Research*, 22 (2015) 5-34.
- [5] B.M. Keikotlhaile, P. Spanoghe, W. Steurbaut, Effects of food processing on pesticide residues in fruits and vegetables: A meta-analysis approach, *Food and Chemical Toxicology*, 48 (2010) 1-6.

Lifetime Member Tribute: Cordelia A. Running, Ph.D.

Assistant Professor, Purdue University

Why did you become a Lifetime Member?

Phi Tau Sigma is an important part of staying connected to the Food Science community, and it seems silly to pay dues every year when I can join for life!

Education:

2015 Ph.D. in Food Science, emphasis Ingestive Behavior, Purdue University
2011 M.Sc. in Food Science, emphasis Food Chemistry, Purdue University
2005 B.A. in Chemistry, Minor in Near Eastern Language and Culture, Indiana University



Experience/Accomplishments:

2016-Present Assistant Professor, Purdue University
2015-2016 Postdoctoral Researcher, Pennsylvania State University
2012-2015 Research assistant, instructor, and doctoral student, Purdue University
2010-2011 Research assistant and master's student, Purdue University
2011 Savory Flavors Intern, Sensient Flavors
2005-2010 Intelligence Analyst, various government organizations

Areas of Expertise:

I'm a psychophysicist—someone who uses flavor and sensation to understand human behavior, with a particular emphasis on foods and health.

Awards and Honors (selected list):

2018 Purdue Department of Food Science Kohl's Early Career Teaching Award Nominee
2017 Patsy J. Mellott Teaching Innovation Award, Purdue University
2014 NIH T32 pre-doctoral fellow, Ingestive Behavior Research Center Purdue University
2014 1st prize Poster presentation Food Oral Processing Conference
2013 Rose Marie Pangborn Sensory Science Scholarship
2013 Society of Flavor Chemists Feeding Tomorrow Scholarship
2012 Institute of Food Technologists Sensory and Consumer Science Division Scholarship

Personal: Family, Interests, Hobbies:

I love dogs, travelling, cocktails, and of course—food!

Advice to university students and career food scientists and technologists:

Be willing to change your mind. Not just about your hypotheses or experiments (which we should all be ready to change our minds, because that's the point of doing science!), but about your plans and what you want from your career, your life. I've been a chemist, an intelligence analyst, a baby sitter, a temp secretary, a math tutor, a test-grader, and a completely bored stay-at-home spouse—all just in the few years between my bachelor's and graduate degrees! You are more than the words on your diploma or job description, so if you find yourself in a place where that diploma or job isn't satisfying you, then change it. Food science, and sensory science in particular, was the answer for me—the thing that matches what I love with what I'm good at. Find that for yourself.

Careers: R & D Scientist II

(Contributed by: Ashwini Wagh, Ph.D., The Clorox Service Company)

Introduction/Background:

I grew up in India and got my Bachelor of Science in Microbiology at Government Modern Autonomous Holkar Science College (Indore), India. Thereafter, I got my M.Sc. in Biochemistry. Thereafter, I got an M.S. in Biochemistry at Utah State University and a Ph.D. at Utah State University, in Food Science, under the guidance of Dr. Marie K. Walsh.



Qualifications:

After my Ph.D., I did a short stint as a post-doctoral candidate and worked on whey proteins and the use of ultrasound as a food processing technology. Currently, I work as an application scientist/ Product development Scientist at the Clorox Services Company in Hidden Valley Foods. As a student, I was involved heavily in IFT poster presentations. I also presented a poster in AOCS and used to be a regular attendee of the IFT Bonaville section. Depending on your interest and need, you can volunteer in different groups in IFT. Knowing your ingredient suppliers well and knowing the ingredient functionalities well help with being successful as a Product Developer.

Positions:

Research Associate: Mead Johnson Nutrition
R & D Scientist II: The Clorox Services Company

Duties:

The Clorox Services Company produces the bestselling salad dressing in the USA, the Hidden Valley Ranch. I work on this brand and some others such as KC Masterpiece, Kingsford BBQ Sauces, Soy Vay etc. On a day to day basis, I work on cost savings related formula innovations, line extensions, clean label launches, new platform launches, brand maintenance projects etc. Recently, I have started working on more consumer facing interactions. While working in my role, I get to learn different aspects of the business and being at Clorox, I have the option to rotate to other businesses such as cleaning, Burts etc.

Salaries:

Since we are located in California, the salaries are slightly on the higher end of the spectrum: B.S. ~\$65-70K; M.S. ~\$75-80 K; Ph.D. ~\$80-90K.

Benefits:

Health, dental, vision, disability (short and long term), 401K

Conclusion:

Although the food industry in USA is huge (going to IFT just once will be sort of an eye-opener), the professional relationships that you build with the other food scientists in academia and industry keep you well-connected and also help with problem solving. Food science is a very broad and diverse field and a lot of the finished products are consumer facing. Problem solving in this field oftentimes needs subject matter experts and a collaboration between folks who are specialized or super-specialized in very specific areas. Maintaining a good relationship with your suppliers, co-packers and with cross functional

teams in your company is very important. Additionally, try to learn at least three new things everyday (science related or business related). If you stop learning in your current role, maybe it's time to move to a new role, thus expanding your horizons. I have found IFT to be one of the best platforms to make the right connections and move ahead. Keeping yourself abreast of all the new trends in food industry is also quite important.

Member News:

Dr. Daryl B. Lund Student International Travel Scholarship:

Molly Higgins, B.S., is a 3rd year Ph.D. Candidate at Pennsylvania State University. Molly was nominated for the Dr. Daryl B. Lund Student International Scholarship by Dr. Catherine Nettles Cutter, Professor of Food Science at Penn State, and Benjamin Chrisfield, M.S., President of the Penn State Phi Tau Sigma Chapter. Molly studies sensory science and her research involves perceptual differences between bitter compounds using classic and novel psychophysical testing methods. The goal of Molly's Ph.D. research is to illustrate how various characteristics of bitter stimuli impact perception. This information can be used to explain differences in the acceptance and liking of bitter food and beverage products. Molly was nominated for the Dr. Daryl Lund International Scholarship to provide funding for travel to the 13th Pangborn Sensory Science Symposium in Edinburgh, Scotland. Molly will present her research on a novel data collection method she developed to record the temporal and regional data from various bitter stimuli. Molly is an exceptional student within the graduate program at Penn State. Molly's commitment to her research is shown through her recent peer-reviewed publication in *Food Quality and Preference* and her presentations at two scientific conferences and a university research symposium.



Molly is also an active member in the Phi Tau Sigma Chapter at Penn State. She is currently the Vice President and helped lead the steering committee last year to restart the Chapter at Penn State. She is currently co-planning various Chapter events such as a cheesemaking outreach workshop to teach adolescent girls about STEM careers. The workshop will entail various activities such as stretching mozzarella cheese and plating microbial samples. Molly is also very active in other extracurricular activities. She is a member of the Penn State Product Development Team which works with a major snack and confectionery company to formulate and develop various food products. Molly and a team of graduate and undergraduate students develop innovative snack products from ideation to formulation. Outside of Penn State, Molly is a Student Representative for IFT's Sensory and Consumer Science Division. She is the community chair and works with other members to promote scholastic and professional discussion within the division.

Dr. Mary K. Schmidl Inducted as President of the International Union of Food Science and Technology (IUFoST)

Dr. Mary K. Schmidl was inducted as President of the International Union of Food Science and Technology at the General Assembly of the 19th IUFoST World Congress of Food Science and Technology (World Food Congress) in Mumbai India, and she will serve as the first woman President of IUFoST which was founded in Washington D.C. in 1970. IUFoST represents over 300,000 food scientists from around the world.

“Professor Schmidl has a long association with IUFoST and the organization will continue to benefit from her pivotal role in the food science and technology profession,” says Professor Daryl Lund. “As President of the Institute of Food Technologists (IFT) and Phi Tau Sigma, Dr. Schmidl brought together innovative ideas and collaborations between industry, academia and government, and she has been outspoken in her promotion of food science, nutrition, sustainability and health of the individual and the planet. Her international perspective and energy will be invaluable to IUFoST as it faces new challenges and opportunities.”



Mary has been an excellent ambassador in promoting the professionalism of food science and technology in speaking to food science societies and at symposia in dozens of countries on all six habitable continents. She was the first IFT President to visit Cuba and the first IFT President to visit Israel after a twenty-year hiatus. Mary was part of the revision of the new and revised Constitution and Bylaws of IUFoST in 1999 (and also in 2018) and played an ever-increasingly active role in it including holding the distinguished positions of Chair of the Scientific Council for IUFoST, elected a Fellow of the International Academy of Food Science and Technology (IAFoST), member of the Board of Directors and now its President.

Dr. Mary K. Schmidl has had a distinguished career as a scientist, research director, educator and leader to public and private agencies both in the US and around the world for more than 40 years. She received her Bachelor of Science degree from the University of California-Davis and a M.S. and Ph.D. degree in Food Science and minors in biochemistry and human nutrition from Cornell University. She is the former Vice President of Science and Technology for the Humanetics Corporation where she was responsible for new drug discovery as well as innovative ingredient development along with regulatory affairs. She was the Director of Research, Clinical Division of Novartis (Nestle, Inc.) that manufactures special dietary foods, weight management products, medical food products and medical devices. Prior to her work with Nestle, Dr. Schmidl directed the Nutrition Research Department for AG Bayer and was involved with intravenous feeding systems and medical foods. She has commercialized more than 75 new products, authored or co-authored over 100 refereed research papers, magazine articles, patents, book chapters, books and is highly sought after as an international speaker. She is the co-author of the book: [Essentials of Functional Foods](#).

Dr. Schmidl has served on numerous Boards for governments, non-governmental organizations and the private sector including the Board of the Council of Scientific Society

Presidents (CSSP), an organization representing 1.5 million scientists throughout the world, the International Union of Food Science and Technology (IUFoST) and the European Union's Advisory Board for Food Risk Communication. Dr. Schmidl received the Babcock Hart Award for Nutrition in 1993 from the Institute of Food Technologists (IFT) and the Phi Tau Sigma Carl R. Fellers Award in 2012 for the honor, recognition and service she has brought to her profession. In 1995 she received the Award of Distinction from the University of California-Davis and in 2008 the "Friendship Award" from the Chinese Institute of Food Science and Technology (CIFST) and the "2014 Scientific Spirit Award" from IUFoST-CIFST for the development of international relationships to foster global cooperation in food science and nutrition. Additionally, Dr. Schmidl holds a visiting professorship appointed at Jiangnan University in China. Mary has been elected a Fellow of IFT and served as its President in 2000-2001. She was elected Fellow of IUFoST and the United Kingdom's Institute of Food Science and Technology. In 1999 Florida State University selected her to present the Stiebling Lectureship, in 2012 the University of Georgia selected her to present the Woodroof Lectureship and in 2016 Louisiana State University selected her for the Patrick Lectureship for her research and leadership contributions. In 2014 she served as President of Phi Tau Sigma, The Honor Society of Food Science and Technology. Dr. Schmidl is an Adjunct Professor in the Department of Food Science and Nutrition at the University of Minnesota where her focus is on obesity, functional foods, dietary supplements and their impact on global public health and wellness.

About IUFoST: The International Union of Food Science and Technology (IUFoST, <https://iufost.org/>) is the global scientific organization representing over 300,000 food scientists and technologists from more than 75 countries. IUFoST has five regional groupings, ALACCTA representing Central and South America, EFFoST representing Europe, FIFSTA representing the ASEAN countries, MENAFoST representing the Middle East and North Africa and WAAFoST representing West Africa. IUFoST is a full scientific member of ICSU (International Council for Science) and it represents food science and technology to international organizations such as WHO, FAO, UNDP and others. IUFoST organizes world food congresses, among many other activities, to stimulate the ongoing exchange of knowledge in those scientific disciplines and technologies relating to the expansion, improvement, distribution and conservation of the world's food supply. It provides the international food science and technology community with its best opportunity to exchange ideas and develop strategies to meet IUFoST's goals.

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.)

Mail your check to: **Kantha Shelke, Ph.D.** (Do **not** address to Phi Tau Sigma.)
33 West Ontario, Suite 57F, Chicago, IL 60654.

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, Honorary Society Advancement Fund, or the President's 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, Amy Simonne, Ph.D. at: asim@ufl.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.

Editorial: It's time for Offense, Not Defense!

(Contributed by H. Russell Cross, Ph.D., Department of Animal Science, Texas A&M University)

The recently released EAT-Lancet report is the most negative report regarding animal products for food to date and is being launched with an extensive world-wide delivery. While the nutritional benefits of meat are well established as an efficient dietary source of complete protein, the report recommends a 90% reduction in consumption of beef and pork and 50% reduction of eggs, while tripling consumption of beans and quadrupling nuts and seeds. The report also claims that meat consumption kills 2.4 million/year at \$285 billion in health related costs. The meat industry has been at war against misinformation for some time, but is being significantly outgunned. The meat industry is losing this information "war!"

Meat and animal industry associations do a very good job of gathering scientific evidence and obtaining input from nutrition experts to respond to these types of reports, but this approach is not enough! When a negative report is due to be released, the industry is always on the defense-gathering information and preparing to respond with science. This approach is necessary, but it is not enough! It is not effective at countering emotionally-held beliefs, thus the industry continues to lose the war of delivering sound nutritional advice. Meat industry professionals and academic scientists must devise a long-term strategy to get ahead of the game. Collectively, this organized group must be thinking years ahead to develop a sophisticated game plan that will be launched well before the next negative report comes out. This approach is necessary to support human health and wellbeing with sound nutritional advice.

When a national nutrition communication plan is developed, the following assumptions should be considered:

- Whatever the proper role of animal products in the diet might be, it must be supported by strong scientific evidence.
- A strategy for effectively delivering accurate, science-based, nutritional information must be devised. Past case-controlled experimental research has not provided all the answers, but the role of protein, certain fats, and essential nutrients from animals has been well-established in the scientific literature. We must also consider biochemically,

physiologically, and nutritionally important nutrients that are abundantly present in animal products (e.g., meat) but completely absent from plants.

- The plan for delivering accurate information must include distribution to all levels (secondary schools, universities, health professionals, policy makers, general public).
- The developers of this plan and “deliverers” of this information will most likely not be the producers of the food products. The communication strategy will most likely be developed by a key consortium of universities, associations, and key government agencies who are committed to providing this information in an accurate, science-based manner. Delivery of information will likely proceed from this newly organized group.
- The cost of delivering this information over a significant period of time should be shared by state and federal agencies and the producers of food (animal, etc.).
- Perhaps it’s time for the National Academy of Science to take an in-depth look at the role of animal products in the diet?

The animal and meat industry should take a hard look at how they are delivering information to their consumers regarding the nutritive value of their products. The current “defensive” plan is not working. The time for “offense” is now!

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., Afef Janen, Ph.D., Hossein Daryaei, Ph.D., Tianxi Yang, Ph.D., and Yiren Yue, B.S. (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 (97-2003 compatibility mode) to Editor Kathryn L. Kotula, Ph.D. at klkotula@msn.com or Associate Newsletter Editor Claire Zoellner 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-form-pdf/>

<http://www.phitausigma.org/membership-nomination-form-word/>

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/>

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 (\$5000)

- 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.

2018-2019 Donors and Sponsors:

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 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.)

David K. Park, M.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 Scholarship.)

Nina Teicholz, M.Phil. is an 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. (Donation towards a Phi Tau Sigma Scholarship, and Phi Tau Sigma programs.)

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.)

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



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