



The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter *June 2019*

News:

Are you contributing to the EMGAM Campaign?

Phi Tau Sigma grows through membership. The Chapters are doing their part through student nomination. Here's your opportunity to participate in growth through the "Every Member Get a Member" (EMGAM) Campaign for Phi Tau Sigma. To facilitate nominating a colleague or someone you know who should be a member, links are found in the documents section of this Newsletter, or go to <http://www.phitausigma.org/growing/>. The leader thus far in recruitment is Dr. Daryl Lund. Be a leader! Nominate a colleague today.

Support Phi Tau Sigma through AmazonSmile

If you shop at Amazon, please register Phi Tau Sigma as your charity through AmazonSmile. 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!

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 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 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
- June 2: 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 15 (Sunday): (times tentative)

- 11:00am-12:15pm Phi Tau Sigma Executive Committee Meeting
- 12:15pm-1:30pm Lunch Break
- 1:30pm-2:30pm 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 (also called: Phi Tau Sigma Annual Recognition Event)
- 6:00pm-7:00pm IFT Awards Celebration, includes the presentation of the Dr. Carl R. Fellers, Ph.D. Award sponsored by Phi Tau Sigma (Meet the Award winners at the IFT Networking Reception immediately following.)

Student Research Synopsis: Impact of using an indigestible oil phase (mineral oil) on the bioaccessibility of vitamin D3 encapsulated in whey protein-stabilized nanoemulsions

(Contributed by: Yunbing (Shelly) Tan, 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: Vitamin D (VD) is a fat-soluble micronutrient that could promote calcium absorption and support bone health, including non-skeletal functions such as inhibition of cancer, diabetes, and cardiovascular diseases (1, 2). VD deficiency is still prevalent in many countries because of poor diet or relatively low exposure to sunlight (3). Nanoemulsions are one of the best vehicles to encapsulate VD due to their ease of preparation, high stability, rapid release properties and high bioavailability and bioactivity (4). However, there are some existing challenges. First of all, nanoemulsions are thermodynamically unstable and will be broken down eventually (5). Secondly, it requires a comparatively costly process. In addition, oil will be used as a carrier for hydrophobic components which could greatly increase the energy-density of a food product. Therefore, the application of indigestible oils could be beneficial. First, they may be used in reduced-calorie products. Second, they may increase the chemical stability of vitamins during storage because they do not contain any unsaturated fatty acids that might promote vitamin degradation. Finally, they may lead to a prolonged release of the VD within the gastrointestinal tract (GIT), with the vitamins being released by simple diffusion from the indigestible oil droplets rather than by digestion.

Purpose: In this study, the impact of oil phase digestibility on the bioaccessibility of VD loaded into oil-in-water nanoemulsions was therefore examined. We hypothesized that encapsulation of VD in indigestible oil nanoemulsions may lead to a prolonged release within the GIT through simple diffusion.

Methods: The digestible oil used was corn oil, whereas the indigestible oil used was mineral oil. Four nanoemulsions (Fig 1, 1-4) were prepared using different combinations of a digestible oil and an indigestible oil:

- (i) A nanoemulsion formed using digestible oil as the oil phase (DO);
- (ii) A nanoemulsion formed using indigestible oil as the oil phase (IO);
- (iii) A nanoemulsion formed by mixing equal masses of DO and IO together before homogenization to form an "oil mixture" (OM) system;
- (iv) A nanoemulsion formed by mixing equal masses of an IO-nanoemulsion with a DO- nanoemulsion to form an "emulsion mixture" (EM) system.

A simulated GIT was used to study the gastrointestinal fate of the nanoemulsions, including lipid digestion and vitamin bioaccessibility (Fig 1, A-D).

Results: Both the lipid digestion rate and vitamin bioaccessibility decreased in the same order: DO > OM \approx EM > IO. We found that vitamin bioaccessibility was much lower when the oil phase was indigestible than when it was digestible. In mixed systems, the presence of the indigestible oil did not appear to impact the digestion of the triglycerides, but it did reduce the bioaccessibility of the vitamin. This latter effect may have been because some of the vitamin remained solubilized within the non-digested oil droplets and so was not

incorporated into the mixed micelles. The change in vitamin bioaccessibility over time under simulated small intestine conditions was also measured. With the exception of the IO nanoemulsions, the vitamin bioaccessibility increased to a maximum value after around 30 minutes, but then decreased during the following 24 h (Fig 1). Measurements of changes in vitamin bioaccessibility throughout incubation under simulated intestinal conditions produced some interesting findings. In particular, the vitamin tended to remain trapped inside indigestible oil droplets even during prolonged incubation under gastrointestinal conditions. On the other hand, for digestible oil droplets, the bioaccessibility reached a maximum value and then decreased steeply. This phenomenon may have occurred because insoluble calcium soaps formed that trapped some of the vitamin. In future studies, the impact of digestible and indigestible oil droplets on the bioaccessibility of VD should be studied under *in vivo* conditions.

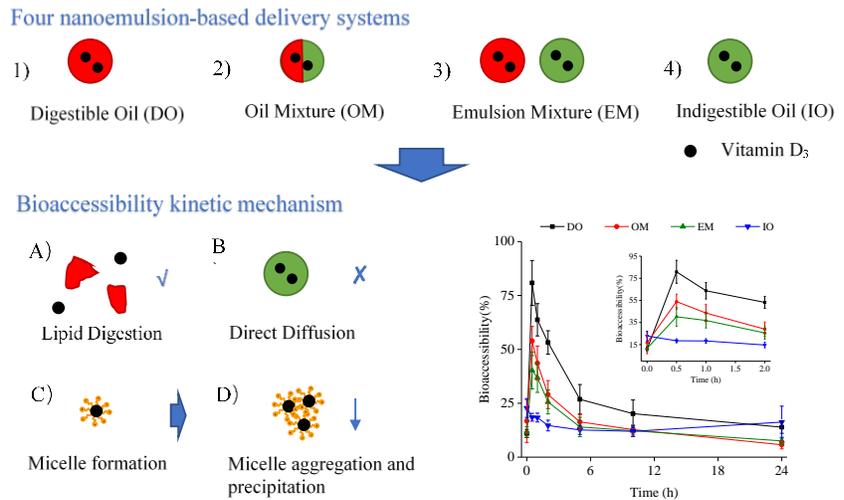


Figure 1. Bioaccessibility mechanism of four nanoemulsions under extended digestion (24h).

Significance: Our results show that VD remained trapped inside the mineral oil droplet even under extended digestion, and that lipid digestion, micelle solubilization, and micelle aggregation impact the *in vitro* bioaccessibility of VD. This knowledge may be helpful for designing more efficacious nanoemulsion-based delivery systems for fat-soluble vitamins.

References:

1. Manios Y, Moschonis G, Hulshof T, Bourhis AS, Hull GLJ, Dowling KG, et al. Prevalence of vitamin D deficiency and insufficiency among schoolchildren in Greece: the role of sex, degree of urbanisation and seasonality. *British Journal of Nutrition*. 2017;118(7):550-8.
2. Pike JW, Christakos S. Biology and mechanisms of action of the vitamin D hormone. *Endocrinology and Metabolism Clinics of North America*. 2017;46(4):815-43.
3. Moulas AN, Vaiou M. Vitamin D fortification of foods and prospective health outcomes. *Journal of Biotechnology*. 2018;285:91-101.
4. Ali A, Ansari VA, Ahmad U, Akhtar J, Jahan A. Nanoemulsion: An advanced vehicle for efficient drug delivery. *Drug Research*. 2017;67(11):617-31.
5. Singh Y, Meher JG, Raval K, Khan FA, Chaurasia M, Jain NK, et al. Nanoemulsion: Concepts, development and applications in drug delivery. *Journal of Controlled Release*. 2017;252:28-49.

Lifetime Member Tribute: Ray Winger, Ph.D.

Professor Emeritus, Massey University, New Zealand (retired)

Why did you become a Lifetime Member? Phi Tau Sigma and similar societies are a unique feature of the USA and not replicated in most Universities overseas. I was honoured to become a member when I was doing my Ph.D. at the University of Wisconsin, but I left the USA to return to New Zealand, so lost direct links to friends and colleagues. For a substantial part of my career I lost touch with Phi Tau Sigma—in fact when I rekindled my involvement, they couldn't find a record of my initiation. This is also a group focused on excellence in food science and technology: something I feel very strongly should be encouraged. A lifetime membership made sense to me, as it provided a continuous link to this important food group and maintained an awareness of the people and developments within the food area in the USA. When I became a Lifetime Member, I became aware of the cooperative relationship between Phi Tau Sigma and IFT. I was encouraged by members I respected to help foster the relationship for mutual benefit.



Education: Bachelor's degree in food technology, Massey University, New Zealand. M.S. and Ph.D. at the University of Wisconsin in food science (Professor Owen Fennema) and Meat & Animal Science (Professor Bruce Marsh).

Experience/Accomplishments: Research Scientist, Meat Industry, NZ. Technical Manager, Healthieries Ltd (health foods, supplements, cosmetics), NZ. General Manager, Food Consultants International, an International Agri-business consultancy, Australia. University Professor in food technology, Massey University, NZ. Personal food manufacture business and consultancy in United Kingdom before retiring. I have been in senior management, Head of Food Department, a Director on several Boards, technical advisor to NZ/Australia biggest food company, established my own business. I consulted extensively around Asia, especially ASEAN, Vietnam and India. I have been actively involved in IFT with educational initiatives and also on the Board of Directors.

Areas of Expertise: Food science and technology, sensory sciences, product development, food chemistry

Awards and Honors (selected list): Emeritus Professor, Massey University. JC Andrews Award, NZIFST, New Zealand (their top award). Fulbright-Hays Scholarship to attend University of Wisconsin.

Personal: Family, Interests, Hobbies: I am currently living in the UK. I have three children (my eldest, plus my grandson in Ireland; two remaining in NZ). I enjoy travelling and gaining an appreciation of other cultures. Despite being retired, it seems I am unable to easily create space and time to focus on the hobbies and interests that I expected to enjoy at my age – e.g. philately, genealogy, golf.

Advice to university students and career food scientists and technologists: I have huge frustration with the pervasive and dominant misinformation, lacking scientific credibility, that is published about food. The single most important skill that a modern-day food

professional must maintain is the desire to question the information they see and to be able to actively and systematically verify the science behind the "facts". When I taught students and set them assignments, I advised them that an essay which was built around social media would fail. They were expected to undertake scientific literature reviews in high quality peer reviewed journals to verify their facts. This is a fundamental ethical issue for any food professional. We need to ensure the application of our knowledge in the food industry is based on sound science. And sound science means 'cause and effect' experimentation. Not assumption-based, empirical, statistical correlations which can only suggest an hypothesis which needs to be properly tested. Our profession, in all its forms and the various skill-sets needed, must always maintain the moral high ground by founding our work on the best science currently available. And yes, it is hard work.

Chapter News:

NCSU Chapter meeting and Induction of new Members

(Contributed by Paige Luck)

The North Carolina State University Chapter of Phi Tau Sigma held our Chapter meeting and induction on April 25, 2019. Inductees, with the Chapter officers, are pictured below:



Pictured left to right: Dr. Rodolphe Barrangou, President; Heather Keefer, Graduate Student; Rachel del Toro Gipson, Graduate Student; Meichen Pan, Graduate Student; Mrs. April Morrison, Vice-President; Daphne Weikart, Undergraduate Student; Helen Galzunov, Undergraduate Student; Mrs. Paige Luck, Treasurer. Not pictured, but inducted on April 25th are: Savannah Everhart, Graduate Student; Lindsey Doring, Undergraduate Student.

Virginia Tech - Departmental Awards Night

(contributed by Jennifer Acuff, Ph.D. student)

On Friday, April 25th, the Department of Food Science and Technology at Virginia Tech held their annual Departmental Awards night and were able to recognize the students who have most recently been inducted into Phi Tau Sigma. Also recognized were graduates of Fall 2018-Summer 2019 who received honor cords to wear during commencement. The Virginia Tech Phi Tau Sigma Chapter has been growing exponentially since it was rebooted in 2016 thanks to new and enthusiastic members!



Pictured from left to right: Cameron Bardsley (Chapter President, Ph.D. student), Erika Estrada (M.S.), Jennifer Acuff (Chapter Secretary, Ph.D. student), Dajun Yu (Chapter Treasurer, Ph.D. student), Linda Granata (M.S.), and Sophie Pinton (B.S.).

Member News:

Congratulations to our $\Phi\tau\Sigma$ Members on their selection to the 2019 Class of IFT Fellows!



Elena Castell-Perez, Ph.D., $\Phi\tau\Sigma$ Member
Professor, Department of Agricultural Engineering
Texas A & M University

At Texas A&M University, Elena Castell-Perez continues to make exemplary contributions to food science through her teaching and research food engineering program, while serving her professional society and other stakeholders. Castell-Perez's vital contributions to food science have been in the field of materials science and rheology. Today, her guiding research principle is "How can a food engineer address the critical challenges of food security and safety?" Her interest in design of therapeutic foods and devices to solve malnutrition problems due to illness or injuries should yield novel nutritious and appealing dietary components that enhance the quality of people's lives.

John Coupland, Ph.D., CFS, ΦΤΣ Lifetime Member (LTM)
Professor, Department of Food Science
The Pennsylvania State University

John Coupland is a professor of food science at Penn State and a former president of IFT. He is an expert in the physical chemistry of foods, especially lipid emulsions and crystals, and his research program strives to connect measurements of food structure with functional properties such as flavor, texture, and stability. Coupland is also interested in the social context of food processing and in advancing the status of the food science profession.



Milda Embuscado, Ph.D., CFS, ΦΤΣ LTM
Senior Principal Scientist
McCormick & Company, Inc.



Milda Embuscado is an accomplished food scientist and a recognized leader in hydrocolloid and starch chemistry. She introduced structure-function relationship in flavor encapsulation and ingredient and powder science and technology to better understand ingredients, products, and processes, the underlying causes of product and process failures, and how to resolve them. She is the recipient of several research awards, including the 2016 Outstanding Food Science Award from the Department of Food Science, Purdue University, for recognition of her outstanding career in the food industry and for leading the way and creating a legacy of excellence. Her publications include three

books and more than 30 book chapters and scientific papers and several invited presentations. She is an active member of IFT, has served as chairperson of the Carbohydrate and Nutraceuticals and Functional Foods Divisions, and is a recipient of several IFT Outstanding Volunteer awards. She has also served as a member of various IFT committees and the Annual Meeting Scientific Program Advisory Panel, Food Chemistry Track.

Christopher Findlay, Ph.D., CFS ΦΤΣ Member
Chairman
Compusense Canada

Chris Findlay is the chairman and founder of Compusense. He earned his Ph.D. and M.Sc. in food science at the University of Guelph. He was elected to the IFT Board of Directors in 2016 and is a past chair of the Sensory Evaluation Division. In 2011, Findlay was honored to receive the IFT Inaugural Award for Achievement in Sensory and Consumer Science. He is a fellow of the Canadian Institute of Food Science and Technology. For 40 years, he has taught, lectured, published, and consulted internationally on food science topics, with a particular passion for sensory science.





Lauren Jackson, Ph.D., CFS ΦΤΣ LTM
Chief, Process Engineering Branch
Food and Drug Administration, CFSAN

An accomplished scientist at the U.S. Food and Drug Administration (FDA), Lauren Jackson continues to make exemplary contributions to food safety through her research program and her leadership as chief of the Process Engineering Branch. Jackson is an internationally recognized expert on mycotoxins, chemical contaminants, and food allergens. Her research focuses on the effects of processing on the formation, destruction, and detection of natural toxins and process contaminants in food. She is also recognized for her research on evaluating the effectiveness of cleaning and other approaches used for allergen control.

Hosahalli Ramaswamy, Ph.D. ΦΤΣ Member
Professor, Food Process Engineering
McGill University Canada

With 32 years of experience at McGill University, Hosahalli S. Ramaswamy, professor of food process engineering, continues to make exemplary research contributions in the field of food science through his dynamic insight into process optimization to ensure food safety and enhance food quality. Ramaswamy, an internationally recognized expert in thermal processing, microwave heating, and high-pressure processing, carries out in-depth studies on heat transfer, process optimization, microbial destruction, and food functionality. Ramaswamy has received numerous awards, both nationally and internationally, for promoting novel technologies. He is admired as an accomplished researcher, author, graduate supervisor, editor, consultant, and extension specialist.



Martha Verghese, Ph.D., CFS ΦΤΣ LTM
Professor and Chair, Department of Food and Animal Sciences
Alabama A & M University

Martha Verghese is an accomplished professor of nutritional biochemistry at Alabama A & M University. Her special interest lies in the utilization of phytochemicals and the design of functional foods/food products for health promotion and the prevention of chronic diseases, especially cancer, diabetes, and heart disease. Her area of research is in developing designs for evaluating phytochemical/nutraceutical bioactivity/bioavailability. She has also provided visionary leadership as chair of the

Department of Food and Animal Sciences. Since joining the faculty ranks in 2001, she has advised 58 M.S. students and 28 Ph.D. dissertations and is currently advising/co-advising four M.S. and 11 Ph.D. students.

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: Why is Phi Tau Sigma so Exclusive?

(Contributed by Kantha Shelke, Ph.D.)

An active professional IFT member, one who was also an active student member of IFT, recently informed me of Phi Tau Sigma members intentionally lapsing their membership to sever ties with what they believed was an elitist society. I was instantly reminded of comedian Groucho Marx's telegram in 1959 to the Friar's Club of Beverly Hills to which he belonged saying "Please accept my resignation. I don't want to belong to any club that will accept people like me as a member".

Once I recovered from the initial astonishment, I probed only to find out that some young food scientists cannot fathom what a scientific honor society actually does or why they should pay to belong to what seemed more exclusive than inclusive. They were perplexed and even offended that Phi Tau Sigma did not automatically include anyone who was already a member of IFT. They do not understand that it is an honor to be part of an Honor Society.

Clearly, Phi Tau Sigma had failed to convey the significance of doing well in school and in the realm of food science and the recognition and responsibilities that these offered. Performing well academically is a commendable accomplishment; maintaining a high GPA entails dedication and self-discipline which attracts invitations to join prestigious honor societies. If Phi Tau Sigma members have nominated you, it means you may be qualified for membership. **Honor societies are not for everyone and differ from professional organizations by selecting only those who have proven themselves to be the very best in what they do.**

Why belong to an honor society? Here are a few reasons why you should accept this prestigious invitation and get involved.

1. Noblesse Oblige.

Those who can should give. Joining Phi Tau Sigma connects you with other dedicated and disciplined professionals at the cutting edge of food science and technology and who are collaborating to further advance the understanding of food science and allied research. It also offers opportunities to expand your horizons in the realm of food science.

2. Boost your resume.

While a high GPA is self-evident, membership in an honor society like Phi Tau Sigma can further boost your resume. Discerning employers are always seeking candidates with proven extracurricular involvement in academic and scientific circles. So, join and get involved to take advantage of the professional community that can further develop your leadership in the field.

3. Reap member benefits.

The Phi Tau Sigma membership fee may be nominal but the access it provides to scientists around the world, job opportunities and scholarships is simply priceless. The Lifetime membership is a particularly attractive feature of Phi Tau Sigma; very affordable and invaluable for the permanent access to opportunities, people, and scholarships.

4. An exclusive network.

Professional networking platforms like LinkedIn and XING may electronically connect you to anyone and everyone on the Internet, but getting their attention to open doors and give you a hand with your career or your work/research is much more difficult. Phi Tau Sigma members can often do what no network app or platform can...specifically for fellow members...for they instantly recognize you as a dedicated student and a vetted professional even without reviewing your resume.

5. Celebrate your accomplishments and applaud others'.

So, you have toiled through university to earn a high GPA and sweated through your career to make yourself stand out from the rest of the pack. Why not do yourself a favor and join Phi Tau Sigma so this exclusive community can offer you scholarships and help you get recognition for the work that you are already doing.

So, if you've been invited to be nominated for membership in Phi Tau Sigma, I encourage you to give it a try. You might like it. If you are already a member of Phi Tau Sigma, get involved. It is only by participating that we can reap rewards. And you might even spread the word and shine the light on other qualified students and professionals.

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/>

Every Member Get A Member Campaign

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

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.

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.)

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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.

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