

ΦΤΣ

The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter *December 2019*

News:

EMGAM:

The “Every Member Get a Member” Campaign is nearing its completion on December 31. If you have not yet nominated a colleague for membership in Phi Tau Sigma, please do so right away.

For more information, including the nomination form, go to:

<http://www.phitausigma.org/professional-membership/>

Questions about the Campaign, contact Daryl Lund, Ph.D. dblund@wisc.edu.

Questions about the membership nomination form, contact Kathryn L. Kotula, Ph.D.

klkotula@msn.com.

From the Desk of the Treasurer:

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



Did you know that donations to Phi Tau Sigma are Tax Deductible?

A donation to Phi Tau Sigma is an excellent tax-saving opportunity available for food scientists. Not only does it benefit the Honor Society and its members, but you the taxpayer, get a tax deduction because Phi Tau Sigma is a qualified organization under IRS rules.

If you hope to deduct your contributions, it may pay to group your donations for maximum tax impact. For example, you could choose to donate in 2019 what you might have given over two years (2019 and 2020), then skip a year. Why not donate more this year for a bigger return on your donation to all?

The Bottom Line: You can put an early smile on your heart this holiday season with a donation to Phi Tau Sigma.

Calendar:

->Phi Tau Sigma Scholarship and Awards Schedule:

- November 30: Deadline to submit nominations to the Awards Committee for the Dr. Daryl B. 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)

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
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.)

Lifetime Member Tribute: Kacie K.H.Y. Ho, Ph.D.

Assistant Professor, Department of Human Nutrition, Food and Animal Sciences, University of Hawaii at Manoa

Why did you become a Lifetime Member?

I decided to become a Lifetime Member because of the access to a great professional network and the investment and development in students (a.k.a. our future leaders). When I was a student member, my peers and I experienced many professional and leadership development opportunities (inviting guest speakers for seminars/workshops, mentorship between graduate students and undergraduate students, etc.) from Phi Tau Sigma, especially from our local chapter and Phi Tau Sigma advisors at Purdue University. Financially speaking, Phi Tau Sigma provided scholarships, which helped students to travel to conferences and gain access to professional opportunities. As a Lifetime Member, I hope to honor the excellent Phi Tau Sigma mentors who helped to shape my career and aim to help the future food scientists achieve their goals.



Education:

B.S. in Food Science from the University of Hawaii at Manoa
Ph.D. in Food Science (Specialization: Food Processing) from Purdue University

Experience/Accomplishments:

Assistant Professor, Department of Human Nutrition, Food and Animal Sciences, University of Hawaii at Manoa (Aug 2018-Present)
Postdoctoral Research Scholar, Plants for Human Health Institute, North Carolina State University (Nov 2017-Jun 2018)
Postdoctoral Teaching Scholar, Wageningen University (Aug 2017-Nov 2017)

Areas of Expertise: Bioactive compounds, especially those from post-harvest agricultural products, for food applications.
Special emphasis on enhancing extraction processes, elucidating the effect of food structure

on potential compound bioactivity, and design of food systems to enhance physicochemical stability and bioavailability.

Awards and Honors (selected list):

National Science Foundation Graduate Research Opportunities Worldwide Grant (Awarded April 2015)

National Science Foundation Graduate Research Fellowship (Awarded September 2013)

Phi Tau Sigma Student Achievement Scholarship (Awarded February 2015)

Personal: Family, Interests, Hobbies:

It's easy to get wrapped up in work and other responsibilities, but I try to make an effort to go outdoors when possible. My husband and I enjoy hiking, biking, and swimming. We both also enjoy spending time with family (especially our parents and siblings) and friends.

Advice to university students and career food scientists and technologists:

My advice is to continuously seek opportunities to improve your skills. Don't be afraid of challenging yourself! In particular, try to view problems (regardless of if they are technical, interpersonal, etc.) as opportunities for learning and development. Especially when you are a student, make a conscious effort to step out of your comfort zone every now and then and seek opportunities to give back.

Student Research Synopsis: Role of Mucin on Behavior of Food grade TiO₂ under Simulated Mouth Phase

(Contributed by: Hualu Zhou, Ph.D. student under the direction of Prof. David Julian McClements, Department of Food Science, University of Massachusetts Amherst)

Introduction: Titanium dioxide (TiO₂) is a food additive (E171) used as a lightening agent to increase the whiteness and brightness of foods. This additive is commonly used in food products consumed by children, including candies, cookies, donuts, and chewing gums. Commercial titanium dioxide additives are usually sold as powders containing particles with mean diameters around a few hundred nanometers. However, a significant fraction of the particles in the particle size distribution have diameters less than 100 nm and can therefore be considered as nanoparticles. Recent in vitro and in vivo studies have suggested that TiO₂ nanoparticles may exhibit toxicity. However, little is known about how the properties of TiO₂ particles change as they pass through the human gastrointestinal tract, which would be expected to impact their toxicity.

Objectives and methods: The objective of this study was therefore to provide further insights into the behavior of TiO₂ particles under simulated oral conditions. In particular, we investigated how the physicochemical properties of TiO₂ particles were altered after interacting with the mucin in the oral phase. The physical and chemical properties of TiO₂ additives, including particle dimensions, surface potential, and aggregation state were determined using static and dynamic light scattering, spectrophotometry, optical microscopy, and transmission electron microscopy (TEM). Moreover, isothermal titration calorimetry (ITC) and surface-enhanced Raman spectroscopy (SERS) techniques were used to provide some insight into the potential interaction mechanisms between mucin and TiO₂ particles.



Results: In summary, this study has shown that mucin affects the behavior of food-grade TiO_2 particles under simulated oral conditions. Mucin appears to rapidly adsorb on to the surfaces of TiO_2 particles, thereby altering the colloidal interactions between them (Figure 1). In particular, we believe that the mucin reduces the electrostatic repulsion by lowering the surface potential, reduces the hydrophobic attraction by covering exposed non-polar groups, and increases the steric repulsion by forming a thick hydrophilic layer. As a result, the tendency for the TiO_2 particles to form agglomerates is reduced in the presence of mucin. TEM, ITC, and SERS analysis confirmed that TiO_2 interacted with mucin, which was probably driven by a combination of electrostatic and hydrophobic interactions. The surface composition and aggregation state of inorganic nanoparticles within the mouth would be expected to impact their subsequent gastrointestinal fate further down the GIT tract. In particular, they might affect their ability to penetrate through the mucus layer coating the human gut, to be taken up by the epithelial cells, to or interact with microbes in the colon.

Significance: This study provides valuable information about changes in the structural and physicochemical properties of food-grade TiO_2 particles under simulated oral conditions, which may be useful for evaluating their potential biological effects and safety profile.

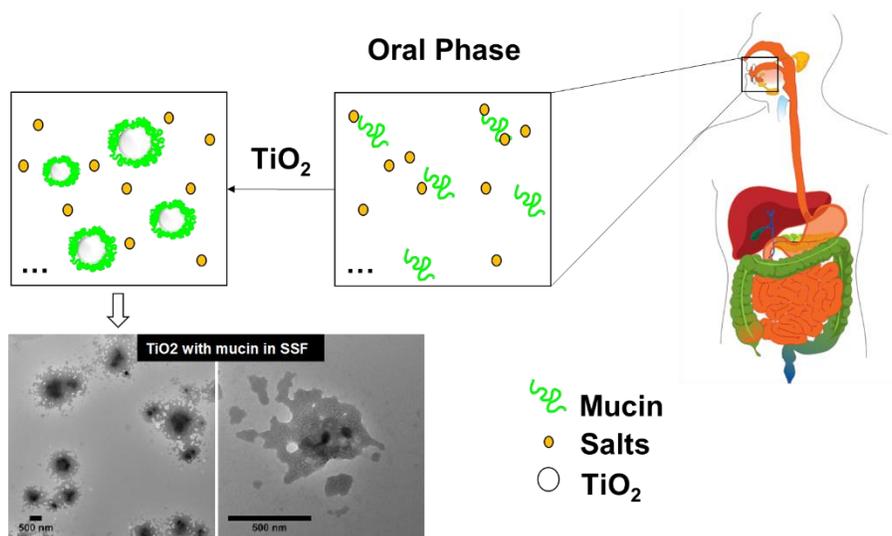


Figure 1. Schematic representation of the mechanism of interaction between the TiO_2 particles and the mucin in the simulated salivary fluids (SSF) solutions.

References:

1. McClements, D. J.; DeLoid, G.; Pyrgiotakis, G.; Shatkin, J. A.; Xiao, H.; Demokritou, P., The role of the food matrix and gastrointestinal tract in the assessment of biological properties of ingested engineered nanomaterials (iENMs): State of the science and knowledge gaps. *Nanoimpact* **2016**, 3-4, 47-57.
2. McClements, D. J.; Xiao, H., Is nano safe in foods? Establishing the factors impacting the gastrointestinal fate and toxicity of organic and inorganic food-grade nanoparticles. *npj Science of Food* **2017**, 1 (1), 6.
3. DeLoid, G. M.; Wang, Y. L.; Kapronezai, K.; Lorente, L. R.; Zhang, R. J.; Pyrgiotakis, G.; Konduru, N. V.; Ericsson, M.; White, J. C.; De La Torre-Roche, R.; Xiao, H.; McClements,

- D. J.; Demokritou, P., An integrated methodology for assessing the impact of food matrix and gastrointestinal effects on the biokinetics and cellular toxicity of ingested engineered nanomaterials. *Part Fibre Toxicol* **2017**, *14*.
4. McClements, D. J.; Xiao, H.; Demokritou, P., Physicochemical and colloidal aspects of food matrix effects on gastrointestinal fate of ingested inorganic nanoparticles. *Advances in Colloid and Interface Science* **2017**, *246*, 165-180.
 5. Li, Q.; Li, T.; Liu, C. M.; DeLoid, G.; Pyrgiotakis, G.; Demokritou, P.; Zhang, R. J.; Xiao, H.; McClements, D. J., Potential impact of inorganic nanoparticles on macronutrient digestion: titanium dioxide nanoparticles slightly reduce lipid digestion under simulated gastrointestinal conditions. *Nanotoxicology* **2017**, *11* (9-10), 1087-1101.

Careers: Nutrition Scientist

(Contributed by Kelly Higgins, Ph.D., MPH, Exponent Inc.)

Introduction/Background: I am a nutrition scientist within the Chemical Regulatory and Food Safety Division of Exponent Inc., a science and engineering consulting company. I recently completed my Ph.D. and MPH at Purdue University in the field of ingestive behavior. My dissertation research was on the differential effects of low-calorie sweetener consumption on body weight, dietary patterns, and appetite with long-term consumption.

Qualifications: Ph.D., M.S., or MPH in nutrition science, food science, or health statistics. Graduate degrees in engineering or other science fields may be eligible for positions within other divisions of Exponent.



Positions:

- Graduate Research Assistant, Purdue University, 2014-2018
- Catholic Relief Services Program Impact & Quality Assurance Intern, Summer 2016
- Catholic Relief Services Farmer to Farmer Consultant, Summer 2015

Duties: The majority of my projects focus on multiple dimensions of clinical nutrition and food science. We conduct safety assessments for pre-market regulatory approval processes and efficacy assessments for health claim substantiation. In addition to literature reviews, we perform statistical analysis of nationally representative data collected in the National Health and Nutrition Examination Survey (NHANES) to estimate dietary intake of foods and nutrients.

Salaries: Employees are compensated with a total compensation package that is competitive in the market place based on education, credentials and relevant experience.

Benefits:

- Funding and time for participation in professional organizations and conferences
- Medical, Dental, Vision Benefits
- Contribution to 401K
- Annual bonuses based on personal work and company performance

Conclusion: A career as a food science or nutrition science consultant allows you to work across the food industry, government, and academia to answer the field's latest and innovative research questions. Every day is something new and the ability to expand your knowledge and skills is without limit. This is the perfect job for creative and inquisitive minds who love to explore the field of food and nutrition science.

Chapter News:

Virginia Tech

(Contributed by Jennifer Acuff, M.S., and Laura Strawn, Ph.D.)

Since being reactivated in 2016, the Virginia Tech Chapter of Phi Tau Sigma has grown in ways we are excited about! What started as a Chapter consisting of two graduate students and several supportive faculty members has taken us to 2019 where we have accepted 9 new student nominees adding membership and enthusiasm into our group.

For the 2019-2020 academic year so far, the student members of the Chapter organized a participatory grant writing seminar, hosted a Halloween Trick-or-Treat event for the students, faculty, and staff of our department.

As of November 11, 2019, we became an officially recognized student organization at Virginia Tech which allows us access to event spaces and additional funding for our programs. To keep the community aware of our efforts, student leaders distribute a monthly newsletter to advertise our events, highlight the successes of the Chapter members, and provide other relevant updates.

In 2020, we hope to continue building momentum by accepting additional membership nominations, hosting open events to raise awareness of food science and technology on our campus, as well as hosting events proposed by our members to promote scholarship and professional development.

Virginia Tech Phi Tau Sigma Chapter Newsletter screen shot:

September 2019

ΦΤΣ
VIRGINIA TECH
The Honor Society of
FOOD SCIENCE & TECHNOLOGY

In an effort to heighten and improve communication, relevant news and updates will be sent through a bimonthly newsletter. Please let us know if you have content you would like to contribute!

Upcoming Events Mark your calendars for the following events!

Thursday, Sept. 26, 3-4pm, PST 132 – Professional Development Event: Grant Writing Conversations with Dr. Clay Cavett. All PST faculty, staff, and students are encouraged to attend. For event accommodations please contact Lester Schoenberger: lschoen@vt.edu by Mon., Sept. 23.

Thursday, Oct. 31 – Member Social: Additional details to come.

Chapter & Society Updates

VT Chapter Officers for 2019-2020

- Cameron Bardeisy, Ph.D. Candidate, President
- Lester Schoenberger, Ph.D. Candidate, Vice President
- Jennifer Acuff, Ph.D. Candidate, Secretary
- Dajun Yu, Ph.D. Student, Treasurer
- Monica A. Fomder, Ph.D., Faculty Advisor
- Laura K. Strawn, Ph.D., Faculty Advisor

New Membership
Interested in becoming a member or recommending a student for nomination?
Application deadline is Tuesday, Oct. 15, and qualifications and application forms can be found here: <http://www.phitausigma.org/membership/>. Annual dues are only \$20 for students and \$40 for professionals!

Chapter & Member Accomplishments

Former Phi Tau Sigma member and President, Nicole Arnold, Ph.D., recently joined the

In July, Dajun Yu received a cash prize for placing in the American Society of Agricultural and Biological

Member News:



Dr. Chris Calkins, Professor, University of Nebraska-Lincoln, and Lifetime Member of Phi Tau Sigma will be inducted into the 2019 **Meat Industry Hall of Fame** January 27, 2020 in Atlanta, Georgia, in the annual event co-located with the International Production and Processing Expo (IPPE).

The Meat Industry Hall of Fame writes:

"Dr. Chris Calkins is a Meat Science Professor at the University of Nebraska. A faculty member at the age of 25, Dr. Calkins has spent nearly 40 years in the meat science field. He was one of the leaders of the beef muscle profiling project. Dr. Calkins evaluated more than 5,500 muscle samples in the beef carcass, looking for untapped potential in beef cuts usually used for ground beef or roasts. Results provided comprehensive information about the muscles of the beef chuck and round. "We identified their potential and called the industry's attention to muscles that are undervalued," Calkins said. The flat iron steak is perhaps the best-known outcome of this muscle profiling research and much broader National Cattlemen's Beef Association efforts to introduce new beef products." [<https://www.provisioneronline.com/meat-industry-hall-of-fame/inductees/chris-calkins>]

In Memoriam:

Pio Angelini Ph.D.

Pio Angelini Ph.D., age 87, died October 22, 2019 peacefully at his home in Danvers, MA. He was the husband of Cynthia A. (Mead) Angelini. Born in Ipswich, MA to the late Germano "Jerry" and Margherita (Iori) Angelini.

An honorably discharged Veteran, Pio served his country in the United States Army.

Pio worked at the US Army Natick Laboratories (NARADCOM) in food science and developed cutting edge food technologies during his long career. He was a professor of advanced chemistry and food science at Framingham State University. From childhood until the last days of his life, Pio worked his family farm, still in operation in Wenham MA and was an integral part of the community of micro farms in the New England area for decades.

Pio also taught catechism for the youths of his parish church, St Cecelia's in Ashland. He enjoyed farming, family, football, the Topsfield Fair, Beethoven and golden movies of eras past.

In addition to his wife Cynthia, Pio is survived by a son Jerry Angelini of San Diego CA; seven daughters, Margaret Angelini and husband John of Hopkinton MA, Nancy Angelini of



Boxford MA, Mary Francis Angelini and husband Neil of Maynard MA, Christine Sophia Angelini of Framingham MA, Louise Alexander and husband Chris of Weymouth MA, Martha Angelini, and Josephine Angelini and husband Al of Sherman Oak, CA; a brother Fr. Joseph Angelini of Wenham MA; a sister Lucia Angelini of Wenham MA; seven grandchildren, Jessica, Nicolas, Emma, Alexa Rose, Althaia, Dominic and Pia.

Pio's funeral Mass was celebrated at St. Adelaide Church, West Peabody, Tuesday, October 29, 2019.

[Modified from:

<http://www.campbellfuneral.com/obituaries/Pio-Angelini?obId=8374069#/celebrationWall>]

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.

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: Fridays

Fridays are, for me, as I suspect they are for many people too, a bit of a challenge or perhaps a game. It seems that folks work hard to get things off their desks by putting them on my desk before the weekend. And my job is to address the issue, and send the

completed work or email back to the person who sent it to me. It is a near-weekly occurrence. But it does give me satisfaction to have a cleared off desk (or nearly so) by close of business Friday.

My Aunt Irene (who became a bank manager and retired as a bank Vice President in the days when women could only be Tellers) passed along the advice to never contact business people before noon on Mondays, or after noon on Fridays. I have found this to be valid advice. However, I find Phi Tau Sigma members to be an exception to this rule. They can focus and address issues at any time. This speaks well of our membership.

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., and Yiren Yue, Ph.D., Laura Stawn, Ph.D., Diane Schmitt, Ph.D., Gabriela John Swamy, Ph.D. Please be responsive to their inquiries for information for the Newsletter.

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

Documents:

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

Phi Tau Sigma Membership Nominations

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

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 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.**



FOOD INGREDIENTS
GROUP

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.)

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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, 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 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)

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