



The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter July 2018

News Alerts:

Annual Meetings and Events of Phi Tau Sigma:

The Annual Meetings and Events of Phi Tau Sigma will be held starting on Sunday July 15, 2018, concurrent with the IFT meeting in Chicago. (The Founders of Phi Tau Sigma, in 1953 determined that having Phi Tau Sigma meetings and events concurrent with the IFT meeting would make travel easiest on the membership.)

The Phi Tau Sigma Leadership Team has worked diligently to produce an interesting, rewarding, and informative program – not to mention the networking opportunities. So please, come see what Phi Tau Sigma has been doing (during the Leadership Council Meeting and Annual Business Meeting), celebrate our scholarship and award recipients (during the Phi Tau Sigma and IFT Division Competition Awards Ceremony), learn at our Sessions, and show your interest in Phi Tau Sigma by being a member of the Phi Tau Sigma Fun Run/Walk Team (details on page 2 and 3, below).

A full listing of the meetings, Awards Ceremony, and Sessions is on page 4 of this Newsletter.

Chapter Annual Reports Due August 1:

(Contributed by Mary Schmidl, Ph.D., Chapter Affairs Committee Chair)

August 1 is the deadline for Chapters to send in their Annual Reports. We are anxious to learn what your Chapter has done in the past year. Please also provide one or more articles about your Chapter activities that are in the format to be printed in the Phi Tau Sigma Newsletter (up to one page, verdana 10 font, one or two photos).

In order to receive the *Certificate of Merit* or *Certificate of Excellence*, Chapters must submit their annual reports for evaluation by August 1.

Chapter of Merit and Chapter of Excellence Criteria

Each year, Phi Tau Sigma Chapters are recognized for their exemplary volunteer service, excellence in leadership, and dedication to the food science and technology profession with the *Chapter of Merit* or *Chapter of Excellence* designation.

In order to be eligible for a **Chapter of Merit** designation, the following criteria must be met:

- Must nominate at least one new member
- Must have an annual induction ceremony
- Annual Report must be submitted by the deadline (Includes activities over that past academic year, current year leadership, list of next year's leadership)
- Chapter should demonstrate continuing education or community service
- Chapter ensures that forwarding contact information (particularly email addresses) is sent by all graduating members, or the Chapter, to the Executive Director (National/International level)

In order to be eligible for the **Chapter of Excellence** designation, the following criteria must be met:

- Criteria for Chapter of Merit are met
- The Chapter increases in membership by 5% based on current membership
- Chapter activities have good attendance (30% of active members)
- Chapter nominates at least one person for an award or scholarship (does not need to be from Chapter) sponsored by Phi Tau Sigma. (Note that the nominee does not have to be chosen to receive the award or scholarship.)
- Provide at least one article for the Phi Tau Sigma Newsletter (may be part of the Annual Report or independent from it).

Please send your annual report to the current Chair of the Chapter Affairs Committee, Dr. Mary K. Schmidl (mschmidl@umn.edu) with a copy to Phi Tau Sigma Executive Director, Dr. Kathryn L. Kotula (klkotula@msn.com).

Phi Tau Sigma Fun Run + Fitness Event Team – Please join

(Contributed by Bruce Ferree, B.S.)

Are you interested in ensuring the best and brightest of our food science students have the funding available to continue their education? Do you want to help ensure scholarships are available to support the next generation of food scientists, Phi Tau Sigma and IFT membership? Then this article is for you – read on.

Every year Feeding Tomorrow, the Foundation of the IFT, along with IFTSA sponsors a fun run at the IFT annual meeting with all funds collected going directly into the Feeding Tomorrow scholarship funds. This year is no exception. This year's event is called a 'Fun Run + Fitness'. In past years, this has been a 5K run event held at the IFT annual meeting and EXPO. Starting in 2017 in Las Vegas, the event has become a more virtual event, allowing participants to perform the fitness portion of the event at their own personal leisure. This saves IFT attendees from packing additional clothing, and provides those who cannot attend with an opportunity to contribute.

Participants are not required to complete a run or walk at IFT18. If you are attending IFT18, there will be informal run/walk and yoga events Monday morning followed by an 'after' party to celebrate our commitment to the next generation of food science professionals. After all... all the funds raised are committed directly to student scholarships. If you are not able to attend, participation can be any fitness event during June or July – run, walk, yoga, bicycling, swimming, golf, etc. Just 1- Sign up on the IFT website (and pay the entrance fee \$30 which goes to Feeding Tomorrow scholarships, plus

\$3.72 service fee), 2-Complete a fitness activity - there is no minimum activity required, 3-Report the completed activity on the Fun Run Facebook page.

In addition, Phi Tau Sigma, as leaders in food science, has created a team for the event. Our member, David Park, has agreed to be our team leader (Thanks Dave!) and we are looking for Phi Tau Sigma members to be a part of the team. Teams don't have to be large. However, teams with more than 20 registered participants will be recognized as CHAMPIONS, receiving special recognition not only at IFT18 but throughout the upcoming year.

Whether you are attending IFT18 or not, you can register for the 'Fun Run + Fitness' event either as an individual or as a team member at: <https://www.eventbrite.com/e/feeding-tomorrow-virtual-fun-run-fitness-registration-43319381436>. The team name is 'Phi Tau Sigma'. You can learn more about the event at: [IFT18 Event page](#) and there is an event Facebook page at: <https://www.facebook.com/FeedingTomorrowFunRun/>

Let's be a part of supporting and encouraging the best and brightest minds in the sciences of food by participating and having a great team. I'm confident that there are already 20 members of Phi Tau Sigma that will be registering for the event. If you have already registered for the Fun Run and now want to be a part of the team, you can contact me or David at grandparunner@gmail.com or dpark@easconsultinggroup.com and we'll get you set up as a teammate.

Let's challenge ourselves to be part of a wonderful event that supports our next generation of food scientists. As a team, we have already challenged some IFT Sections and Divisions to see who can have the largest team. Let's have some fun (and fitness!). Dave and I are looking forward to having a great championship team.

Ribbons to attach to one's IFT badge will be available, at no charge, to Phi Tau Sigma Members in Good Standing (those who have paid their dues). There are two types of ribbons: those for regular members who have paid their annual \$20 student or \$40 professional member dues; and those for Lifetime Members, who have paid the one-time \$400 Lifetime Member dues:



Ribbons can be picked up in the registration area of the convention center at the ribbon desk. If you have not paid your dues, please pay them immediately (see directions in the Dues Reminder section of each Newsletter). If you are not sure if you have paid, look for your dues status on the cover email sent with this Newsletter.

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!

Phi Tau Sigma Annual Meetings and Symposia at IFT 18:

Editors Note: Please print this page, and bring it with you to Chicago. For specific details about the symposia, including moderators, affiliations, and session descriptions, please refer to the April 2018 Phi Tau Sigma Newsletter.

All events are in [McCormick Place](#)

July 15-18, 2018, Institute of Food Technologists Annual Meeting, Chicago, IL:

July 15 (Sunday):

- 11:00am-12:15pm** Phi Tau Sigma Executive Committee (Board of Directors) Meeting – [Location: S101A McCormick Place](#)
- 12:15pm-1:30pm Lunch Break
- 1:30pm-3:00pm** Phi Tau Sigma Leadership Council Meeting and Annual Business Meeting – [Location: S101B McCormick Place](#)
- 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) - [Location: S405AB McCormick Place](#)
- 6:00pm-7:00pm IFT Awards Celebration, includes the presentation of the Dr. Carl R. Fellers, Ph.D. Award - [Location: S100-Ballroom McCormick Place](#)
(Meet the Award winners at the IFT Networking Reception immediately following.)

July 16 (Monday):

- 10:30am-12pm** Advances and Challenges in the Design, Development and Implementation/Commercialization of Novel Food Processing and Packaging Technologies [Location: S404A McCormick Place](#)

July 17 (Tuesday):

- 12:30pm-2pm** Educating the Future Food Scientists Capable of Facing Evolving Regulatory and Technological Challenges in Global Food Industry [Location: S501ABCD McCormick Place](#)

July 18 (Wednesday):

- 8:30am-10am** Shedding Light on Food Safety, Quality, and Nutrition: Opportunities and Challenges with the Light-based Technologies [Location: N426C McCormick Place](#)
- 10:30am- 12pm** The Future of Food Packaging [Location: S404A McCormick Place](#)

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.phitausigma.org/fellers-award/>)

->Phi Tau Sigma Chapter Schedule:

- 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
- November 1: Deadline to order Honor Cords and lapel pins to ensure delivery before Fall graduation dates

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, Dr. Mary Schmidl (mschmidl@umn.edu) 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 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

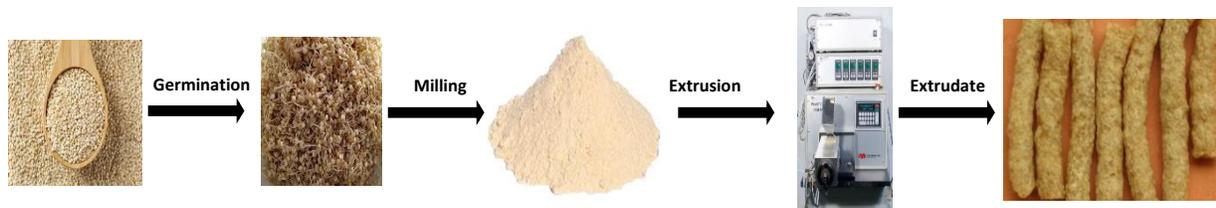
Student Research Synopsis: Developing finger foods for infants from sprouted millet and quinoa using extrusion technology (Contributed by Gabriela John Swamy, Ph.D. candidate in Agricultural Biosystems and Mechanical Engineering, South Dakota State University)

Background of the study: Finger foods are food pieces that an infant can pick up and eat by him/herself. At first, finger foods are mostly tools for practice in self-feeding, which helps the infant to develop manual dexterity and give more control of mouth muscles. Practice at finger feeding also promotes the skills necessary for later self-feeding with a spoon. Once these skills develop (9-10 months), finger foods become an important nutritional part of the infant's diet. Since their tummies are small and feeding is frequent—no more than a few hours apart—the feeding pattern is three small meals and two or three snacks daily. Nonetheless, snacks should be as nutritious as main meals.

Introduction: Wheat, oats and corn-based finger foods are available in the market. However, there is still a need for nutritious snacks as these grains do not provide enough nutrients required for an infant's growth. There is a thirst for high protein and gluten free snacks among parents. Millets are a good source of phenols and flavonoids, contributing to their antioxidant activity. The grain is also rich in important minerals like calcium, phosphorus and iron, and in methionine, an essential amino acid. Similarly, quinoa is a naturally gluten-free grain. It is high in protein and one of the few plant foods that contain all nine essential amino acids. Flavonoids, quercetin and kaempferol are found in large amounts. Germination of millet and quinoa increases the free amino acids and total sugars and decreases the dry weight and starch content. Increases in lysine, tryptophan, and non-protein nitrogen also occur. In short, germination can increase the digestibility of grains.

Extrusion technology has been used to develop puffed snacks. During extrusion processing, food materials undergo many order-disorder transitions such as starch gelatinization, protein denaturation, components interactions, and browning reactions and thus modify the ingredients' molecular structure, change their functionalities and subsequently alter the extrudate's physical and biological qualities (Singha, Muthukumarappan, & Krishnan, 2018). These changes result in improved organoleptic properties, increased nutrient availability, improved antioxidant properties, and inactivation of heat labile toxic compounds and enzyme inhibitors (Gopirajah & Muthukumarappan, 2018).

Methods: Ready-to-eat extrudates were developed using a single- and twin-screw extruders. Once the extruder conditions were stabilized, 6 kg samples were extruded for each flour by optimizing the extrusion parameters, such as: screw speed (90-140 rpm), temperature (90-140°C), and flour moisture content dry basis (15-25%), separately to identify optimal conditions critical to obtaining nutritionally and functionally enhanced product. Characterizing the extrudates by determining the physical properties such as true and bulk density, porosity, water solubility index (WSI), and water adsorption index (WAI), hardness, compressibility, water activity and thermal properties were carried out. Starch and protein digestibility tests were conducted to test the efficiency of the germination process.



Results: Germination improved the in-vitro protein (14% to 26%) and starch (56% to 72%) digestibility in millet and quinoa. The density of the millet extrudates varied between 128 and 451 kg/m³. Expansion ratio of millet extrudates ranged from 0.86 to 2.93. WAI of extrudates ranged between 4.13 and 5.18 g/g which was significantly higher than that of (1.45 g/g) unprocessed millet. Minimum WSI of 0.17 g/g was achieved at 19.0% feed moisture content, 115°C die temperature, and 196 rpm screw speed. The density of dry quinoa extrudates varied between 117 and 507 kg/m³. Low density, which is a desirable characteristic of the expanded product, was achieved with low feed moisture content, low temperature, and high screw speed combination. The expansion ratio of quinoa extrudates ranged from 0.92 to 3.58. WAI of extrudates ranged between 4.45 and 6.72 g/g which was significantly higher than that of (1.69 g/g) unprocessed quinoa. Minimum WSI of 0.186 g/g was achieved at 18.3% feed moisture content, 140°C die temperature, and 192 rpm screw speed. The protein content of quinoa seeds varies from 8% to 12%, which is higher on average than that in common cereals such as rice, wheat, and barley. The protein content represents 14–20% (g/100 g dry basis, d.b.), being particularly rich in essential amino acids such as lysine and methionine, thus supplying high-quality protein. The protein digestibility of quinoa extrudates was between 76.3 and 80.5%. The GABA amino acid ranged between 65- 110 ppm in the sprouted samples.

Significance: With quinoa attaining a superfood status, it needs to be utilized well. It can be used to make a novel, healthy, extruded, snack-type food product as a first step. Likewise, millet is so important because of its uniquely high content of nutrients, including impressive starch levels, very high B-vitamin content, as well as calcium, iron, potassium, zinc, and magnesium. Developing a novel, healthy, extruded food product from millet will provide a nutritious snack for infants.

References

- Gopirajah, R. & Muthukumarappan, K. (2018). Effect of extrusion process conditions on the physical properties of tef-oat healthy snack extrudates. *Journal of Food Processing and Preservation*, 42(3), e13559.
- Singha, P., Muthukumarappan, K., & Krishnan, P. (2018). Influence of processing conditions on apparent viscosity and system parameters during extrusion of distiller's dried grains-based snacks. *Food science & nutrition*, 6(1), 101-110.
- Swamy, G. & Muthukumarappan, K. (2018). Development of healthy and nutritious finger food from sprouted quinoa using single screw extrusion technology. [In progress]
- Swamy, G. & Muthukumarappan, K. (2018). Optimization of single screw extrusion process parameters to develop a ready-to-eat finger food from sprouted millets. [In Progress]

Member News:



Dr. Mindy Brashears is the recipient of the 2018 **Distinguished Research Award** of the American Meat Science Association. The award was established in 1965 to recognize members with outstanding research contributions to the meat industry and is sponsored by ConAgra Brands. Dr. Brashears will be honored at a special awards banquet at the AMSA 71st Reciprocal Meat Conference on Tuesday, June 26, 2018 in Kansas City, Missouri.

Dr. Mindy Brashears is a Professor of Food Microbiology and Food Safety, Director of the International Center for Food Industry Excellence (ICFIE) at Texas Tech University and holds the Roth and Letch Family Endowed Chair in Food Safety. Her research program focuses on improving food safety standards to make an impact on public health.

[From: American Meat Science Association, eNewsletter, May 31, 2018, Volume 55e Number 367]

In Memoriam: Professor Emeritus Elwood Caldwell, Ph.D.

(Contributed by Mary Schmidl, Ph.D., Lifetime Member and Past President of Phi Tau Sigma)

Professor Elwood Caldwell, the first department head of Food Science and Nutrition at the University of Minnesota passed away on May 22, 2018.

A native of Canada, Elwood first graduated from the University of Manitoba before going on to hold a quality assurance chemist position in flour milling, brewing, malting, vegetable oil processing and cookie and cracker baking in his home country. He then went on to receive his M.A. in food science and his Ph.D. in nutrition at the University of Toronto. After moving to Chicago to join the research and development team at Quaker Oats, he earned an M.B.A. in financial management at the University of Chicago followed by a second major in computer science.



A leading accomplishment during his 19 years with Quaker Oats was his discovery, first publication and gaining of legal recognition of the role of phenolic antioxidants in preserving the shelf life of ready-to-eat cereals; now used by most manufacturers and subsequently extended to products such as snacks, instant potatoes and rice.

Moving on from Chicago, Dr. Caldwell relocated to Minnesota to become the very first head of the Department of Food Science and Nutrition, which was created by merging three different departments: the Department of Food Science and Industries (College of Agriculture), Division of Foods (College of Home Economics) and the Division of Nutrition and Food Service Administration (College of Home Economics). He served in this capacity from 1972-1987, the longest serving head for the department in its history.

He is credited with the early success of the newly formed department, helping it become one of the top programs in the nation. He is also recognized as the creator of the department's Advisory Council, bringing in over 60 members from industry and governments.

Passionate about students, he established the Elwood F. and Florence A. Caldwell Fellowship, fully funding a graduate student in the department, ensuring FSCN continues to attract top graduate students.

Active in the Chicago Section, he established the Tanner Lectureship which is still thriving today and brings to the Chicago Section outstanding scientific speakers. With the Minnesota Section of the Institute of Food Technologists (IFT), he was responsible for the beginning and subsequent growth of Minnesota's Suppliers Night with over 250 exhibitors. Elwood also chaired (and raised the initial funding for) the establishment of Minnesota's Macy Award. Established in 1981, the award is given annually to recognize an outstanding example of food technology transfer or cooperation between scientists in academic, government and private industry.

Professor Caldwell was the President of Phi Tau Sigma, The Honor Society of Food Science and Technology (1980-81). During his Presidency of Phi Tau Sigma, he and others are recognized for establishing the Dr. Carl R. Fellers Award. The Dr. Carl R. Fellers Award is bestowed annually "To honor a member of IFT and Phi Tau Sigma who has brought honor and recognition to the profession of food science and technology through a distinguished career in that profession displaying exemplary leadership, service and communication skills that enhance the effectiveness of all food scientists in serving society." Furthermore, "priority shall be given to a record of achievement in communicating to the profession, to governmental and international agencies and/or to the public scientific information relative to the quality, wholesomeness, safety, nutritive value and other aspects of food and the food supply; in bringing individuals into the profession; and/or in propagating knowledge of the importance of the profession to the public, governmental agencies, and scientific and academic communities."

Professor Caldwell is also recognized by the University of Minnesota as the founder of their Chapter of Phi Tau Sigma.

A major Minnesota Section scholarship named in Elwood's honor is also awarded every year to a qualified applicant. The Elwood F. Caldwell Scholarship for Student Volunteer Service is given annually to one student member who demonstrates a commitment to the MN IFT Section by their volunteer service and/or a commitment to the betterment of the community in which they live.

Dr. Caldwell served on major committees of IFT nationally, was elected a Fellow of IFT and in 1991 was the recipient of the Calvert L. Willey award for distinguished service to IFT, serving on numerous committees while a member. He was also a Fellow of AACC International, served as its Scientific Director of Services and Executive Editor of *Cereal Foods World*, was the 1996 recipient of its William F. Geddes Memorial Award. In 2002 he was the recipient of AOAC International's Reference Material Achievement Award.

Dr. Caldwell's obituary can be found at:

<http://www.startribune.com/obituaries/detail/0000259612/?fullname=elwood-caldwell#1>

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: **Daryl Lund, Ph.D.** (Do **not** address to Phi Tau Sigma.)

May 1 to October 31: 151 E Reynolds Street, Cottage Grove, WI 53527.

November 1 to April 30: 11815 N 97th Avenue, Sun City, AZ 85351.

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, Mary Schmidl, Ph.D. at: mschmidl@umn.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:

You see me write a lot about opportunities. I see them everywhere, and it saddens me when I see opportunities that are lost. So, what opportunities do I see at the moment? The opportunity to participate in the Phi Tau Sigma Meetings and Events during the IFT meeting. The opportunity to represent Phi Tau Sigma by becoming a member of the Phi Tau Sigma Fun Run/Walk Team. If you cannot attend the annual meeting, at least sign up to be a member of the Phi Tau Sigma Fun Run/Walk Team from home.

About Phi Tau Sigma Communications:

The Phi Tau Sigma Newsletter Committee includes: Kathryn Kotula, Ph.D., Editor-in-Chief, Chair (kkotula@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 Daryl Lund, Ph.D. (dblund@wisc.edu). 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, Daryl Lund, Ph.D. (dblund@wisc.edu), or the Executive Director, Kathryn L. Kotula, Ph.D. (klkotula@msn.com). Please write "Donation" or "Sponsorship" in the subject line.

2017-2018 Donors and Sponsors:

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 recent 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 fully sponsor a Phi Tau Sigma Student Achievement Scholarship.)



International Food Network, Inc. is a consultancy based in Ithaca, New York that serves the food, beverage and nutrition industry, providing services in the areas of value optimization, corporate development, mergers & acquisitions and divestitures. Peter Salmon is IFN's founder and principal. (Donation to fully support a Phi Tau Sigma Student Achievement Scholarship.)

Dr. Mary K. Schmidl is the President-Elect 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. Daryl and Mrs. Dawn Lund. Dr. Lund is a past President of Phi Tau Sigma, a Lifetime Member, and current Treasurer; and is an Emeritus Professor, University of Wisconsin. (Contribution to sponsor the Dr. Daryl B. Lund Student International Travel Scholarship.)

Dr. Fergus Clydesdale, a Lifetime Member of Phi Tau Sigma, is the Distinguished Professor and Director of the UMass Food Science Policy Alliance, University of Massachusetts Amherst and a member of Phi Tau Sigma since the 1960's.

Dr. Rakesh K. Singh is the President-Elect 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 towards a Phi Tau Sigma Achievement Scholarship.)

David K. Park, M.S., Phi Tau Sigma Lifetime Member, is Principal, Food-Defense, LLC, providing expert food safety / process authority / food defense consultation for traditional and novel low acid canned foods (LACF), acidified foods (AF), and refrigerated extended

shelf life foods (ESL) for USFDA and USDA-FSIS- inspected products, packaging and processing systems. (Donation towards a Phi Tau Sigma Scholarship.)

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

Kantha Shelke, Ph.D., CFS, a Lifetime Member of Phi Tau Sigma, is a Principal at Corvus Blue, a food science and research firm contracted by the mid-market sector (\$50 - \$500m sales) to expedite development and commercialization of honestly healthful products and technologies. Previously employed at ACNielsen, Ben & Jerry's, Continental Baking Corporation, and Pillsbury, she provides expert witness services to food industry litigations, writes for trade and consumer media, and serves as adjunct faculty in Johns Hopkins University's Master of Science in Food Safety Regulation program (Baltimore, MD), and visiting professor at the Department of Food Science and Nutrition, at Management Center Innsbruck (MCI), Austria. (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.)

Professor J. Ralph Blanchfield, MBE, Consultant in food science, food technology and food law with his own international practice for the past 36 years, following 34 years in industrial food science and technology and management.