Phi Tau Sigma Newsletter  May 2019

News:

Election Results: New Phi Tau Sigma Leadership:

President Elect: Martin Sancho-Madriz, Ph.D., Cal Poly Pomona
Directors:
- Martha Cassens, M.S., ACH Food Companies, Inc.
- Rebecca Creasy, Ph.D., Texas A&M University
- Yaguang (Sunny) Luo, Ph.D., Agricultural Research Service, USDA
- Laura Strawn, Ph.D., Virginia Tech University

We had an extremely good turnout of 58.36% of members in good standing having voted. Congratulations to all! We look forward to working with you.

Calling Runners, Fitness Enthusiasts, Feeding Tomorrow Supporters!

----->Join the Phi Tau Sigma IFT19 Fun Run + Fitness Team<-----
(Contributed by Claire Zoellner, Ph.D., Associate Editor)

Phi Tau Sigma has formed a team to participate together in the annual IFT19 Fun Run + Fitness event, Feeding Tomorrow’s largest fundraiser to support food science student scholarships. Participants can run, walk, do yoga, bike, or swim...anywhere, anytime with the option to participate virtually from May 1st-June 5th! Or, if you will be at IFT19 in New Orleans, you can join us bright-and-early on Monday, June 3rd at 6:30am in Audubon Park for a 5k run, 1-mile walk, or outdoor yoga, followed by a celebratory after party. Event registration is a $30 donation to Feeding Tomorrow.

For more information and to register, visit: https://www.iftevent.org/funrun. Be sure to include the “Phi Tau Sigma” team name when registering. Contact Claire (cez23@cornell.edu) if you have already registered as an individual and would like to be added to the team.

As a former recipient of a Feeding Tomorrow Scholarship, thank you for supporting the future food scientists of the world!
Students about to graduate:

Please remember to:
1) Order your Honor Cord and lapel pin in plenty of time for them to be mailed to you before graduation. Store web address: http://www.phitausigma.org/store/
2) Forward your new contact information (especially your new email address) to the Executive Secretary (klkotula@msn.com).

Thank you, and Congratulations on your graduation!

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, you must pay them before May 15, 2019 to be included (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.

Pins. Remember to bring and wear your Phi Tau Sigma lapel pin during the IFT Annual Meeting. If you do not yet have one, or are in need of another, pins may be purchased in the Phi Tau Sigma Store by Members in Good Standing (those who have paid their dues). Pins will not be sold at IFT this year, so please visit the Store and purchase your pin before May 15, 2019 to ensure time for mailing. Please provide your mailing address if it is different from your credit card billing address. [Pin cost is $7.] Store web address: http://www.phitausigma.org/store/

Dues Status
To be listed as a Member in Good Standing before the Annual Meeting, pay your dues before May 15, 2019. The cover email for this Newsletter will tell you your dues status. If you have dues due, please follow the directions in the cover email, or in the Dues Reminder section of the Newsletter.
Phi Tau Sigma Annual Meetings and Symposia at IFT 19:
Editors Note: Please print this page, and bring it with you to New Orleans. For specific details about the symposia, including moderators, affiliations, and session descriptions, please refer to the April 2019 Phi Tau Sigma Newsletter.

All Sunday and Wednesday events are in the Ernest N. Morial Convention Center.

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

June 2 (Sunday):
11:00am-12:15pm Phi Tau Sigma Board of Directors Meeting – Location: Rooms 286-287
12:15pm-1:30pm Lunch Break
1:30pm-2:15pm Phi Tau Sigma Leadership Council Meeting and Annual Business Meeting – Location: Rooms 240-241
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 – Location: La Nouvelle Ballroom
6:00pm-7:00pm IFT Awards Celebration, includes the presentation of the Dr. Carl R. Fellers, Ph.D. Award – Location: La Nouvelle Ballroom (Meet the Award winners at the IFT Networking Reception immediately following.)

June 3 (Monday):
6:30am Phi Tau Sigma Team participating in the Fun Run + Fitness – Location: Audubon Park (Shuttles will be provided from the Marriot Hotel at 5:45am)

June 5 (Wednesday):
8:30am-10am Nonthermal Processing with Light and Plasma: Microbes and Mycotoxins – Location: Rooms 283-285
1:15pm-2:45pm Emerging Food Processing and Packaging Technologies: Current Status and Future Prospects – Location: Rooms 283-285

A Path Forward for Phi Tau Sigma
(Contributed by Claire Zoellner, Ph.D., Associate Editor)

The *ad hoc* Strategic Relations Committee of Phi Tau Sigma has been working hard to evaluate the performance, value, and organization of the Honor Society of Food Science and Technology. Strategic relations was identified as an important initiative for the 2018-2019 year to formalize the solicitation of feedback and development of a plan to ensure the Society remains at the forefront of scholarship, achievement, and member experience for the field of food science and technology.

“Officially, the charge of the *ad hoc* Strategic Relations Committee is to ‘Develop and recommend to the Executive Committee a prioritized strategic plan for long term financial stability and relationship building of Phi Tau Sigma,’” explains Dr. Kathryn Kotula, Executive Director of Phi Tau Sigma. In execution of this charge, the committee has conducted both a benchmarking exercise and a stakeholder survey. Dr. Taylor Wallace, chair of the Committee, sees that “Phi Tau Sigma has undergone many positive changes over the past
few years. Now is the time to look forward into the future and assess the needs of professionals in the field.”

First, the benchmarking endeavor compared Phi Tau Sigma against other science-based honor societies to understand basic characteristics, membership values, and new challenges facing such organizations. The preliminary findings suggested that Phi Tau Sigma is very similar to other societies in value, size, and function, and did not provide much insight into new directions. Therefore, the Committee designed and circulated a brief stakeholder survey for both members and non-members in the field of food science. Thank you to all who participated.

A report of the results has been presented to the Board and the insights and suggestions are being prioritized. Dr. Rakesh Singh, President of Phi Tau Sigma, mentioned, “The Strategic Relations Committee under the leadership of Dr. Taylor Wallace did an excellent job in conducting the detailed survey and presenting the results. Prioritization of those results will help us to launch different initiatives in each of next couple of years.”

The Annual Meeting in June will provide an excellent opportunity for the Board and Committee members to lay the groundwork for continued progress in growing the Phi Tau Sigma membership and providing the experiences and resources essential to members’ success. We will continue to provide Newsletter updates on our progress, so stay tuned for new opportunities to get involved!

Calendar:

-> Phi Tau Sigma Team Fun Run + Fitness Virtual Activities:  
   May 1 to June 5: Accomplish your Virtual activity

-> 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., (p joseph@kalsec.com) and Executive Director Kathryn L. Kotula, Ph.D. (k kotula@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.  

-> 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

Student Research Synopsis: Diversification of strategies to better understand and improve dairy quality
(Contributed by Tim Lott, Ph.D. Student, Milk Quality Improvement Program, Field of Food Science and Technology, Cornell University)

The Milk Quality Improvement Program (MQIP) at Cornell University provides support for New York State dairy producers and processors to help them in their efforts to increase the quality of raw and processed milk and milk products and to assure the safety and wholesomeness of dairy products. Post-pasteurization contamination (PPC) and spore-forming bacteria are two factors that present major challenges to the dairy industry. Identifying at what conditions these organisms grow, as well as how they should be addressed in the distribution chain, will be important for advancing improvements in dairy quality.

Spore-forming bacteria survive High Temperature Short Time (HTST) pasteurization as spores, causing spoilage in fluid milk and a defect known as late blowing in certain styles of cheese (Fig. 1). These bacteria persist in farm and dairy plant environments. To better understand spore-forming bacteria in the dairy chain, the MQIP has conducted studies isolating and characterizing spore-forming bacteria from raw milk. Findings include the relation of farm practices to spore-formers in bulk tank raw milk (Miller 2015a) and that raw milk spore-forming bacterial

Figure 1. Example of late blowing defect in cheese.
populations differ from those found in dairy powders (Miller 2015b). These studies allow the dairy industry to pinpoint where strategies need to be implemented for reducing the entry of spore-forming bacteria into the milk continuum.

Currently, coliform testing is the industry standard and a requirement of the FDA Pasteurized Milk Ordinance (PMO) which serves as a hygiene indicator of dairy facilities. However, research, including studies from the MQIP, has shown that detection of gram-negative organisms provides a better indicator of PPC (Hervert 2016, Van Tassel 2012). PPC accounts for approximately 50 percent of fluid milk spoilage. Better understanding of PPC through improved detection methods will allow for the development and improvement of technologies to prevent it.

Producers, processors, and distributors need to decide what technologies and strategies they can afford to implement. While improving quality can increase profits by reducing product losses at all levels, the finances required may limit implementation of these new technologies and strategies for increasing quality. This is where modeling can help those involved across the distribution chain make decisions to optimize both product quality and profitability. If there is an increase in the development and implementation of technologies that aim at reducing the instances of PPC, spoilage due to spore-forming bacteria may become more prevalent in the dairy industry.

Code dates of fluid milk are both inaccurate and imprecise. Predictive modeling can be used to improve accuracy and precision of shelf-life by taking into consideration processing parameters (e.g. pasteurization temperature), storage time and temperature, and the characterization of bacteria isolated from milk. The MQIP has developed a Monte Carlo simulation based predictive model for spoilage of fluid milk due to specific psychrotolerant spore-forming bacteria (Buehler 2018).

Providing ways for other researchers to better understand dairy spoilage will allow for the advancement of dairy quality improvement outside of the MQIP. One such effort includes the development of a standard bacterial isolate set, available to the public, that encompasses spoilage organisms of current relevance to the dairy industry (Trmčić 2015). Public availability and transparency of data will be crucial in advancing improvements in dairy quality as well.

References:


**Lifetime Member Tribute: Xujian Qiu, Ph.D.**
Associate Professor, Jimei University

**Why did you become a Lifetime Member?**
Phi Tau Sigma is a well-known Food Science Honor Society. Many seasoned food science and technology experts and also young university students are members of this organization. We want to be with people who share the common interest with us. Phi Tau Sigma is thus such a perfect platform where we can share information, grow professionally, etc. As a Lifetime Member, you show your commitment to Phi Tau Sigma and also to food science and technology for lifetime.

**Education:**
Ph.D. University of Maine
M.S. Ocean University of China
B.S. Zhejiang Gongshang University (Hangzhou Institute of Commerce, formerly)

**Experience/Accomplishments:**
I am an Associate Professor at Food Science Department, Jimei University (Xiamen, China). Before this job, I worked for several food companies both in China and the US.

**Areas of Expertise:**
I am now doing seafood related research with particular interest in how processing and storage conditions can affect the seafood quality/safety.

**Awards and Honors (selected list):**
UMaine Bob Slabyj Scholarship
CAFS Graduate Student Scholarship Award

**Personal: Family, Interests, Hobbies:**
I am married and have one 6 year old son. I often run a little bit early in the morning and have finished a couple of marathons. I try to compete in one marathon every year.

**Advice to university students and career food scientists and technologists:**
When you work in the kitchen, you are doing something related with food science and technology. Even when you enjoy your meal, chemical reactions occur inside your body. The particular flavor of some food makes you feel good, but may be hard to describe. Or you might be curious about how bread can turn moldy when you were a child......It is the curiosity and interest that could motivate you and keep you moving forward when you feel
uncomfortable and hit the wall someday in your career in the future. Please be curious and have fun while you are tasting the flavor of food science and technology.

**Member News:**

**2019 IFT Achievement Awards**

**Dr. Carl R. Fellers Award**
*For Excellence in Leadership—Honors an IFT member and Phi Tau Sigma member for their distinguished career in the food science and technology profession, and who has displayed exemplary leadership, service, and communication skills.***

**Colin Dennis,** Ph.D., CFS, ΦΤΣ LTM
*IFIS Publishing and British Nutrition Foundation (BNF)*

Colin Dennis is the recipient of the 2019 Carl R. Fellers Award for his life-long dedication to bringing honor and recognition to the profession of food science and technology, and to enhancing the effectiveness of all food scientists through exemplary leadership. Dennis has held senior management and leadership roles in R&D, analysis and testing, and training and consultancy in government institutes in the United Kingdom and Norway and in commercial research and technology organizations, including 21 years as CEO of CampdenBRI. He has also held visiting professorships in universities and provided scientific, technical and strategic leadership in not-for-profit organizations and professional institutes, including serving as president of IFT and the Institute of Food Science and Technology. An enthusiastic and dedicated volunteer, he has committed much time to mentoring colleagues, including students and new professionals.

**Nicolas Appert Award**
*For Excellence in Leadership—Honors an IFT member or nonmember for contributions to the field of food technology.*

**D. Julian McClements,** Ph.D., ΦΤΣ Lifetime Member (LTM)
*University of Massachusetts*

David Julian McClements is a Distinguished Professor at the Department of Food Science at the University of Massachusetts. He specializes in food biopolymers and colloids, with an emphasis on using structural design approaches to improve food quality, nutritional value, and safety. He has authored five books, edited six books, filed 12 patents, and published over 900 scientific articles. He has received awards from the American Chemical Society (ACS), AOCS, International Union of Food Science and Technology, IFT, Society of Chemical Industry, and UMASS in recognition of his achievements. He is a fellow of the Royal Society of Chemistry, ACS, and IFT. His research has been funded by the U.S. Department of Agriculture, National Science Foundation, NASA, and the food industry. He is co-editor of *Annual Reviews in Food Science and Technology*, and a member of the editorial boards of numerous other journals.


**Babcock-Hart Award**

*For Innovation—Awarded for food technology contributions that resulted in improved public health through nutrition or more nutritious food.*

**Hang Xiao, Ph.D., ΦΣΤ LTM**  
*University of Massachusetts*

Hang Xiao has received the 2019 Babcock-Hart award for his exceptional scientific contributions, which have had a positive impact on advances in health and wellbeing. His work has focused on the development of diet-based strategies for the prevention of chronic diseases. An example of the uniqueness of his work is the study of how bioactive dietary compounds are extensively metabolized by different human tissues as well as the gut microbiome, to produce new compounds with potent disease-preventative effects. This information can enable food manufacturers to develop foods that will have a direct impact on the improvement of public health.

**William V. Cruess Award for Excellence in Teaching**

*Awarded for achieving excellence in teaching food science and technology.*

**M. Mónica Giusti, Ph.D., ΦΣΤ Member**  
*The Ohio State University*

Mónica Giusti, Professor of food science and technology at The Ohio State University, is the 2019 recipient of William V. Cruess Excellence in Teaching Award. Comments from current and former students unanimously acknowledge her sincere attention to enhancing their knowledge and inspiring their drive toward excellence. The students refer to her as their mentor, a role model, a leader in food science, and an innovative teacher. She connects with her students at a personal level, discovers their special talents, and encourages independent thinking while supporting them in overcoming hurdles and moving to the next level of success.

**Myron Solberg Award**

*For Excellence in Leadership—Honors leadership in industry/government/academia cooperative organization.*

**Ken Lee, Ph.D., ΦΣΤ LTM**  
*The Ohio State University*

Ken Lee is the recipient of the 2019 Myron Solberg Award. A Professor of food science at Ohio State, his many roles include serving on boards, as president of Phi Tau Sigma, and currently as a member of the IFT Board and director of OSU Food Innovation. He is an IFT Fellow and a Fellow of the American Association for the Advancement of Science. Lee earned his BS at Rutgers and PhD at UMass Amherst. He was tenured at the University of Wisconsin-Madison then recruited to Ohio State as Chair in 1990.
Bor S. Luh International Award
For Global Impact—Honors an IFT member or an institution whose outstanding efforts in the field of food technology resulted in international exchange of ideas; better international understanding; and/or practical successful transfer of food technology to an economically depressed area.

Valente B. Alvarez, Ph.D., ΔΠΣ Member
The Ohio State University
Valente B. Alvarez is the recipient of the 2019 Bor S. Luh International Award. Alvarez is an internationally renowned scientist whose outstanding efforts sustain an exchange of ideas across the globe, making an impact through research, outreach and service. His research efforts have contributed to food and dairy processing, product development, and ingredient functionality and quality. His leadership, tireless organization, and international collaborations foster better understanding of global food issues by transferring technology to those who need and use it by collaborating in countries across Latin America, Europe, Asia, Middle East and Africa.

Samuel Cate Prescott Award for Research
For Innovation—Awarded for outstanding research in food science and technology.

Han-Seok Seo, Ph.D., ΔΠΣ LTM
University of Arkansas-Fayetteville
Han-Seok Seo is a creative sensory scientist who combines an interdisciplinary background with skills that contribute to improved quality of life through healthy and joyful eating behavior. Seo is an Associate Professor and Director of the University of Arkansas Sensory Service Center in the Department of Food Science at the University of Arkansas, Fayetteville. He holds a Ph.D. in food and nutrition and a Doctor of Medical Science in otorhinolaryngology from Seoul National University (Seoul, Korea) and the Technical University of Dresden (Dresden, Germany), respectively. Seo has published 106 articles in peer-reviewed journals, including the Journal of Food Science, Scientific Reports, Human Brain Mapping, and Food Quality and Preference. His work has been frequently cited by the scientific community and supported by various funding agencies. He serves as an editorial board member of multiple journals including the Journal of Sensory Studies and Food Quality and Preference.
IFT Emerging Leaders Network Award

The IFT Emerging Leaders Network (ELN) is a highly selective global leadership program established for new professionals in the science of food who are eager to expand their leadership skills. The program is designed to bridge the gap between the participant’s academic experience and their on-the-job training. These award recipients are recognized for demonstrating high potential for success in leadership roles and a strong commitment to the profession. The recipients will be a part of the 2019 Emerging Leaders Network Program at IFT19.

Claire Zoellner, Ph.D., ΦΤΣ Member
iFoodDecisionSciences

Claire Zoellner is a food safety scientist at iFoodDecisionSciences, a provider of food safety and process control data management software and analytics. She manages research aimed at developing and delivering pragmatic, science-based tools for the food industry to leverage data in making food safety decisions. Her research integrates microbial contamination data with simulation and risk assessment models to yield actionable information for fresh produce supply chains and food manufacturers to manage food safety risks in production environments. Prior to her employment at iFoodDS, Claire received a B.S. in food science and human nutrition from the University of Illinois Urbana-Champaign and a Ph.D. in food science and technology with minors in epidemiology and systems engineering from Cornell University. She also completed a postdoctoral research appointment under Renata Ivanek and Martin Wiedmann at Cornell. Zoellner is active in Phi Tau Sigma and a member of IFT and the International Association for Food Protection.

Phi Tau Sigma President at CHIMBORAZO POLYTECHNIC UNIVERSITY, Ecuador

Phi Tau Sigma President, Rakesh Singh, Ph.D. visited ESCUELA SUPERIOR POLITÉCNICA DE CHIMBORAZO (ESPOCH) in Ecuador from February 26 to March 1, 2019. ESPOCH is an institution of higher education founded in 1972, and is located in the city of Riobamba in the central zone of Ecuador. The University now enrolls 20,000 students and has an area of 1,000 hectares for scientific and academic use. It has the highest concentration of students from all the 24 provinces of Ecuador and owns 7 faculties offering training in 31 different careers plus 6 research centers, and 5 experimental research stations. ESPOCH has goals of modernization and internationalization of their higher education by aligning with UGA and other universities.

The main purpose of the visit was to initiate educational collaboration between ESPOCH and the University of Georgia (UGA) College of Agricultural and Environmental Sciences. The team members from UGA included Heads of Animal & Dairy Science (Dr. Fluharty), Poultry Science (Dr. Applegate) and Food Science & Technology (Dr. Singh), and the Assistant Dean for Global Programs in Agriculture (Dr. Bart). The UGA team met with administrators of ESPOCH and each side gave presentations about their teaching and research capabilities and topics for future collaboration under the recently signed Memorandum of Understanding between the two universities.
Dr. Singh met with the faculty of Science which houses the Food Science program and visited the pilot facilities for food engineering including alcohol fermentation and distillation, drying and dairy products processing. The new research facility being built had instruments for food safety and chemical analyses. ESPOCH has very good hands-on teaching facilities but they are expanding into state-of-the-art research. The research themes interesting to food science were utilization of cheese whey and other food wastes, quinoa processing including measurement for aflatoxin and treatment to eliminate it. Student mobility is another major aspect of this collaboration, so in the future students will be able to have exchange or internship opportunities at both the partner universities, UGA and ESPOCH.

**Phi Tau Sigma members interact with food safety regulators**

The Department of Food Science & Technology at the University of Georgia (UGA) hosted its second annual roundtable forum on March 11, 2019 to interact with food safety regulators. The forum was organized and moderated by Dr. Anand Mohan, Food Science Extension Specialist (Phi Tau Sigma Lifetime Member (LTM)). The purpose of the forum was to exchange academic, industry and regulatory inspectors’ knowledge to facilitate understanding of food processing inspections. The food safety regulators included Georgia Department of Agriculture (GDA) inspectors, a US-FDA national compliance officer, and
USDA-FSIS regional officers. The attendees and speakers were a few UGA faculty and staff and a representative from Grocery Manufacturers’ Association (GMA) foundation.

UGA’s food science extension faculty and staff regularly provide technical trainings and services to small and medium size food processors in Georgia. The services include product classification, process approvals and nutritional facts panels. The GDA and USDA-FSIS inspectors work closely with the UGA extension and the training material for acidified and low-acid canned foods come from GMA foundation. Therefore, it is crucial to get all the parties involved in food safety trainings and inspections in the same room.

The following Phi Tau Sigma members attended and participated in the lecture and discussion: Dr. Rakesh Singh (Phi Tau Sigma President and LTM), Dr. Koushik Adhikari (Phi Tau Sigma LTM), Dr. Kevin Mis Solval (Phi Tau Sigma LTM), and Dr. Akhila Vasan (Phi Tau Sigma member) representing GMA foundation. The presentations by Phi Tau Sigma members included: (1) Process Validation for Acidified/Aseptic Systems by Dr. Rakesh Singh, and (2) Thermal Processing Capacity Building Programs: An Update by Dr. Akhila Vasan. Other presentations included, Issues/Designing of Environmental Monitoring Program by Mark Harrison (Josiah Meigs Distinguished Professor), and Produce Safety Updates by Dr. Laurel Dunn (Assistant Professor). After the formal presentations, representatives from GDA, USDA-FSIS, and FDA gave their perspectives and insight for enhancing our trainings and services.

In Case You Were Wondering….“Hallowed Were the Gold Dust Trails”
(Contributed by Mary K. Schmidl, Ph.D., Lifetime Member and a Past Phi Tau Sigma President 2013-14)

In the 21st century, most Americans do not spend their day plowing fields or wrangling cattle, yet as food scientists we appreciate the strong and inevitable link between agriculture, food, health and the environment. Many of our ancestors were farmers or sharecroppers and worked the land. Our forefathers were real people with full lives. Attempting to reach beyond their basic statistics (name, date of birth, death, etc.) can help us understand their experiences better, learn more about history and often be a source of fun and inspiration for our own lives as food scientists and technologists. Here is a short glimpse on my heritage and its intersection with food and agriculture which hopefully serves as an encouragement to explore your own family background.

The tale begins with my great Uncle, Father Michael McNaboe, who was raised on a cattle farm in Moyne, County Longford, Ireland. Fortunately for me, his life was captured by Henry L Walsh, S. J. in the book entitled: “Hallowed Were the Gold Dust Trails”.

The book is a documentary of the Irish Roman Catholic pioneer priests (1849 -1900) of Northern California who were educated at “All Hallows College” in Dublin, Ireland, my great Uncle being one of them. Upon graduation from “All Hallows College” Father Michael McNaboe was one of the first missionary priests to arrive in California shortly after it was granted statehood by the U.S. Congress. Father McNaboe was dispatched to the wide-open unruly city of San Francisco.
Francisco where he received his orders to continue on to the Sierra Nevada mountains of California where the “Gold Rush” was booming.

Often traveling on horseback or on foot, he ventured through the roaring mining camps saying Mass in miners’ cabins, or out in the open. He regularly ministered to the spiritual needs of the gold seekers, visiting the sick and burying their dead. This early experience enabled Father McNaboe to develop strong and lasting relationship with many miners. One special relationship was with James Fair, a highly successful Irish mining engineer and businessman. His investments in silver made him an extremely wealthy man and later he became a United States Senator from Nevada. Father McNaboe baptized his daughter, Virginia Fair who later in life married into the Vanderbilt family and erected the “Fairmont Hotel” located on Nob Hill in San Francisco.

When Father McNaboe became more established, he sent for his unmarried sister, Catherine McNaboe, my great grandmother to join him in California. With the help of my great grandmother and through his endless energy, hard work and esteemed by all who knew him, he was able to erect numerous Catholic Churches and Parochial Schools throughout Northern California. To provide leadership, administration and staff for the Catholic Schools, he returned to Ireland several times to chaperone back to the USA highly trained Sisters of Mercy.
As one might predict, Catherine met a tall charming, good-looking Irish farmer (my great grandfather) and fell in love. The wedding ceremony was performed by her brother (of course) and thus continued the Irish farm legacy of her and Michael’s ancestral heritage. For decades, this farm, located in Rio Vista, California consisted of grain, corn and hay. In the mid 1930s, natural gas was discovered on the farm property and greater surrounding areas. The area was the largest natural gas field west of the Rocky Mountains. The immediate result of wealth (from the gas wells) did not diminish the importance of farming and it continued to be part of my grandparent’s and mother’s childhood as they diversified into fruit trees and row crops.

Besides the obvious importance of farming and agriculture, education was paramount in my family. For example, after graduating from college, my mother was able to do her “student teaching and training” in San Francisco and later obtained a position as a school teacher in a neighboring country side near the Sutter Buttes in California. Within a few short months, she met my father, Joseph Schmidl, Jr. who also was a farmer and married him resulting in a large family with eight children.

As a young man, my father worked side by side with his father and brothers on their family farm which has been in continuous operation since 1914. The early farm included a raisin-grape operation and small dairy herd. These farming skills were those brought to California by both my paternal grandparents from the Bavarian region of Germany. This farm operation was later expanded to peach, prune and almond orchards. Being mechanically talented, my father was one of the first farmers in the tri-county (Yuba, Sutter, Butter counties of California) area to automate the harvesting of prunes in the early 1960s designing and assembling the machine himself. He truly never retired and continued his involvement in the family farming operation, teaching, advising and acting as a resource to not only his sons and grandchildren who are active in the farming operation but also helping neighbors and friends.
The children were always foremost in my parent's mind, nurturing them and providing for them opportunities to achieve their dreams. All of their children attended colleges and universities. Some went on to obtain advanced degrees (masters and doctorate degrees) while others became recognized within the community for their expertise in agricultural practices.

Today the farm is being managed by the fourth and fifth generations of McNaboes and Schmidls and in full operations with on-going changes to adjust to the challenges of the 21st century. These new introductions include sustainable farming practices, organic farming, water conservation methods and new breeding of plants to adapt to the predicted climate changes for the state of California.

Nicknamed “The Golden State”, California can trace its developments back to the “Gold Rush” days, the abundance of the golden poppy flowers and the sunshine which provides the wealth of agriculture and food for humanity. Mary enjoying the bright golden sun at an early age.

This year the International Union of Food Science and Technology (IUFoST) holiday card featured the California Sutter Buttes, the smallest mountain range in the world and birthplace of the IUFoST President (Dr. Mary K. Schmidl). The Sutter Buttes is also the setting for Mary’s multi generation family farm. Fruit trees are shown in the foreground. Family farms across the globe play a vital role in improving nutrition, ensuring global food security, enhance local economies and are at the center of a sustainable food supply.
About the author: Dr. Mary K. Schmidl received her undergraduate degree from the University of California – Davis and her Master and Doctorate degrees in Food Science from Cornell University – New York. She is a Lifetime Member and a past President of Phi Tau Sigma, a Past President of the Institute of Food Technologists (IFT) and the current President of the International Union of Food Science and Technology (IUFoST). Building on her heritage she is committed to global collaboration in food and agriculture to provide a safe, nutritious and sustainable food supply for every individual on our planet.

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: Memories

Do you find that certain objects or concepts remind you of certain people, time and time again? I have many of these instances. Every time I run across these items, I think of the person I associate with them.

Some of the objects or concepts that cause me to think of specific people, in these cases all Phi Tau Sigma members, include: pasta and noodles, purple ink, bold patterned jackets, oyster plates, blood transfusions, hummingbirds and hummingbird feeders, extraordinarily
innovative entrepreneurship, a monthly cheery response to the Newsletter, peace and
contentment, warm sunny days, chance meetings that turn into great friendships, prompt
replies to emails, quality workmanship,....

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/

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** ($5000)
- Company listing in the “Donors and Sponsors” section of the Phi Tau Sigma Newsletter.
- Recognition with company name on www.PhiTauSigma.org
- Prominent recognition at all major Phi Tau Sigma events

**Silver** ($10,000)
- Bronze benefits.
- Posting your company’s job openings and internships in the Phi Tau Sigma Newsletter.

**Gold** ($15,000)
- Silver benefits.
- Acknowledgement of sponsorship and placement of corporate logo on plaque or scholarship/award memorabilia.

**Platinum** ($20,000)
- Gold benefits.
- A press release associated with significant contributions, distributed to allied professional and trade associations for circulation to their membership via their publications, e-news and/or listservs.
- Complimentary access to student resume database.

**Diamond** ($25,000)
- Platinum benefits.
- Prominent multi-year listing on the Phi Tau Sigma website as a sponsor of an Endowed Program.

Some corporations will match individual contributions of their employees, so check with your company about matching funds.
For more information contact the Treasurer, Kantha Shelke, Ph.D. (kantha@corvusblue.net), or the Executive Director, Kathryn L. Kotula, Ph.D. (klkotula@msn.com). Please write “Donation” or “Sponsorship” in the subject line.

2018-2019 Donors and Sponsors:

**Dr. Mary K. Schmidl** is the President of the International Union of Food Science and Technology (IUFoST), a Lifetime Member and a past President of Phi Tau Sigma, a Past President of the Institute of Food Technologists (IFT) and Adjunct Professor, University of Minnesota.

**Dr. Theodore P. Labuza** is a Lifetime Member of Phi Tau Sigma, a Past President of the Institute of Food Technologists (IFT) and the Morse Alumni Distinguished Teaching Professor of Food Science and Engineering, University of Minnesota.

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

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

**David K. Park, M.S.**, Phi Tau Sigma Lifetime Member, is Principal, Food-Defense, LLC, providing expert food safety / food defense, USFDA and USDA-FSIS Process Authority consultation for thermal and non-thermally processed low acid canned foods (LACF), acidified foods (AF), and refrigerated extended shelf life foods (ESL) and their packaging systems. (Donation towards a Phi Tau Sigma Scholarship.)

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

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

**Elsevier Publishing Company.** Elsevier’s Food Science content covers aspects of food from chemical composition, to growth and production to distribution and consumption – from farm to fork. Our extensive collection includes eBooks, print books, series, handbooks, and major reference works, all complementing our expansive collection of food science journals and designed to help food science professionals continue to be innovative and make evidence-based contributions to the communities, translating knowledge into applications for the world. Elsevier books have an established reputation for providing ground-breaking and expansive content; written by world renowned, award-winning authors and reviewed by an expert team of editors. Our wide variety of books and eBooks has been empowering research development, initiating innovation, and encouraging confidence and career growth in the scientific field. (Donation towards a Phi Tau Sigma 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. (Contribution for the General Fund.)

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.