

ΦΤΣ

The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter September 2018

President's Message: Rakesh Singh, Ph.D.

I am honored and excited to begin my term as your President for the Year 2018-19. In the past few years, the Phi Tau Sigma leadership and the committees have worked diligently to update the by-laws, web site and communication with the membership. I am looking forward to expanding on our progress.

The leadership team talked about increasing visibility of Phi Tau Sigma and I believe that this year's committees are already taking steps to accomplish that goal. The website committee is looking into the social media in addition to enhancing the functionality of our newly developed website. Another committee that has made great progress and will continue making progress is the Chapter Affairs committee. Our goal is to have viable Phi Tau Sigma chapters affiliated with every food science program. The new committee on internship organization will provide a conduit for connecting students with corporate sponsors. These steps will not only create visibility but also expand the membership.



Being an honor society, Phi Tau Sigma thrives on recognizing excellence among students and professionals. We also communicate with the members on issues related to science via the monthly newsletter. We had explored the possibility of sponsoring special lectureship but we do not have sufficient funds to do so. We may be able to start special webinars on hot topics or issues if we could get a few volunteers. These webinars or scientific information via the newsletter could be archived and become a resource for future. I would like to get feedback from the membership on the ideas in this message or other issues, since it is your Society and we have to work together to make it the best it can be.

Finally, I want to acknowledge and thank my immediate predecessors, Bob Brackett and Russell Cross for their efforts to continue to enhance the stable footing of Phi Tau Sigma financially and intellectually. Their hard work and dedication has already brought much visibility to Phi Tau Sigma, which will make the work of future leaders much easier toward continuous progress.

About your Phi Tau Sigma President:

Dr. Rakesh K Singh has been Professor and Head in the Department of Food Science and Technology at The University of Georgia, Athens since July 2001. He started his faculty career in 1983 as an Assistant Professor at the Technical University of Nova Scotia (now Dalhousie University), Canada and in 1985 moved to Purdue University as an Assistant Professor of Food Science. He was tenured and promoted through the ranks of Associate and Full Professor at Purdue University where he spent 16 years. For the past 17 years, he has provided an outstanding leadership for instruction, research and extension programs in the department of food science and technology at The University of Georgia. He has been engaged in internationally prominent research and teaching programs that have addressed aseptic processing, food quality and food-safety engineering. He has published as author or co-author of 155 refereed journal articles, 3 edited books and 33 book chapters. He has been major professor for 17 Ph.D. and 20 M.S. students, and has supervised 12 postdoctoral researchers, and several Visiting Scholars. He is currently advising 4 Ph.D. students.



He is Editor-in-Chief of *LWT-Food Science & Technology*, and serves on the editorial board of *International Journal of Food Properties*, and is a past board member of *Journal of Food Engineering*. He is a Fellow of the Institute of Food Technologists (IFT) since 2008 and received the prestigious Elizabeth Fleming Stier award from IFT in 2009. Dr. Singh is Life Time Member of Phi Tau Sigma, and served as Chair of Awards Committee 2015-16, President-Elect 2017-18. He was Chair Designate/Chair/Past-Chair of the IFT's K-12 Career Guidance committee 2006-08, and Chair of Council of Food Science Administrators 2010-11.

New Treasurer:

After many years as our outstanding Treasurer, Dr. Daryl B. Lund has stepped to the position of Past Treasurer, and Dr. Kantha Shelke has moved to the position of Treasurer. Kantha has been serving as Assistant Treasurer for some months, learning the position. Daryl will continue as Past Treasurer for a time to ensure that this transition is seamless.

Many thanks to Daryl for his fantastic job as Treasurer, and we look forward to working with Kantha in her role as Treasurer.

Know your Leadership:

Phi Tau Sigma Executive Committee:

Rakesh Singh, Ph.D., President
Liz Boyle, Ph.D., President Elect
Robert Brackett, Ph.D., Past President
Kantha Shelke, Ph.D., Treasurer
Daryl Lund, Ph.D., Past Treasurer
Kathryn L. Kotula, Ph.D., Executive Director

rsingh@uga.edu
lboyle@ksu.edu
rbrackett@iit.edu
kantha@corvusblue.net
dblund@wisc.edu
klkotula@msn.com

Phi Tau Sigma Directors:

2018-19: Until August 31, 2019

Kantha Shelke, Ph.D.
T. Matt Taylor, Ph.D.
David Park, M.S.
Dongjun Zhao, Ph.D.

kantha@corvusblue.net
matt_taylor@tamu.edu
dkpark72@aol.com
dz47@cornell.edu

2018-19 to 2019-20: Until August 31, 2020

Ruth MacDonald, Ph.D.
Wesley N. Osburn, Ph.D.
Elizabeth M. Grasso-Kelley, Ph.D.
Tom Aurand, Ph.D.

ruthmacd@iastate.edu
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egrasso@iit.edu
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2018-19 to 2020-21: Until August 31, 2021

Stephen Campano, M.S.
Lili He, Ph.D.
Rodrigo Tarté, Ph.D.
Claire Zoellner, Ph.D.

steve.campano@hawkinsinc.com
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rtarte@iastate.edu
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2018 – 2019 Phi Tau Sigma Committees

Awards

"The Awards Committee shall develop appropriate awards programs to recognize distinguished scientists who have made substantial contributions to Food Science and Technology and its related disciplines. Awards programs shall also be developed to recognize promising younger scientists and students." [Phi Tau Sigma ByLaws, Article XI, Section 1]

John Luchansky, Ph.D., Chair (john.luchansky@ars.usda.gov), Artemio Tulio, Jr. Ph.D., Incoming Chair, Poulson Joseph, Ph.D., Past Chair, Mary Schmidl, Ph.D., Rick Falkenberg, Ph.D., Ravi Chermala, M.S., Charlwit Kulchaiyawat, Ph.D., Kasiviswanathan (Muthu) Muthukumarappan, Ph.D., Lili He, Ph.D.

Chapter Affairs

"The Chapters Affairs Committee shall be responsible for the relationships between the SOCIETY and the Chapters" [Phi Tau Sigma Bylaws, Article XI, Section 2]

Amy Simonne, Ph.D., Chair (asim@ufl.edu), Claire Koelsch Sand, Ph.D., Incoming Chair, Mary Schmidl, Ph.D., Past Chair, Terri Boylston, Ph.D., Lily Yang, M.S., Charlwit Kulchaiyawat, Ph.D., Evelyn Watts, Ph.D., Naim Montazeri, Ph.D., Gayathri Gunathilaka, M.S. (Student Rep), Reza Tahergorabi, Ph.D.

Constitution & Bylaws

"The Committee shall maintain continuing surveillance over the developments of any conflicts between the Constitution and the Bylaws. It shall review and make recommendations to the Executive Committee on all proposed amendments to the Constitution or Bylaws." [Phi Tau Sigma Bylaws, Article XI, Section 3]

T. Matt Taylor, Ph.D., Chair (matt_taylor@tamu.edu), Christina Dewitt, Ph.D., Past Chair, Rick Falkenberg, Ph.D., Kenneth McMillin, Ph.D., Hossein Daryaei, Ph.D.

Finance

"The Finance Committee shall be responsible for managing the SOCIETY'S finances including preparing and submitting the budget." [Phi Tau Sigma Bylaws, Article XI, Section 4]
Kantha Shelke, Ph.D., Chair (kantha@corvusblue.net), Daryl Lund, Ph.D., Past Chair, Ken Lee, Ph.D., Mary Schmid, Ph.D., Kathryn L. Kotula, Ph.D., Robert Brackett, Ph.D., Rakesh Singh, Ph.D., Liz Boyle, Ph.D.

Membership & Qualifications

"The Membership and Qualifications Committee shall review all membership nominations for compliance with the SOCIETY'S requirements and shall recommend qualified candidates to the Executive Committee for induction into Phi Tau Sigma." [Phi Tau Sigma Bylaws, Article XI, Section 5]

Rebecca Creasy, Ph.D., Chair (rebecca.creasy@tamu.edu), Lauren Jackson, Ph.D., Incoming Chair, Jamie Valenti-Jordan, M.S., Past Chair, Rodrigo Tarté, Ph.D., Martha Cassens, Ph.D., Jimmy Keeton, Ph.D., Poonam Singha, Ph.D., Elizabeth M. Grasso-Kelley, Ph.D.

Newsletter and Communications

"The Newsletter shall serve as a source of information about the SOCIETY, its Members, and other news and information related to Food Science and Technology." [Phi Tau Sigma Bylaws, Article XI, Section 7]

Kathryn Kotula, Ph.D., Editor-in-Chief, Chair (klkotula@msn.com), Claire Zoellner, Ph.D., Associate Editor (cez23@cornell.edu), Anthony W. Kotula, Ph.D., Afef Janen, Ph.D., Hossein Daryaei, Ph.D., Tianxi Yang, Ph.D., Yiren Yue, B.S. (Ph.D. Candidate)

Nominations & Elections

"The Nominations and Elections Committee shall solicit nominations for officers and At-Large Councilors, screen candidates and obtain written agreements from them to serve if elected, in time to meet the balloting deadlines." [Phi Tau Sigma Bylaws, Article XI, Section 6]
James Valenti-Jordan, M.S., Chair (jamie@catapultserv.com), Tom Aurand, Ph.D., Past & Incoming Chair, Cameron Parsons, Ph.D., Charles Onwulata, Ph.D., Roger Clemens, DrPH, Jozef Kokini, Ph.D., Ravi Chermala, M.S., M.B.A.

Program

"The Program Committee shall be responsible for identifying and presenting appropriate programs to encourage the long-range professional growth of the SOCIETY. It shall be responsible for all activities at the Annual Meeting of both the SOCIETY and of the Institute of Food Technologists, other than the meeting of the Executive Committee. The committee may develop or assist in developing programs for smaller groups or members, such as: Chapters, regional meetings, symposia or scientific lectureships." [Phi Tau Sigma Bylaws, Article XI, Section 8]

Liz Boyle, Ph.D., Chair (lboyle@ksu.edu), Rakesh Singh, Ph.D., Past Chair, Ruojie (Vanessa) Zhang, Ph.D. candidate, Ashwini Wagh, Ph.D., Yaguang (Sunny) Luo, Ph.D., Kathiravan Krishnamurthy, Ph.D., Akhila Vasan, Ph.D.

Development

Develop and implement strategies and mechanisms to raise long range funding to allow Phi Tau Sigma to be funded in perpetuity.

Wes Osburn, Ph.D., Chair (osburnw@tamu.edu), Matt Taylor, Ph.D., Past Chair, Steve Campano, M.S., Daryl Lund, Ph.D., W. Benjy Mikel, Ph.D., Afef Janen, Ph.D., Josh Herring, Ph.D.

Ad Hoc Audit

Audits, reviews, and reports on the Treasurer's records.

Luis Pena, M.S., Chair (lepena@ncsu.edu), Denny Heldman, Ph.D., Past Chair, H. Kenneth Johnson, M.S., Keith Belk, Ph.D.

Ad Hoc Strategic Relations

Develop and recommend to the Executive Committee a prioritized strategic plan for long term financial stability and relationship building of Phi Tau Sigma.

Taylor Wallace, Ph.D., Chair (taylor.wallace@me.com), Kantha Shelke, Ph.D., Past Chair, Ted Labuza, Ph.D., Roger Clemens, DrPH, Amy Simonne, Ph.D., Larry Keener, B.S., Dongjun Zhao, Ph.D.

Ad Hoc Student Relations

Develop and recommend to the Executive Committee a prioritized strategic plan for a long term relationship with IFTSA and Phi Tau Sigma and improve student relations/interactions with student members of Phi Tau Sigma. The recommended strategies may be implemented with Executive Committee approval.

Rebecca Creasy, Ph.D., Chair (rebecca.creasy@tamu.edu), Claire Zoellner, Ph.D., Incoming Chair, Joe Regenstein, Ph.D., Past Chair, Janet Collins, Ph.D., Hannah Laird, M.S., Anand Mohan, Ph.D.

Ad hoc Website/Wikipedia Committee

Provides leadership, creativity and timely information for the Phi Tau Sigma website and the webpage on Wikipedia.

Kathiravan Krishnamurthy, Ph.D., Chair (kathiravan.rps@gmail.com), Ken Lee, Ph.D., Past Chair, Pablo Coronel, Ph.D., Sofia Feng, Ph.D., Jenny Hayek, B.S., Ashwini Wagh, Ph.D.

Ad hoc Recruitment Campaign Committee

To identify and encourage Phi Tau Sigma membership nominations of professionals.

Daryl Lund, Ph.D., Chair (dblund@wisc.edu), Steve Campano, M.S., Past Chair, Liz Boyle, Ph.D., Claire Zoellner, Ph.D., Ruth MacDonald, Ph.D., Rodrigo Tarté, Ph.D.

Ad hoc "Building a Science Bridge" Committee

To explore if the "National" Headquarters of Phi Tau Sigma should support and adopt into a global program "Building a Science Bridge to Africa and Beyond" beyond the local Chapter at the University of Minnesota.

Mary Schmidl, Ph.D., Chair (mschmidl@umn.edu), Robert Brackett, Ph.D., Daryl Lund, Ph.D., Jenny Hayek, B.S., Kathryn L. Kotula, Ph.D., Vaidhyanathan Anantharamkrishnan, B.S., Sofia Feng, Ph.D.

Ad hoc Internship Organization Committee

To organize and administer a program to advertise and link companies seeking interns with Phi Tau Sigma students seeking internships.

David Park, M.S., Chair (dkpark72@aol.com), Ellen Bradley, B.S., Rebecca Creasy, Ph.D., Gayathri Balakrishnan, Ph.D., Kantha Shelke, Ph.D., Christina Dewitt, Ph.D., Purnendu C. Vasavada, Ph.D.

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 John Luchansky, Ph.D., (john.luchansky@ars.usda.gov) and Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com). (More information: <http://www.phitausigma.org/awards/>)

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

->Phi Tau Sigma Chapter Schedule:

- November 1:** Deadline to order Honor Cords and lapel pins to ensure delivery before Fall graduation dates
- March 15: Deadline for membership nominations to ensure decisions from the Membership and Qualifications Committee before the Annual Meeting
- April 1: Deadline to order Honor Cords and lapel pins to ensure delivery before Spring graduation dates
- May 1: First call for Chapter annual reports
- June 1: Second call for Chapter annual reports
- July 1: Final call for Chapter annual reports
- August 1: Deadline for Chapter annual reports

Reminder to all Chapters: In order to receive the *Certificate of Merit* or *Certificate of Excellence*, Chapters must submit their annual reports for evaluation by August 1. Please send your annual report to the current Chair of the Chapter Affairs Committee, Amy Simonne, Ph.D. (asim@ufl.edu) with a copy to Dr. Kathryn L. Kotula (klkotula@msn.com).

->Election schedule:

- December 15: Nominations due to Nomination and Election Committee
(Jamie Valenti-Jordan, M.S., Chair (jamie@catapultserv.com))
- January 2: Nominations and Elections Committee convenes
- January 21: Deadline for Nomination and Elections Committee to submit slate of candidates to President
- February 5: Last date on which nominations by petition may be submitted
- March 1: List of candidates will be emailed to the Members for balloting
- March 31: Deadline for casting ballots
- April 8: Deadline for tabulation of ballots
- July 15: Phi Tau Sigma President will present the newly elected individuals to the Membership at the Annual Business Meeting of Phi Tau Sigma

Student Research Synopsis: Lipidomic profiling reveals soluble epoxide hydrolase as a therapeutic target of obesity-induced colonic inflammation

(Contributed by: Weicang Wang, Ph.D. student under the direction of Prof. Guodong Zhang, Department of Food Science, University of Massachusetts-Amherst; Research Group website: <http://blogs.umass.edu/guodongzhang>)

Recently published work featured here:

Wang, W. et al. 2018. *Proceedings of the National Academy of Sciences*, 115(20) 5283-5288. <https://doi.org/10.1073/pnas.1721711115>.

Introduction: Obesity is growing at an alarming rate in the United States: currently, more than 35% of adults and nearly 17% of children are obese¹. Obesity is associated with enhanced colonic inflammation^{2,3}, which is a major risk factor for developing colorectal cancer⁴. Considering the obesity epidemic and the potential lethal consequence of obesity-enhanced colorectal cancer, it is important to identify novel therapeutic targets for obesity-induced colonic inflammation. Eicosanoids, which are metabolites of arachidonic acid (ARA), are autocrine and/or paracrine mediators regulating inflammation and hemostasis. Emerging research supports the notion that the eicosanoid signaling is deregulated in obesity and plays critical roles in the pathogenesis of obesity^{5,6}, although the action of eicosanoid signaling in obesity-induced colonic inflammation is still largely unknown.

Purpose: The objective of this research was to explore the potential actions of eicosanoids in obesity-induced colonic inflammation in mice and to discover novel therapeutic targets for treating this disease.

Methods: We used a liquid chromatography-tandem mass spectrometry (LC-MS/MS)-based lipidomics approach, which can analyze >100 eicosanoids produced by cyclooxygenase (COX), lipoxygenase (LOX), and cytochrome P450 (CYP) enzymes from multiple polyunsaturated fatty acid substrates, to explore the roles of eicosanoids in obesity-induced colonic inflammation in mice. To further validate the roles of soluble epoxide hydrolase (sEH) in obesity-induced colonic inflammation, we studied the effects of either pharmacological inhibition or genetic ablation of sEH on obesity-induced colonic inflammation.

Results: The central finding of our research is that sEH could be a promising target for obesity-induced colonic inflammation. We find that obesity-induced colonic inflammation is associated with increased expression of sEH and its eicosanoid metabolites, termed fatty acid diols, in colon tissues. Furthermore, we find that pharmacological inhibition (by using selective sEH inhibitors) or genetic ablation of sEH (by using sEH knockout mice) inhibits the production of fatty acid diols and thus abolishes obesity-induced colonic inflammation and

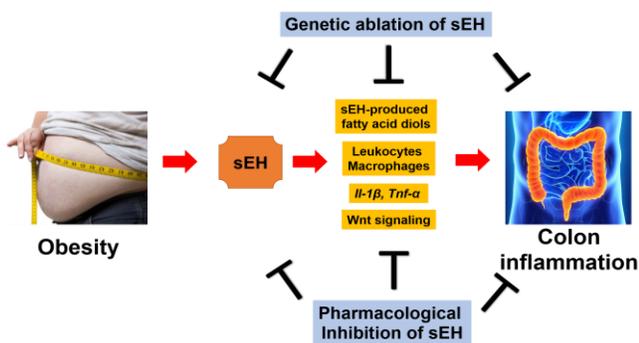


Figure 1. Soluble epoxide hydrolase (sEH) is a promising therapeutic target for obesity-induced colonic inflammation

activation of Wnt signaling in mice (**Figure 1**). These results support that obesity increases colonic inflammation in part through up-regulating sEH in colon tissues, and inhibition of sEH could be a novel strategy to attenuate obesity-induced colonic inflammation and associated diseases.

Significance: Obesity is associated with enhanced colonic inflammation, which is a major risk factor of colorectal cancer. To date, the mechanisms by which obesity increases colonic inflammation are not well understood, and there are few effective strategies to control obesity-induced colonic inflammation and associated diseases. Here using a LC-MS/MS-based lipidomics, we report that sEH could be a novel therapeutic target for obesity-induced colonic inflammation. This could lead to rapid human translations, because the pharmacological inhibitors of sEH are being evaluated in human clinical trials targeting multiple disorders.

References:

1. Ogden, C. L., Carroll, M. D., Kit, B. K. & Flegal, K. M. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010. *JAMA* **307**, 483-490, doi:10.1001/jama.2012.40 (2012).
2. Gulhane, M. *et al.* High Fat Diets Induce Colonic Epithelial Cell Stress and Inflammation that is Reversed by IL-22. *Sci Rep* **6**, 28990, doi:10.1038/srep28990 (2016).
3. Liu, Z. *et al.* Diet-induced obesity elevates colonic TNF-alpha in mice and is accompanied by an activation of Wnt signaling: a mechanism for obesity-associated colorectal cancer. *J Nutr Biochem* **23**, 1207-1213, doi:10.1016/j.jnutbio.2011.07.002 (2012).
4. Terzic, J., Grivennikov, S., Karin, E. & Karin, M. Inflammation and colon cancer. *Gastroenterology* **138**, 2101-2114 e2105, doi:10.1053/j.gastro.2010.01.058 (2010).
5. Iyer, A., Fairlie, D. P., Prins, J. B., Hammock, B. D. & Brown, L. Inflammatory lipid mediators in adipocyte function and obesity. *Nat Rev Endocrinol* **6**, 71-82, doi:10.1038/nrendo.2009.264 (2010).
6. Zha, W. *et al.* Functional characterization of cytochrome P450-derived epoxyeicosatrienoic acids in adipogenesis and obesity. *J Lipid Res* **55**, 2124-2136, doi:10.1194/jlr.M053199 (2014).

Lifetime Member Tribute: Abhinav Mishra, Ph.D.

Assistant Professor, Department of Food Science and Technology, University of Georgia

Why did you become a Lifetime Member? In every professional field, we need a society that can provide students and professionals the needed guidance, network, and opportunities to grow. Phi Tau Sigma provides all these values to every Food Scientist. I wanted to show my commitment to the philosophy of Phi Tau Sigma, and becoming a Lifetime Member was the most obvious first step. In the future, I look forward to giving back in my capacity and serve this Society in whatever way I can.

Education: B.Tech. Agricultural Engineering, G.B. Pant University, Pantnagar, India; M.S., Food Science, Indian Institute of Technology Kharagpur, India; Ph.D., Food Safety, University of Maryland, College Park, MD



Experience/Accomplishments: I have developed risk assessment models related to major foodborne pathogens (bacteria and parasites) in foods. My interest is in mathematical modeling in food safety, and I have developed tools to optimize the food temperature during the supply chain considering the storage cost, sensory quality and microbial safety. I also developed a novel mathematical “system mode” that could simulate the pathogen pathway of pathogens in a leafy greens growing farm. I have also developed and validated models related to growth of pathogens during cooling of meat, beans, rice, pasta, and vegetable products. *Salmonella* is a pathogen that has potential to survive in low-moisture foods for a very long period of time. I have investigated the survival of this pathogen in animal and human low-moisture foods.

Areas of Expertise: My expertise is in food microbiology, particularly quantitative microbial risk assessments, mathematical modeling, and validation of thermal processes in inactivating pathogens. I have worked on various projects related to fresh produce, meats and poultry, cereals, dairy products, and pet foods.

I am a Preventive Controls Qualified Individual (PCQI) – FSPCA Preventive Controls for Human Food, Preventive Controls Qualified Individual. I have completed the training for Food Safety Preventive Controls Alliance FSPCA and FDA; HACCP – University of Maryland; and Better Process Control School- Rutgers University.

Awards and Honors (selected list): ΦΤΣ – Phi Tau Sigma – January 2018, The Honor Society of Food Science and Technology.

Personal: Family, Interests, Hobbies: Like listening to classical Indian music and watching movies, traveling, reading religious books and spending time with family.

Advice to university students and career food scientists and technologists: I advise the students, and food scientists and technologists to participate in the Phi Tau Sigma’s activities and to suggest people in their network to become members of this Society. I also recommend they find a mentor in their area of choice (industry, government agencies, or academia) and learn new things from their mentor. It may work even better if they can meet at least once a semester in person or online.

Careers: Product Development Scientist

(Contributed by: Gayathri Balakrishnan, Ph.D., Ocean Spray Cranberries Inc.)

Introduction/Background:

I am originally from Chennai, India. After graduating with a B.S. degree in Food Technology, I moved to the U.S. in 2010 to pursue my Master’s degree in Food Science and Human Nutrition. My thesis involved understanding the satiety effects of Chia seeds using Labeled Magnitude Scale. My passion for research steered me to do a Ph.D. in Food Science with a research emphasis on antioxidants present in ancient grains such as quinoa and amaranth. My areas of specialization include: Product Development, Food Chemistry, and Cereal Science.



Qualifications:

This position requires a M.S. or Ph.D., with a solid foundation in Food Science/Food Chemistry.

Positions:

Sensory and Consumer Sights Intern, Nestle Gerber, Fremont, MI
Product Development Scientist, Ocean Spray Cranberries Inc., Lakeville, MA

Duties:

Ocean Spray Cranberries is an agricultural cooperative owned by cranberry growers and is the world's leading producer of cranberry beverages and dried cranberries (Craisins®). As a Product Development Scientist, I am responsible for the formulation of new food products and reformulation of existing products. My primary responsibilities include understanding ingredient functionality and creating formulas that meet consumer expectations, collaborating cross-functionally with other teams such as sensory, marketing, and production plants to successfully launch these products. Since product development plays a central role in any food industry, starting your career in this field is an excellent opportunity to gain a complete understanding of all the processes involved from concept phase to launch phase of a new food product.

Salaries:

\$65k-\$75k/annum

Benefits:

401k, health, vision, and dental insurance, paid vacation (up to 15 days), flexible work schedule, half-day Fridays during summer months.

Conclusion:

In addition to academic and research skills, it is important to demonstrate strong communication and leadership skills when applying for a job in the food industry. Hence it is advisable for students to take part in conferences and build professional relationships with peers and experts in this field. Organizations like IFT also offer volunteering opportunities, which is a great way to get involved with the food science community and expand your professional and personal network.

Chapter News:

Hoosier Chapter at Purdue University – 2017-2018 Activities

The Phi Tau Sigma Hoosier Chapter at Purdue University has continued to expand its activities and commitment to excellence. We welcomed 9 new members at our annual luncheon in March. Additionally, we recognized our Outstanding Senior, Elena Bailoni, for her scholarship, service, and food science activities. Our invited speaker, Carrie Burbrink (B.S. & M.S. in Food Science from Purdue University), Associate R&D Manager, General Mills, provided an excellent motivational talk on forging one's own path in the field of Food Science.



Hoosier Chapter members with guest speaker Carrie Burbrink at the annual luncheon

Other activities the Chapter organized this year included two mentoring events for undergraduate students to give them insights to graduate school; a fall seminar on managing leadership roles in the food industry by Katie Rippel (B.S. & M.S. in Food Science from Purdue University), Global Director, Supply VPO for AB-InBev; and a spring seminar on careers in industry vs. academia with guest speakers Dr. Rebecca Jutkus (Ph.D. in Food Science from Purdue University), Manager in Chocolate Product Development, Hershey's, and Dr. Andrew Neilson (Ph.D. in Food Science from Purdue University), Associate Professor, Virginia Tech.



Students with guest speakers Dr. Rebecca Jutkus and Dr. Andrew Neilson at the spring seminar

Several of our members also participated in campus service activities including volunteering at Purdue's Spring Fest and serving as judges at the regional youth science fair. In the future, the Hoosier Chapter aims to continue organizing and improving upon these events, with special focus on encouraging increased membership in Phi Tau Sigma and implementing more service-related events. We look forward to another successful year!

Member News:

Poulson Joseph, Ph.D. received the **Distinguished Achievement Award** of the American Meat Science Association at a special awards banquet at the AMSA 71st Reciprocal Meat Conference (RMC) on Tuesday, June 26, 2018 in Kansas City, MO.

The Achievement Award was established in 1992 and is designed to recognize and foster the development of young AMSA members who have demonstrated significant scientific skills in muscle foods research and technology that contribute to the animal products industry and the AMSA. The award is sponsored by Burke Corporation.



Dr. Poulson Joseph was born in India, where he received his B.S. in 2004 and M.S. in 2006 from Kerala Agricultural University and completed his Ph.D. at University of Kentucky in 2011. Following graduation, Poulson was hired as a Post-Doctoral Research Associate at Mississippi State University. He began his professional career as Lead Scientist at Kalsec and is currently the Principal Scientist and leader of the Center of Excellence in Meat and Poultry. Dr. Joseph has authored and co-authored more than 80 publications including 35 peer-reviewed journal articles and 3 book chapters. Additionally, he has delivered invited presentations at conferences and institutions across the globe.

Dr. Joseph's research utilizes proteomic tools to interpret biomolecular interactions in post-mortem skeletal muscles to solve protein-based concerns in meats. In industry, he has been instrumental in supporting clients to improve their meat product quality. Under his leadership, the launches of new ingredient solutions have resulted in significant commercial success to Kalsec, especially for clean label and shelf-life extension in meat and poultry.

Dr. Joseph is a professional member of AMSA, ASAS, IFT, and Phi Tau Sigma. He has served on the AMSA Color Guidelines Revision Committee and RMC Planning Committee; he has also acted as an RMC Session Organizer and an RMC Graduate Research Poster Competition Judge. Currently, Dr. Joseph serves as the Chair of the IFT Muscle Foods Division as well as past Chair of the Phi Tau Sigma Awards Committee. Dr. Joseph has been a recipient of the IFT Muscle Foods Division's Member-of-the Year Award and Outstanding Volunteer Award. Recently, he was awarded the 2018 IFT Emerging Leader Network Award. Dr. Joseph is a strong advocate for student internships at Kalsec, and a reviewer for several international journals in meat, animal, and food sciences.

[Modified from: <http://meatscience.org/awards-scholarships/professional-awards-program/achievement-award/award-winner/poulson-joseph>]



Jamie Valenti-Jordan, M.S., founded Catapult Commercialization Services in March 2018 to help food/bev startup companies with Engineering and Operations Services. In practice, this mission typically manifests as scale up and plant trial work, but it frequently also requires contract manufacturer sourcing/negotiations, capital acquisition and installation, and packaging systems. Interestingly, it has also included technology licensing, business plan development, and marketing. Basically, Catapult helps clients leverage Food Engineering and the installed infrastructure in the Food Industry to bring new products to life, without having to reinvent the wheel.

Jamie has worked with companies, large and small, throughout his career to discover his passion to launch new products. Thanks to a recent relocation, the time was right, personally and professionally, to attempt starting something new...to help those trying to develop something new. This move was really a manifestation of all his interests: food science, engineering, business, entrepreneurship, building systems, dynamic environments, leadership, teaching, and mentoring. There is no greater execution of "do what you are good at" and "do what you love".

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:

We would like to thank **Dr. Sheryl Barringer, Dr. Ken Lee, and Kelly Elisar** of the Ohio State University for providing space at their booth on the IFT Expo floor for Phi Tau Sigma materials and members.



Daryl Lund, Ph.D., and Ken Lee, Ph.D. on the ends, and Sarah Steinbrunner, Megan Hoehn, and Amy Andres - potential future Phi Tau Sigma members from the Ohio State University - in the middle. (Photo by Corrie Lee.)

Thanks also to **Dr. Kantha Shelke** for the great t-shirts for Phi Tau Sigma members who were speaking with interested individuals (note the one being worn by Daryl in the photo), and for placing Phi Tau Sigma pamphlets at the booth of Johns Hopkins University.

Additionally, we express our thanks to **Steve Campano, M.S.** for printing the pamphlets, and having them available during the Annual Meeting and Events, and at the Hawkins, Inc. booth.

We encourage Phi Tau Sigma members and Chapters to help distribute Phi Tau Sigma information. Please let anyone on the Executive Committee or our Chapter Affairs Committee know of such interest.



Photo courtesy of Fritz Wagner

About Phi Tau Sigma Communications:

The Phi Tau Sigma Newsletter Committee includes: Kathryn Kotula, Ph.D., Editor-in-Chief, Chair (klkotula@msn.com), Claire Zoellner, Ph.D., Associate Editor (cez23@cornell.edu), Anthony W. Kotula, Ph.D., Afef Janen, Ph.D., Hossein Daryaei, Ph.D., Tianxi Yang, Ph.D., and Yiren Yue, B.S. (Ph.D. Candidate). Please be responsive to their inquiries for information for the Newsletter.

The Newsletter Committee particularly wishes to share news from Phi Tau Sigma Members and Chapters. Any items for the monthly Phi Tau Sigma Newsletter should be emailed in Word (97-2003 compatibility mode) to Editor Kathryn L. Kotula, Ph.D. at klkotula@msn.com or Associate Newsletter Editor Claire Zoellner at cez23@cornell.edu. Write "Phi Tau Sigma Newsletter" in the subject line. Please provide the information by the 1st of the month. Thanks.

Documents:

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

Phi Tau Sigma Membership Nominations

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

Phi Tau Sigma Scholarships and Awards Forms

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

Phi Tau Sigma Constitution and By-Laws

<http://www.phitausigma.org/constitution/>
<http://www.phitausigma.org/bylaws/>

Phi Tau Sigma Mentorship Program

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

Donors, Sponsors, and Contributing Partners:

Phi Tau Sigma accepts donations and has a variety of available sponsorship opportunities.

Phi Tau Sigma is a non-profit 501(c)(3) charitable organization, so your contributions are tax deductible to the extent provided by U.S. law.

Donations and sponsorships may come from, but are not limited to, Corporations, Companies, Universities, Government agencies, Associations, Consultants, and individuals.

Contributions are appreciated in any amount, and can be made by way of the Phi Tau Sigma website (<http://www.phitausigma.org/sponsor/>). Donations by check can be made by contacting: Treasurer Kantha Shelke, Ph.D. (kantha@corvusblue.net), 33 West Ontario, Suite 57F, Chicago, IL 60654. Please write "Donation" or "Sponsorship" in the subject line.

Contributions of \$500 or more will be recognized publicly by the Society at the annual meeting, on the Phi Tau Sigma website, in printed material associated with relevant programs and events, and in the Phi Tau Sigma monthly Newsletter. Sponsorships of awards and scholarships are also available at levels of contribution sufficient to cover the associated cost of the award or scholarship. Endowments are also accepted.

Sponsorship opportunities are available for the Phi Tau Sigma Annual Recognition Event, Phi Tau Sigma Special Recognition Award, Phi Tau Sigma Student Achievement Award (up to 3 will be awarded), the Dr. Gideon "Guy" Livingston Scholarship Fund, the Phi Tau Sigma Founders' Scholarship, the Dr. Daryl B. Lund International Scholarship Fund, and the Phi Tau Sigma Outstanding Chapter of the Year Award. Donations can be made towards the awards and scholarships listed above, as well as the Program fund and the General fund. There are also endowment opportunities for student scholarships named for the sponsoring company.

Phi Tau Sigma has a **Contributing Partners Program** with five levels of sponsorships as described below. The Contributing Partner receives all of the benefits in the previous levels, plus the addition of the benefit listed for that level.

Bronze (\$5000)

- Company listing in the "Donors and Sponsors" section of the Phi Tau Sigma Newsletter.
- Recognition with company name on www.PhiTauSigma.org
- Prominent recognition at all major Phi Tau Sigma events

Silver (\$10,000)

- Bronze benefits.
- Posting your company's job openings and internships in the Phi Tau Sigma Newsletter.

Gold (\$15,000)

- Silver benefits.
- Acknowledgement of sponsorship and placement of corporate logo on plaque or scholarship/award memorabilia.

Platinum (\$20,000)

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

Diamond (\$25,000)

- Platinum benefits.
- Prominent multi-year listing on the Phi Tau Sigma website as a sponsor of an Endowed Program.

Some corporations will match individual contributions of their employees, so check with your company about matching funds.

For more information contact the Treasurer, Kantha Shelke, Ph.D.

(kantha@corvusblue.net), or the Executive Director, Kathryn L. Kotula, Ph.D.

(klkotula@msn.com). Please write "Donation" or "Sponsorship" in the subject line.

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 Products 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.

2018-2019 Donors and Sponsors:

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.

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