News:

Giving Tuesday

Giving Tuesday is the world’s biggest day of generosity and will take place on November 30 this year. Join in on the movement to give, collaborate, and celebrate generosity! Support Phi Tau Sigma in efforts to give students a supportive community, to collaborate on raising awareness about the scientific foundations of our profession, and to celebrate all of your great achievements in food science and technology! No amount of money or service is too little. Share your generous actions on social media with #GivingTuesday and inspire others to give with you.

Link to PayPal: https://www.paypal.com/donate?hosted_button_id=QTA7NUHUEEPP2

Awards Committee - Upcoming Deadline:
(Contributed by Lili He, Ph.D., Chair of the Phi Tau Sigma Awards Committee)

Dr. Daryl B. and Mrs. Dawn L. Lund Student International Travel Scholarship - Deadline November 30

The Dr. Daryl B. and Mrs. Dawn L. Lund Student International Travel Scholarship is presented annually to a student Member of Phi Tau Sigma - The Honor Society of Food Science and Technology, to supplement international travel for educational purposes. The scholarship, in the amount of $2,000, is presented to honor the commitment of Dr. Lund, whose international reputation for outstanding scholarly contributions and inspired leadership has fostered and facilitated the global advancement of food science and technology.

Nominees shall be students who are members in good standing during the administrative year of the nomination, although they may have graduated by the presentation of the award.

Nomination materials must be submitted to the Chair of the Awards Committee by email by November 30th (lilihe@foodsci.umass.edu), with a copy to the Executive Director (klkotula@msn.com). For more information on the nomination process please visit the Awards section of the Phi Tau Sigma website (http://www.phitausigma.org/awards/).
Fantastic Opportunity at The Ohio State University
(Contributed by Dennis R. Heldman, Ph.D., Lifetime Member)

Summer Scholars Program
Department of Food Science & Technology

The Department of Food Science and Technology at The Ohio State University is now accepting undergraduate applications for our 2022 OSU FST Summer Scholars Program. The deadline is January 21, 2022. The program will begin on May 15th and conclude on July 23rd, 2022.

Professionals: We are asking your assistance in circulating the attached flyer, which includes a QR code, to undergraduate rising Juniors and Seniors who might be interested in this opportunity.

Students, rising Juniors and Seniors: Open the attached flyer, and apply for this important opportunity.

The Summer Scholars Program aims to recruit top undergraduate students to engage in Food Science research under the direction of a faculty mentor. Selected students will engage in innovation and discovery, participate in critical thinking and problem solving, develop scientific communication skills, and gain a better understanding of the expectations associated with research. Additionally, the Summer Scholars Program includes Research Engagement, Research Logistics, Food Industry Awareness/Career Development, Scientific Communication, Collaboration Network.

Thank you, let us know if you have any questions. https://u.osu.edu/fssummerscholarsprogram

[Please send similar opportunities for publication in this Newsletter]

Dr. and Mrs. Daryl Lund – Platinum Contributing Partner to Phi Tau Sigma (Contributed by Dr. Daryl B. Lund, Lifetime Member)

Dawn and I have enjoyed the opportunity to travel abroad extensively during my professional career. We have appreciated the insights we have gained in visiting and living in different cultures. We realize that not everyone has these opportunities, especially if the person is in his or her academic studies. As result, we have established the endowment for the Dr. Daryl B. and Mrs. Dawn L. Lund Student International Travel Scholarship which encourages international travel in support of food science and technology research.

Interested in becoming a Contributing Partner or other significant donor to Phi Tau Sigma? Read the “Contributing Partners” article below or the “Sponsors and Donors” section.
Step-by-step Instructions to make Phi Tau Sigma your AmazonSmile Charity

(Contributed by Lily Yang, Ph.D. and Adam Baker, Ph.D.)

Let’s be honest, for the most part, we all have shopped on Amazon. Why not make a donation and make a difference to Phi Tau Sigma through AmazonSmile?

AmazonSmile is a program through Amazon in which Amazon donates 0.5% of eligible purchase to your favorite charitable organization – with no fees and no extra costs! And of course, we know your favorite organization is Phi Tau Sigma.

But how can you make this happen? Follow these simple easy steps below!

1. Instead of going to amazon.com directly, instead, go to smile.amazon.com

2. Sign into your account!
3. On the top right, click on where it says “Hello, [your name] Account & Lists”
4. In the drop-down menu, select “Account”

5. In Account, scroll down to the section that says OTHER PROGRAMS (bottom right section), and select CHANGE YOUR AMAZONSMILE CHARITY --->
6. You will see a similar page to the picture below (in which Amazon will spotlight a few charities for you). You will be allowed to Pick Your Own Charitable Organization.

7. In the “Or pick your own charitable organization” type in “Phi Tau Sigma” and click SEARCH

8. Click on SELECT for Phi Tau Sigma

9. Then voila, the next page will show this:

But the only way to get Amazon Smile credit towards your charity is to use Amazon Smile (smile.amazon.com) as opposed to Amazon’s main site (amazon.com). To do this, you can add a simple and easy bookmark to your bookmarks bar!
10. At the bottom of the page that tells you YOUR CURRENT CHARITY, there is a button that you can add to your bookmarks bar that looks like this!

To support charity, always shop at smile.amazon.com
Try this easy way to start with a smile. Learn about AmazonSmile

Create a bookmark
Drag this box to your bookmarks or favorites bar to create a shortcut to smile.amazon.com on your desktop computer or mobile web browser.

11. Drag and drop the AmazonSmile button to your bookmarks bar and **click on it every time you are going to shop on Amazon!** THANK YOU!

**Graduating or Moving?**

Be sure to send your new contact information, particularly your new email address, to Executive Director, Kathryn L. Kotula, Ph.D. at klkotula@msn.com.

We don’t want to lose you when/if your current email address becomes inactive.

**What to do with your Required Minimum Distribution?**

Many of us are putting pretax money into an **Individual Retirement Account** (IRA) so that when it is withdrawn, the tax rate will be less than it is currently. When you reach the age of 70.5, you must withdraw a minimum amount from the plan, the **Required Minimum Distribution** (RMD), calculated based on your age. These withdrawals are eligible to be donated to a charitable organization (501.c.3) as a **Qualified Charitable Distribution** (QCD), a direct transfer of money from the fund to a 501.c.3 organization (up to $100,000 from all qualified funds). In addition to the benefits of giving to charity, a QCD excludes the amount donated from taxable income, which is unlike regular withdrawals from an IRA.

Keeping your taxable income lower may reduce the impact to certain tax credits and deductions, including Social Security and Medicare. Also, QCDs don’t require that you itemize, which, due to the recent tax law changes, means you may decide to take advantage of the higher standard deduction ($12,400 for individuals, $24,800 for married couples) but still use a QCD for charitable giving. This sure seems like a win-win. If you are in this situation, consider donating to Phi Tau Sigma, a 501.c.3 organization. *[This information is general in nature and should not be considered legal or tax advice. Please consult an attorney or tax professional.]*

**Seeking a Volunteer from Phi Tau Sigma to become the Liaison with the Cereals and Grains Association (CGA)**

If you are a member of CGA and would be willing to serve as a liaison between CGA and Phi Tau Sigma, please contact Liz Boyle, Ph.D., Chair of the Future Directions Committee at lboyle@ksu.edu. As we strategically plan the future of Phi Tau Sigma, we aim to increase our collaborations and have identified CGA as an important collaborator with potentially overlapping interests.
Know your Leadership: Directors

Martha Cassens, M.S., is currently the Vice President of Product Innovations, Development, and Quality at ACH Food Companies. She previously worked at Hillshire Brands, Sara Lee, ConAgra (Armour Swift-Eckrich) and Vienna Beef. She has 30 plus years of meat and food industry experience in research, quality assurance, and product/ process/ package/ innovation development. Martha earned her B.S. in Food Science, specializing in Meat and Processing, and her M.S. in Food Science, specializing in Nitrite and Frankfurters, both from the University of Illinois. Martha is an active member of the American Meat Science Association, Institute of Food Technologists, Research Chefs Association and Lifetime Member of Phi Tau Sigma, and has served on various committees for each of the associations.

Rebecca Creasy, Ph.D., a Lifetime Member of Phi Tau Sigma, is an Instructional Assistant Professor in the Department of Nutrition at Texas A&M University. Rebecca received a Bachelor of Science in Agriculture (B.S.A.) degree with a major in Food Science and a minor in Nutrition Science from The University of Georgia in 2007. She earned a Ph.D. in Food Science and Human Nutrition with a minor in Agricultural Education and Communication in 2013 from the University of Florida. Her dissertation research focused on effects of cranberry polyphenols on human immune function. Following graduate school, Rebecca worked at the University of Georgia as an Area Extension Agent focusing on community food safety and nutrition education. She has served as Advisor of the Texas A&M Chapter of the Institute of Food Technologists Student Association, member of the Institute of Food Technologists Teaching and Learning Work Group and has actively participated in Phi Tau Sigma as Chair of the Membership and Qualifications Committee and member of the Ad hoc Internship Organization Committee. In 2018, Rebecca received the Marion Teaching Award for exceptional teaching and outstanding mentorship of underclassmen within the College of Agriculture and Life Sciences at Texas A&M University.

Yaguang (Sunny) Luo, Ph.D., is a Lifetime Member of Phi Tau Sigma and a Lead Scientist with the U.S. Department of Agriculture. She joined the agency after five+ years of research and management experience in the food industry. Sunny served on the Inter-Agency Food Safety Task Force of the White House’s Office of Science and Technology Policy, the joint FAO/WHO expert panel on food safety. Sunny served as the President of Chinese American Food Society and chaired the IFT’s Fruit and Vegetable Product Division. She currently serves on the External Advisory Board for Harvard University and Nanyang Technology University (Singapore) Sus-Nano Initiative. Sunny has led or co-led 19 externally funded research projects exceeding $16 million, and has over 200 publications including 175 peer-reviewed and three patents. Dr. Luo is an elected Fellow of IFT.
Laura K. Strawn, Ph.D., is a Lifetime Member of Phi Tau Sigma, and an Associate Professor, Extension Specialist of Produce Safety in the Department of Food Science and Technology at Virginia Tech. She holds three degrees in Food Science with food microbiology emphases, as well as minors in Epidemiology and Molecular Microbiology: a Ph.D. from Cornell University under Dr. Martin Wiedmann, a M.S. from the University of Florida, under Dr. Michelle Danyluk, and a B.S. from the University of California, Davis. Her research program at Virginia Tech focuses on the microbial safety of fresh fruits and vegetables; specifically, the ecology, evolution, and transmission of foodborne pathogens in the produce field to fork continuum. Additionally, Dr. Strawn works directly with produce stakeholders on various produce safety issues, as well as teaches a cadre of food safety curriculums. She leads Virginia Cooperative Extension’s educational efforts on the Food Safety Modernization Act’s Produce Safety Rule including teaching Produce Safety Alliance Grower Trainings and performing On-Farm Readiness Reviews. Dr. Strawn is also the Lead of Applied Research for Virginia’s Fresh Produce Food Safety Team, Extension Team Leader for the Delmarva Food Safety Task Force, and an invited-member of the Radiation Advisory Board for the Commonwealth of Virginia. Professional service includes involvement in Phi Tau Sigma (Board of Directors), International Association for Food Protection, and the Institute of Food Technologists.

Navam S. Hettiarachchy, Ph.D., an IFT Fellow and an IUFoST Fellow, is a Lifetime member of Phi Tau Sigma. She earned her Ph.D. in Biochemistry, Hull University, England; M.S. University of Edinburgh, Scotland, and B.SC in Chemistry, Madras University, India. She is a University Professor, Department of Food Science at the University of Arkansas, Fayetteville. Prior to this she was an Associate Professor and the Director of Food Science program at North Dakota State University and served in R&D in food industry. As a researcher she combines an interdisciplinary background with skills and develops and implements strategies for high-impact research for a diversified integrated structure-chemistry-function properties of food proteins and bioactive peptides with special focus on pulses, and rice, adding value to industry co-products, phytonutrients specifically curcuminoids - polyphenolics, and moving onto preparing of 3D ink printing of targeted nutritious and healthy foods. She is a resource Professor to Japan in training food science related courses to 18 countries. Currently she is the Chair of: the Awards, Research Reproducibility & Replicability, and Research Council Committees at the University of Arkansas. She has a history of advising and coaching teams of students to several first-place award winnings at international, national and local levels including IFT Disney product development, and College Bowl competitions. Navam received several teaching and research awards at all levels. She is the past Presidents of: American Association of Food Scientists for the Indian sub-continent – Institute of Food Technologists (AAFSIS-IFT), and Stem Cell coalition (University of Arkansas Medical School). Navam is an active member of Phi Tau Sigma (Board of Directors), Institute of Food Technologists (IFT), AAFSIS-IFT, and American Oil Chem. Society.
Poulson Joseph, Ph.D., is the Director of Food Protection & Protein Innovation at Kalsec®, Kalamazoo, Michigan. He received his Ph.D. in Animal and Food Sciences from University of Kentucky focusing on applications of proteomics in meat quality and strategies to improve meat color and oxidative stability. Subsequently, Poulson completed his post-doctoral research on muscle food quality at Mississippi State University. At Kalsec®, he leads the Food Protection & Protein team with research emphasis on natural antioxidants and works closely with food/pet food industry clients by offering technical and analytical support. He spearheads the team’s effort in innovative natural and clean label solutions for improving meat/protein-based foods’ quality and shelf-life. Poulson has delivered invited lectures in professional meetings and academic institutions and had conducted industry workshops globally. He is actively involved in American Meat Science Association (AMSA), as well as Phi Tau Sigma. At Phi Tau Sigma, he served as the Chair of Awards Committee from 2017-2019. At the Institute of Food Technologists (IFT), he had served as IFT Muscle Foods Division’s Chair and as member of Leadership team from 2013-2019. He was the recipient of IFT Division Best Volunteer Award (2014), IFT Muscle Foods Division’s Member-of-the Year Award (2016), AMSA Achievement Award (2018), and IFT Emerging Leader Network Award (2018).

Fanbin Kong, Ph.D., a Lifetime Member of Phi Tau Sigma, is a Professor of Food Engineering at the University of Georgia. He received his B.S. and M.S. degrees in Environmental Engineering from Tianjin University and Tsinghua University, China, respectively. He had several years of industry experience working in wastewater treatment. He then obtained another M.S. degree in Food Science from North Dakota State University, and received his Ph.D. degree in Food Engineering from Washington State University in 2007. He received postdoc training at UC Davis before joining UGA in 2011 as an Assistant Professor. He was promoted to Associate Professor in 2016, and Professor in 2021. Dr. Kong has developed vigorous research and teaching programs. His research emphasis included developing dynamic in vitro gastrointestinal models to study food digestion, and using radio frequency (RF) heating technology to pasteurize low moisture foods. Dr. Kong has a strong interest in developing and using innovative teaching methods to improve student learning outcomes. He received the NACTA Teacher Award of Merit in 2015. Dr. Kong has been active in several professional organizations including IFT and IAFP, and participated in various activities including reviewing abstracts and proposals and organizing sessions for annual meetings. He served as the President of the Chinese American Food Society (CAFS) for 2018-2019.
Matthew (Matt) Taylor, Ph.D. is a Professor in the Department of Animal Science at Texas A&M University in College Station, TX. He joined the faculty there in 2007 after completing his Ph.D. in Food Science and Technology at the University of Tennessee in Knoxville, TN. Bachelor and Master of Science degrees were both earned in Food Science from North Carolina State University. His teaching, research, and outreach programs all center around the microbiological safety of foods. His specific research interests lie in encapsulation of antimicrobial additives/preservatives to improve their usefulness in food products. Nevertheless, his research program in recent years has expanded to incorporate process validation for members of the U.S. rendering industries, helping to provide pathogen destruction validation to comply with FDA regulatory requirements for these industry members. His outreach program focuses on interacting with other food safety stakeholders and industry members, where he provides training, as well as works with organizations that promote food safety in the U.S. and globally. In recent years, he has partnered with IFT to help re-configure food microbiology and food safety content offered through their Certified Food Scientist preparatory course, working to develop training that demonstrates the integration of the disciplines within food science for food product processing. He has served Phi Tau Sigma as a committee chair for multiple committees, recently the Constitution and Bylaws committee.

Terri Boylston, Ph.D., is a Lifetime Member of Phi Tau Sigma and is an Associate Professor and Interim Associate Chair in the Department of Food Science and Human Nutrition at Iowa State University. Prior to joining Iowa State University in 1999, she was a Research Food Scientist at USDA-Southern Regional Research Center (1988-1990), Associate Professor at Washington State University (1990-1996), and Adjunct Professor at Texans Woman’s University (1996-1998). She holds a B.S. degree in Food & Nutrition – Nutritional Sciences and a M.S. degree in Food Science from Iowa State University, and a Ph.D. in Food Science from Michigan State University. At Iowa State, she teaches a number of undergraduate and graduate courses, including Food and the Consumer, Food Chemistry, Food Ingredient Interactions, and Integrated Food Science. Her research area focuses on the flavor chemistry of foods and the impact of processing technologies on food quality. Her committee responsibilities at Iowa State include service on committees related to student learning. Her dedication of teaching has been recognized with the Career Achievement in Teaching Award from the College of Human Sciences. Among her service to IFT, she has served as chair of the Education Division, the Iowa Section, Graduate Fellowship Jury, and Freshman-Sophomore Scholarship Jury. She has served as editor of the Journal of Food Quality (2007-2016) and is currently a member of the Editorial Board of the Journal of Food Science Education. As an active member of Phi Tau Sigma, Terri has served as president and adviser to the Iowa State chapter of Phi Tau Sigma, and is currently Chair of the Chapter Affairs Committee and a member of the Membership and Qualifications Committee.
**Stephen Campano, M.S.,** a Lifetime Member of Phi Tau Sigma, is Vice President of Research and Applied Technology for Hawkins, Inc. He received a B.S. degree in Animal Science and M.S. degree in Animal Industries from the University of Connecticut in 1978 and 1981, respectively, and has spent the past 30+ years working with the meat industry in a variety of positions with processors and allied suppliers. Steve has been involved in developing and directing food safety research initiatives with government, industry and academic institutions, and has been instrumental in the development and application of new food ingredient technologies, both domestically and internationally. He was elected to the American Meat Science Association Executive Board, served as President in 2008/2009, was conferred an AMSA Fellow in 2011. Steve is past Chair of the Phi Tau Sigma Membership and Qualifications Committee, the Awards Committee, the Recruitment Campaign Committee, and the Development Committee. Steve was the 2015 recipient of the Phi Tau Sigma Special Recognition Award.

**Dennis R. Heldman, Ph.D.,** a Lifetime Member of Phi Tau Sigma, is the Dale A. Seiberling Endowed Professor of Food Engineering at The Ohio State University. He served as President of Phi Tau Sigma, the Honorary Society for Food Science and Technology from 2010-11. He has been a member of the faculty at Michigan State University, the University of Missouri and Rutgers, The State University of New Jersey. In addition, he has held positions as VP of Process R&D at Campbell Soup Company, Executive VP for the National Food Processors Association (now GMA) and as consultant with the Weinberg Consulting Group Inc. He was President of IFT from 2006-07. He has been elected Fellow in the International Academy of Food Science & Technology and was recognized with the Life Achievement Award from the International Association for Engineering and Food. He was recipient of the Frozen Food Foundation Freezing Research Award and the Dr. Carl R. Fellers Award from Phi Tau Sigma. He received the Harold Macy Food Science and Technology Award from the Minnesota Section of IFT, and the 2018 Nicholas Appert Award from IFT. He has been inducted into the Food Science and Technology Hall of Distinction at The Ohio State University. His teaching and research have a focus on the application of engineering principles and concepts to the processes used to transform raw food materials into consumer food products in the most sustainable manner.

**Amarat (Amy) Simonne, Ph.D.,** a Lifetime Member of Phi Tau Sigma, is a Professor of Food Science and Technology and Extension Food Safety Specialist with the Department of Family, Youth and Community Sciences in the College of Agricultural and Life Sciences at the University of Florida. Her research theme centers around food quality and food safety, and she has published more than 300 technical articles. Amy has long standing service records for her professional organizations such as the Institute of Food Technologists and International Association of Food Protection. She serves as a scientific editor and on editorial boards of many prestigious journals in her field. [https://foodsystems.ifas.ufl.edu/people/faculty/amy-simonne/](https://foodsystems.ifas.ufl.edu/people/faculty/amy-simonne/)
Calendar:

-> Phi Tau Sigma Chapter Schedule:
  October 25: 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
  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, Terri Boylston, Ph.D., (tboylsto@iastate.edu), with a copy to Dr. Kathryn L. Kotula (klkotula@msn.com).

-> Phi Tau Sigma Scholarship and Awards Schedule:
  November 30: Deadline to submit nominations to the Awards Committee for the Dr. Daryl B. and Mrs. Dawn L. Lund Student 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 Lili He, Ph.D. (lilihe@foodsci.umass.edu) and Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com). (More information: http://www.phitausigma.org/awards/)

-> Phi Tau Sigma – AMSA ‘Research with Impact’ Scholarship Schedule:
  April 19: Deadline to submit nominations for the Phi Tau Sigma – AMSA Research with Impact Scholarship.

Send completed nomination forms to Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com), and the AMSA Youth Programs Manager (scholarships@meatscience.org). (More information: http://www.phitausigma.org/awards/)

-> January 14: Deadline to submit Nominations for the Dr. Carl R. Fellers Award, and other IFT Achievement Awards.
(More information: https://www.ift.org/community/awards-and-recognition/achievement-awards)

-> Election schedule:
  December 15: Nominations due to Nomination and Election Committee (Liz Boyle, Ph.D., Chair, lboyle@ksu.edu)
  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
Student research synopsis: Evaluating the effect of cooking and gastrointestinal digestion in modulating the bio-accessibility of different bioactive compounds of eggs

(Contributed by Emerson Nolasco, Ph.D. student, Advised by Kaustav Majumder, Ph.D., University of Nebraska-Lincoln, Food Science and Technology Department)

Introduction: The egg is known for its nutritional quality with high availability in high- and middle-income countries.¹ Efforts to increase the egg nutritional value through enrichment have been successful.² Benefits from incorporating these compounds, such as lutein, into the egg can be observed in a higher bioavailability in human subjects when compared to plant sources.³ The incorporation of these compounds is an effective strategy to produce functional foods. Nevertheless, the influence of different hen breeds on the bioactive compounds’ stability and bio-accessibility is not well understood. Nor how different cooking methods on standard and enriched egg may impact its digestibility and bioactive compounds bio-accessibility.

Purpose: The objective of this study was to determine the effect of hen breed, egg enrichment, and cooking methods in the gastrointestinal digestibility of egg and bio-accessibility of different bioactive compounds.

Methods: Fresh White Leghorn (WLH: white shell) and Rhode Island Red (RIR: brown shell) standard (Std) and enriched (Enrh) eggs were collected and stored at 4 °C without exceeding 21 days. Eggs were subjected to boiling (B) and frying (F) cooking methods for a total of eight treatments. The cooked eggs were minced and subjected to a simulated gastrointestinal digestion to obtain the whole hydrolysate, freeze dried, and stored at -20 °C. The whole hydrolysate degree of hydrolysis was analyzed through the pH Stat method, Linolenic fatty acid composition was analyzed through gas chromatography, the lutein and zeaxanthin content were analyzed through HPLC, and the peptide content was analyzed through a fluorometric peptide assay kit.
Results: Cooked whole egg subjected to boiling and frying methods showed a degree of hydrolysis (DH) range of 25-28% with no difference between the treatments. These values are higher compared to previous research on crude egg white, in which a 2 h digestion obtained a 9.4% DH. Enriched samples had a higher amount of linolenic acid (C18:3) in all the treatments compared to their standard counterparts. No significant difference was found between cooked samples and their digested counterparts. The lutein content was significantly higher between standard and enriched samples for WLH-B, WLH-F, RIR-B, RIR-F, and RIR-F-D. Additionally, significant differences through the process were found for enriched samples between RIR-B vs. RIR-B-D (33.29 vs. 17.3 µg/g of hydrolysate, p<0.0002) and RIR-F vs. RIR-F-D (33.78 vs. 23.35 µg/g of hydrolysate, p<0.0267) in which the lutein content was lower after gastrointestinal digestion. No significant differences were found for zeaxanthin in any treatment. No difference in the peptide content (Figure 1) was observed through a one-way MANOVA with Fisher’s LSD and Bonferroni’s correction mean separation. A breed × cooking interaction was observed as significant, as RIR fried samples tended to show a lower peptide concentration compared to its boiled counterpart although no significant differences were observed.

Significance: These results are helpful to elucidate new strategies for egg production while educating consumers about benefits from egg consumption. It will also support the sustainable growth of the egg and poultry industries of the United States and diversify the use of the egg as the leading product for the development of functional foods.

References:


(4) Chen, C.; Chi, Y. J.; Zhao, M. Y.; Xu, W. Influence of Degree of Hydrolysis on

Lifetime Member Tribute: Nuria C. Acevedo, Ph.D.
Principal Scientist Technical and Analytical Innovations. Griffith Foods Inc.

Why did you become a Lifetime Member?
I decided to become a Lifetime Member because I wanted to stay engaged and connected to this Society that provides so many opportunities to Food Science professionals to advance their career. This Lifetime membership will give me the opportunity to contribute closely to the Chapter and Society that shares the goals I value the most; benefiting the food science industry and community.

Education:
2000-2002: Specialization in Technological Applications of Nuclear Energy (CEATEN). University of Buenos Aires (Engineering), National Commission of Nuclear Energy (CNEA), National University of Cuyo (Institute Balseiro)

Experience/Accomplishments:
2020 – 2021 Associate Professor. Department of Food Science and Human Nutrition, Iowa State University.
2013 – 2020 Assistant Professor. Department of Food Science and Human Nutrition, Iowa State University.
2008 – 2013 Postdoctoral Research Associate. Department of Food Science, University of Guelph, Canada.
2008 – 2010 Assistant Researcher of the National Research Council of Argentina. (CONICET), Department of Industries, University of Buenos Aires, Argentina.
2006 – 2008 Postdoctoral Research Associate of the National Research Council of Argentina. (CONICET), Department of Industries, University of Buenos Aires, Argentina.

Areas of Expertise:
• Lipid Chemistry • Physical and Structural properties of edible fats and oils • Food gels (oleogels, biogels, emulgels and other multicomponent gel systems) • Entrapment/Encapsulation • Food emulsions • Functional foods • Plant base ingredients for fat replacement • Bioaccessibility of food components • Textural, Rheological & Microstructural properties of foods • Food Molecular Interactions

Awards and Honors (selected list):
• Nationwide selected for the 2018 Linton-Poodry SACNAS Leadership Institute (LPSLI).
• Best Poster Presentation Award 2011. 9th Eurofed Lipids Congress. Rotterdam, Netherlands.
Postdoctoral fellowship of the National Research Council of Argentina (CONICET), 2006-2008.

Personal: Family, Interests, Hobbies:
I have been married to my wonderful husband for 11 years and we have two children, Cataleya who is 9 and Felix who is 6. We also have two dogs named Lucas (bichon-poodle) and Cody (beagle). We love the outdoors, and spend lots of our time visiting parks and nature trails.

Advice to university students and career food scientists and technologists:
If I could give my young student self any piece of advice over and over again it would be to get and stay involved as much as possible in professional societies whose vision and goals match with your career objectives. Networking is a valuable strategy at every stage of your career and staying engaged in your professional society will give you the chance to forge long term relationships with peers, while getting advice from those who are more advanced in their career. It will also give you the chance to develop leadership, communication and organizational skills through practical experience, as well as the possibility to shape the future of the organization you are contributing to.

Careers: Food Process Engineers
Contributed by Dennis R. Heldman, Ph.D.

Introduction/Background: Although there are many types of engineers employed in the food industry, process engineering is likely to be most closely aligned with quality and safety of the products reaching the consumer. Engineers in these positions must work very closely with colleagues from a variety of different disciplinary backgrounds.

Qualifications: A successful food process engineer is likely to have strong background in basic engineering fundamentals, but with specific attention to transport phenomena, including heat and mass transfer. Beyond these fundamentals, knowledge of the chemistry and microbiology of food is critical to a successful food process engineer.

Positions: Specific positions in food process engineering usually are associated with Research & Development or Corporate Engineering in large corporations. In small- to medium-size companies, individuals in these positions may be associated with smaller groups of technical staff, all dedicated to broad cross-section of technical issues associated with ensuring product quality and safety.

Duties: A food process engineer has direct involvement in two areas associated with food manufacturing; product development and quality assurance. An engineer involved in development of new food product will be part of a team of individuals from different disciplines including food chemistry, food microbiology, sensory science and nutrition, as well as marketing and consumer acceptance. A team in quality assurance is likely to include expertise on the processes used during manufacturing to ensure that the products meet quality standards.
Salaries: starting with B.S. Degree at $55,000 to 65,000 per year

Benefits: competitive

Conclusion: In general, food manufacturing is a stable industry, due to a consistent demand for the products being offered to consumers.

Member News:

Phi Tau Sigma - AMSA 'Research with Impact' Scholarship – Award Outcome/Benefits
Contributed by Derico Setyabrata, Ph.D. Candidate

Being selected as the recipient of the Phi Tau Sigma - AMSA 'Research with Impact' Scholarship is a great honor and privilege, especially for a graduate student like myself. The award provided me with a very meaningful acknowledgment of my work, showing that my research is actually valuable and could benefit the community. This acknowledgment is also a very excellent morale booster that will encourage and remind me to do my best in my research and career. Furthermore, a significant monetary gift was included as a part of this award. The fund that I received from this award supported me to attend the 2021 Reciprocal Meat Conference and the 2021 Institute of Food Technologist Meeting, which are 2 premier conferences in the Meat Science and Food Science field. This fund provided me with the opportunity to further disseminate my research and the chance to connect and expand my network with academic and industry leaders, which are crucial for my future career development.

In Memoriam: Louise Slade, Ph.D.

It is with great sorrow that we share the news that Louise Slade, Ph.D., 74, of Morris Plains, NJ, a research biochemist known for her fundamental insights into the basic chemistry of food, and a Lifetime Member of Phi Tau Sigma, died unexpectedly on October 7, 2021. Her research and life partner of over 40 years, Dr. Harry Levine, was with her at her death, as he had been throughout most of her adult life.

Following obtaining her Ph.D. in chemistry at Columbia University in 1974 and a postdoctoral fellowship at the University of Illinois, she joined General Foods as a Research Scientist and then spent her entire research career in the food industry, as a Research Fellow with both Nabisco and Kraft Foods. In collaboration with Dr. Levine, she created a novel approach to what is now termed "food polymer science". This fundamental scientific work led to 47 granted patents, most of which were turned into practical advances, now taken for granted in such commercial foods as cookies, crackers, snack chips, and soft ice cream. Her research and practical impact on wheat flour/wheat
quality is felt across grain-based food companies. She and Harry together created rich, fundamental links between flour testing methods (most notably, Louise's new Solvent Retention Capacity (SRC) method) and food quality. Late in her career, she was honored by having a new soft wheat cultivar named "Louise" after her by the cultivar's breeder, Dr. Kim Kidwell, and the USDA Western Wheat Quality lab led by Dr. Craig Morris.

During her illustrious career, she was awarded many honors bestowed by several national and international research organizations. Among the most prominent was a 3-day symposium, at an American Chemical Society annual meeting in 2018, titled “Water in Foods Symposium in Honor of Louise Slade and Harry Levine.” In 1999, Drs. Slade and Levine received the Institute of Food Technologists (IFT) Industrial Scientist Award for their major technical contributions to the advancement of the food industry. In 2004, they were honored with the prestigious Tanner Award from IFT's Chicago Section. In addition, Drs. Slade (in 2016) and Levine (in 2018) were elected IFT Fellows. In 2007, Drs. Slade and Levine received the Halverson Award from the Milling and Baking Division of AACC International. In 2008, Drs. Slade and Levine were honored with AACCI’s Applied Research Award, which brought along with it AACC Fellow status. And in 2019, Louise and Harry also received AACC’s Alsberg-French-Schoch Lectureship award for excellence in fundamental Starch Chemistry.

Following her retirement from Kraft Foods in 2006, Dr. Slade continued her involvement in basic food science by creating her own consulting business, Food Polymer Science Consultancy, with partner Dr. Harry Levine, and by consulting with dozens of global food and beverage companies. Additionally, she became affiliated with the Monell Chemical Senses Center, a basic research organization in Philadelphia that studies taste, smell, and related senses. She served in several capacities at Monell, and at her death, she was a member of the Center’s Board of Directors, where she shared her expertise and passion for making healthier foods.

Louise was born on October 26, 1946, in Florence, South Carolina to Charles and Loraine (Browning) Slade. As a young girl, Louise was attracted to art and particularly to ballet. She studied ballet at Julliard for several years, but, realizing that she could likely not be a top ballerina, she chose a quite different path to drive an impact on the world. Instead, she went to Barnard College and obtained a degree in Biology. There, she was highly attracted to botany, but there were few funds at that time to support graduate studies in plants, so she became a biochemist. Her interest in botany re-blossomed in her later years, when she became deeply involved studying healthy constituents in extra virgin olive oil, along with colleagues at Monell. Her last scientific paper (out of over 270 in her career), published just months before her death, concerned novel sensory properties of olive oil.

On a personal note, one of her colleagues at Nabisco, Dr. Hamed Faridi, had the following to say: “Louise was likely the only Nobel Prize caliber food scientist in the last 50 years.” And Deirdre Ortiz added that Louise was a valuable friend and technical mentor that Deirdre called her “science-mom”. Many who knew her recognized her willingness to share what she learned and her disdain for “bad-science”. She pushed us all to be better technical leaders, and while Louise lives on in her contributions, the world is poorer for her absence.

She is survived by her partner, Dr. Harry Levine. Please send condolences to him at: levineharry@optonline.net. If you wish to make a donation in her memory, please consider the Monell Chemical Senses Center.

[Modified From: Louise Slade memorial for CGA from Deirdre Ortiz and Hamed Faridi; https://www.cerealsgrains.org/Pages/Slade_Louise.aspx]
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.phitasigma.org/membership-dues/. Proceed on to pay by PayPal. Be sure to include your address. Once you are successful with your PayPal payment, you will receive a receipt. If you do not receive a receipt, please try again.

Dues can also be paid by check payable to Phi Tau Sigma, (made with U.S. Funds and drawn on a U.S. Bank). (Do not send a money order.) Do not write the check to Kantha. Mail your check to: Kantha Shelke, Ph.D. (Do not address to Phi Tau Sigma.)
33 West Ontario, Suite 57F, Chicago, IL 60654.
Send an email to Kantha to let her know to expect your check (kantha@corvusblue.net).

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. and Mrs. Dawn L. Lund Student International Scholarship Fund, Phi Tau Sigma Founders’ Scholarship, Phi Tau Sigma Chapter of the Year Award, the Phi Tau Sigma – AMSA ‘Research with Impact’ Scholarship Fund, the Program Fund, or the General Fund. http://phitasigma.org/store/
Scroll down to Donate and click the yellow Donate button.

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, Terri Boylston, Ph.D. at: tboylsto@iastate.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.phitasigma.org/store.

Support Phi Tau Sigma through AmazonSmile:

If you shop at Amazon, please register Phi Tau Sigma as your charity through AmazonSmile (https://smile.amazon.com/). There is also a mobile app that one can access. Instructions for the mobile app can be found at: https://www.amazon.com/b?ie=UTF8&node=15576745011.

The AmazonSmile Foundation will then donate 0.5% of the purchase price of eligible products to Phi Tau Sigma. This may not sound like a lot, but it adds up. Be sure to enter Amazon through AmazonSmile every time you shop (https://smile.amazon.com). Thank you!
Editorial: Thankfulness

Although we have reason to give thanks all year long, November – as we approach Thanksgiving Day – is a time when thanks are particularly remembered.

We are thankful that we have an Honor Society that promotes our students and professionals, through scholarships and awards, and leadership and networking opportunities, ....
We are thankful to the membership of Phi Tau Sigma who supports our Honor Society with their Time and Talent (volunteering), and Treasure (paying dues, and making contributions).

We need our membership to be engaged.
- If you are already engaged: Thank you! Even something that seems so small as paying one’s dues is very important to keeping our Society running.
- If you are not engaged: Please find ways to become engaged. Be sure to pay your dues. Consider a Leadership role, whether on the Chapter level, or the National/International level.
- And whether you are engaged or not: Consider an additional contribution for your favorite Phi Tau Sigma initiative, or the General Fund.

Every effort means so very much! THANK YOU!

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.; Tianxi Yang, Ph.D., Research Co-Correspondent; Tiantian Lin, Ph.D., Research Co-Correspondent; Samruddhi Jadhav, M.S., Careers Correspondent; Kaavya.Rathnakumar, M.S., Chapter News Correspondent; Diane Schmitt, Ph.D., Member News Correspondent; Ashwini Wagh, Ph.D.; Ravi Tadapaneni, Ph.D.; Damla Dag, M.S. (Ph.D. student), Social media Co-Correspondent; Sonali Raghunath, M.S. (Ph.D. student), Social Media Co-Correspondent

Please be responsive to their inquiries for information for the Newsletter.

Documents:

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

Phi Tau Sigma Membership Nominations

Phi Tau Sigma Scholarships and Awards Forms
http://www.phitasigma.org/awards/

Phi Tau Sigma Constitution and By-Laws
http://www.phitasigma.org/constitution/
http://www.phitasigma.org/bylaws/

Phi Tau Sigma Mentorship Program
http://www.phitasigma.org/mentorship/
Sponsors, Donors, and Contributing Partners:

Phi Tau Sigma accepts contributions and has a variety of available sponsorship opportunities, as well as the General fund and Program fund.

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.

Contributions 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://phitasigma.org/store/ Scroll down to Donate and click the yellow Donate button, or by going directly to PayPal https://www.paypal.com/donate?hosted_button_id=QTA7NUHUEPP2). Contributions by check (written from a US bank) can be made by sending to our Treasurer: Kantha Shelke, Ph.D., 33 West Ontario, Suite 57F, Chicago, IL 60654. Please write “Sponsorship”, “Donation”, “Contributing Partner”, etc. in the subject line. [A Sponsorship covers the cost of the honorarium and the administrative costs (PayPal, plaque, postage). A Donation covers only the cost of the honorarium. The Contributing Partners program is described below.]

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 monthly Phi Tau Sigma Newsletter. Endowments are also accepted.

Contribution opportunities are available for the 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. and Mrs. Dawn L. Lund Student 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 (on a ‘first come’ basis), as well as the Program fund (which includes the Phi Tau Sigma Awards Ceremony) and the General fund.

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. (http://www.phitasigma.org/sponsor/)

**Bronze** ($5,000)
- Company listing in the “Donors and Sponsors” section of the Phi Tau Sigma Newsletter.
- Recognition with company name on www.phitasigma.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 “Contribution” in the subject line.

**2021-2022 Contributing Partners:**

**Hawkins, Inc.** is a progressive concern that manufactures and distributes specialty chemicals and provides functional solutions for a wide variety of industries. The Food Ingredients Group is a leading manufacturer of innovative pathogen control technologies and ingredients for the food industry. The formation of Ingredient Works, an entity conceived to capitalize on expertise in functional ingredient applications, food industry knowledge, technical service, and an extensive product portfolio, is focused on the comprehensive science of shelf-life, providing customized solutions to both the common and the highly complex issues faced every day by food manufacturers. The ultimate goal for the Hawkins Food Ingredient Group is to re-define the concept of shelf life and become a complete solution provider to the food industry. (Contribution to sponsor the Phi Tau Sigma Founders’ Scholarship, and to sponsor the new Phi Tau Sigma – AMSA Research with Impact Scholarship and its endowment.) **Hawkins, Inc. is a Silver level Contributing Partner.**

**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. (Contribution to endow the Dr. Daryl B. and Mrs. Dawn L. Lund Student International Travel Scholarship.) **The Lunds are a Platinum level Contributing Partner.**

**2021-2022 Sponsors and Donors:**

**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. (Donation to the General Fund)
The **American Meat Science Association (AMSA)** works to cultivate a global community of professionals and students to discover, apply and communicate meat science and technology. An independent, objective, and credible voice for meat science and technology, AMSA is an organization recognized for its unmatched competence and commitment to attracting and developing meat industry leaders. We are an association that encourages our members' active participation and engagement, welcoming collaborative relationships with other groups and organizations.

**Anthony W. Kotula, Ph.D.**, a Lifetime Member of Phi Tau Sigma, retired in 1992 as a Supervisory Food Technologist after 38 years of service at the Agricultural Research Service, USDA; 25 years of which were as the Leader of the Meat Science Research Laboratory. (Donation towards the endowment for the Phi Tau Sigma-AMSA ‘Research with Impact’ Scholarship)

**Anonymous** donation towards the endowment for the Phi Tau Sigma – AMSA ‘Research with Impact’ Scholarship.

**Dr. Rakesh K. Singh** is a Past President of Phi Tau Sigma, a Lifetime Member; and is a Professor in the Department of Food Science & Technology at the University of Georgia, where he was department head from 2001 to 2020. He is also a Fellow of IFT, Fellow of IAFoST, Fellow of National Academy of Agricultural Sciences of India, and Editor-in-Chief of LWT – Food Science and Technology. (Sponsorship of a Phi Tau Sigma Student Achievement Scholarship.)

**William Benjy Mikel, Ph.D.**, a Phi Tau Sigma past President and a longtime Lifetime Member. (Recurring donation towards the endowment for the Phi Tau Sigma-AMSA ‘Research with Impact’ Scholarship)

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**Peter M Salmon, M.S., MBA**, a Lifetime Member of Phi Tau Sigma, is the Founder of International Food Network, Inc., currently retired. (Sponsorship of a Phi Tau Sigma Student Achievement Scholarship.)

**Dr. Mary K. Schmidl** is a Past President of the Institute of Food Technologists (IFT), a Lifetime Member and a past President of Phi Tau Sigma, the Past President of the International Union of Food Science and Technology (IUFoST), and Adjunct Professor, Department of Food Science and Nutrition, 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 an Emeritus Morse Alumni Distinguished Teaching Professor of Food Science and Engineering, Department of Food Science and Nutrition, University of Minnesota.