



The Honor Society of Food Science and Technology

## ***Phi Tau Sigma Newsletter*** April 2015

### **News Alerts:**

#### **Membership Renewal: Dues Time Again?**

(Contributed by W. Benjy Mikel, Ph.D., Phi Tau Sigma President, and Lifetime Member)

Seems like tax time and dues time always seem to roll around way too soon! While both are true, I am willing to bet you get a bigger bang for your bucks (only \$10 or \$15 actually) for Phi Tau Sigma dues!! Your dues are essential to the operation of our Organization, but more importantly, they are a signal of your commitment to excellence in food science. By being an active member in Phi Tau Sigma, we all build upon the legacy given us by our Founders. Your dues help to pay for annual meeting expenses, day to day operating expenses, student scholarships and much more. (Phi Tau Sigma Leadership always pay their own expenses to ensure the fugal use of your dues.) So take a moment today and make the commitment....pay your dues! Better yet, avoid the hassle of yearly recurring dues and become a Lifetime Member for only \$300! Either way, it is money well spent!

(See "Dues Reminder" section below, page 14, for details to pay your dues. And refer to the "Editorial: Did you know that (regarding Dues)", pages 15-16, for more information about the benefits of paying dues.)

### **Program:**

Please attend these five Phi Tau Sigma sponsored or co-sponsored symposia at the IFT Annual Meeting:

#### **Food Science and Technology: A Vision for the Future**

**Sunday, 7/12/2015, 08:30 am - 10:00 am**

Moderators: Kanika Bhargava, Ph.D., University of Central Oklahoma, and Mario de Figueiredo, Ph.D., Mario de Figueiredo Consulting

Speakers:

- Manan Sharma, Ph.D., Agricultural Research Service, USDA, Beltsville, MD  
*"Food Microbiology: What Happens Next?"*
- Janet E. Collins, Ph.D., RD, Senior Vice President of Science and Regulatory Affairs, CropLife America, Washington, DC  
*"Regulatory Implications of Change and Trends Regarding Food Quality and Safety"*
- Lester A. Wilson, Professor, Iowa State University  
*"Training Food Scientists: Current and Future Needs"*

- John Litchfield, Ph.D., Adjunct Professor, The Ohio State University  
*"Food Science and Technology: A Vision for the Future"*

Session Description: Consumer concerns about food safety and quality have increased, and so have demands that government and industry increase efforts to assure food safety and quality. Environmental concerns have spawned a wave of sustainable, recyclable, and non-polluting products. At the same time, consumer attitudes and behavior regarding healthy, nutritious, and innovative foods have changed in the past several decades, with consumers demanding more from their food products. With these dynamic changes, it is essential to plan for the training strategies for new generation of food scientists. The purpose of this symposium is to provide food scientists viewpoints how specific fields of food science will address the future challenges. This will help in incorporation of these current trends in food science curricula. This session is organized by Phi Tau Sigma.

### **What Do We Have Here: Exploration of Professional Roles in an Integrated Product Development Venture**

**Sunday, 7/12/2015, 01:30 pm - 03:00 pm**

Moderator: Lu Ann Williams, MBA, Director of Innovation Innova Market Insights

Speakers:

- Lu Ann Williams, MBA, Director of Innovation, Innova Market Insights, Duiven, The Netherlands  
*"Marketing Wants to Market"*
- Conrad Rebello, Ph.D., Director – Beverages Category, PepsiCo Global R&D  
*"Product Development Wants to Deliver the Goods"*
- Anthony T. Pavel, JD, Lawyer at Morgan, Lewis & Bockius LLP, Washington, D.C.  
*"And Then There Are the Rules"*

Session Description:

The interactions that are critical to the successful new product launch and marketing of a new product or product line extension which go way beyond the science of food and food ingredients will be explored. Panelists will interact with audience participants in addressing individuals' questions and reactions to real world case studies. Further, upon acceptance of the proposal, this team will post a call for questions and input from various IFT Divisions with focal areas appropriate to product development, marketing and management, and foods laws and regulations. This panel, which is supported by Phi Tau Sigma, will engage with audience participants to discuss real-world team dynamics and actual case studies to identify concerns associated with the product development process. Scientists will have the opportunity to listen to team dialogue and participate in creative solutions to divergences in expertise as new product ideas are considered.

### **Communicating food science to the masses: Opportunities and responsibilities**

**Monday 7/13/2015, 10:00 am - 11:30 am**

Moderator: Stephen Campano, M.S., Hawkins, Inc.

Speakers:

- Kimberly Essex, B.A., Director, North American Food & Beverage Practice, Ketchum Public Relations

- *"Breaking through: Ensuring science is part of the conversation about food"*
- Keith Belk, Ph.D., Colorado State University  
*"Science, Policy and the Public"*
- Benjamin Chapman, Ph.D., Associate Professor, North Carolina State University  
*"Communicating responsibly - Have you seen irresponsible communication?"*

Session Description:

This session will focus on the opportunities that each food scientist should be aware of to communicate the virtues of feeding the world's growing population a safe, quality and nutritious food supply. Further, topics will touch on the responsibility of the industry in communicating to the public and the necessity of communicating responsibly with fact based information.

## **Bioactive Compounds and Functional Foods in Chronic Disease and Healthy Aging**

**Tuesday 7/14/2015 10:30 am-12:00 noon**

Moderators: Hossein Daryaei, Ph.D., Illinois Institute of Technology and Rui Hai Liu, Ph.D., Cornell University

Speakers:

- Rui Hai Liu, M.D., Ph.D., Cornell University  
*"Molecular targets of bioactive food components for cancer prevention and health aging: Whole food approach"*
- Steven J. Schwartz, Ph.D., The Ohio State University  
*"Absorption and Metabolism of Tomato Bioactives in Human Clinical Trials"*
- Britt Burton-Freeman, Ph.D., Illinois Institute of Technology  
*"Plant Bioactives: Bioavailability and Function in Humans"*

Session Description: More evidence suggests that a healthy eating pattern with increased consumption of fruits, vegetables, whole grains, and other plant-based foods has been negatively correlated to the risk of developing chronic diseases, such as heart disease, cancer, stroke, diabetes, Alzheimer's disease, cataracts and age-related diseases. Phytochemicals in fruits, vegetables, and whole grains have been suggested to be responsible for their health benefits. This symposium will bring together three world-renowned experts in bioactive compounds, functional foods, nutrition, and human health, and will provide a forum for discussion and debate about the beneficial effects of bioactive compounds and functional foods for chronic disease prevention and health aging. The first presentation of the symposium will discuss the current research on health benefits of bioactive compounds in fruits and vegetables in the prevention of chronic diseases and health aging, and focus on the mechanisms of action. The additive and synergistic interactions of the phytochemicals in the wide varieties of fruits, vegetables, and whole grains will be also discussed. The second presentation will compare metabolite profiles to identify new potentially bioactive tomato compounds. Several studies to understand the absorption and metabolism of tomato phytochemicals in human clinical trials will be discussed. Finally, the importance to human clinical trials in the assessment of bioavailability of bioactive compounds and their function will be discussed in the third presentation. This symposium is being organized by the Program Committee of Phi Tau Sigma – The Honor Society of Food Science and Technology, and co-sponsored by Nutrition Division, and Nutraceutical/Functional Foods Division.

## **Innovations and Trends in Food Product Development: Implementation of Emerging Technologies, Commercialization, and Consumer Acceptance** **Tuesday 7/14/2015, 01:15 pm - 02:45 pm**

Moderators: Hossein Daryaei, Ph.D., Illinois Institute of Technology and Martha E. Cassens, M.S., ACH Food

Speakers:

- Wouter de Heij, M.S., CEO and Co-Owner; TOP b.v., Wageningen, The Netherlands  
*"How Novel Technologies Will Impact the Future of Food"*
- Christopher J. Doona, Ph.D., Senior Research Chemist; U.S. Army Natick Soldier RD&E Center, Natick, MA, USA  
*"Innovative Technologies for Producing High Quality Shelf-stable or Extended Shelf-life Foods for the Military"*
- Lu Ann Williams, MBA, Director of Innovation; Innova Market Insights, Duiven, The Netherlands  
*"New Technologies and the Consumer: Case Study Beverages"*
- Larry Keener, B.S., President and CEO; International Product Safety Consultants; Seattle, WA, USA  
*"Food Safety and Regulatory Challenges Associated with the Commercialization of Foods and Beverages Manufactured Using Novel Processing Technologies"*

Session Description:

This session provides an overview of the current status and future role of emerging processing and packaging technologies in food product development. Challenges associated with the successful commercialization of products produced using novel technologies, including safety and regulatory requirements, as well as consumer acceptability of such products will also be presented.

The worldwide consumer demand for safe, healthy food (both fresh and processed) with desirable organoleptic properties and high nutritive value has driven innovation in product development. One approach in meeting this demand has been to reformulate traditional products so that they contain more natural ingredients, less fat, sugar, salt, artificial colors and preservatives. However, these reformulated products may lose taste, texture, color and nutritional properties if they undergo severe heat treatments to extend shelf-life and ensure consumer safety. Novel processing technologies such as high pressure processing and pulsed electric field processing can assist in manufacturing safe and high quality foods and beverages while overcoming product degradation that is frequently associated with conventional preservation methods.

Packaging is a key component in the product development continuum. Using appropriate packaging systems is not only crucial in maintaining quality and ensuring food safety, but it is also important in marketing and consumer acceptance of the product, as well as reducing waste. Innovation in packaging enables a more efficient distribution and storage of foods and beverages while keeping them fresher longer.

### **Election Update:**

Thank you to the 43% of members in good standing who just voted in the current ΦΤΣ election! As the balloting just closed on March 31, please watch for the official results in the May 2015 Newsletter. Our Nominations and Elections Committee is now verifying the results

of what appears to be a very close election. We have a record of 77 members who expressed interest in serving on our committees, another great sign of a healthy and relevant organization. The future is bright with your vote and your voluntary support of The Honorary Society of Food Science and Technology.

## Calendar:

### ->July 11-14 Institute of Food Technologists Annual Meeting, Chicago, IL 2015:

Dates and times approximate

July 11 (Saturday):	
11:00am-12:15pm	Phi Tau Sigma Executive Committee Meeting
12:15pm-1:30pm	lunch break
1:30pm-3:00pm	Phi Tau Sigma Leadership Council Meeting and Annual Business Meeting
12:30pm-1pm	Student Competition Poster Set-up
1:00pm-2:30pm	Student Poster Competition Judging
3:30pm-4:20pm	Phi Tau Sigma and IFT Division Competition Awards Ceremony (also called: Phi Tau Sigma Annual Recognition Event)
5:30pm-6:45pm	IFT Awards Celebration, includes the presentation of the Dr. Carl R. Fellers, Ph.D. Award (Meet the Award winners at the IFT Networking Reception Immediately following.)

### ->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 Liz Boyle, Ph.D., Awards Committee Chair, at: [lboyle@ksu.edu](mailto:lboyle@ksu.edu). (More information: <http://www.phitausigma.org/content.php/3-Awards>)

->January 9: 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.aspx>, <http://www.ift.org/Membership/Awards-and-Recognition/Achievement-Awards/Carl-R-Fellers-Award.aspx>)

### ->Election schedule:

December 15:	Nominations due to Nomination and Election Committee (Roy Arnold, Ph.D., Chair: email: <a href="mailto:roy.arnold@comcast.net">roy.arnold@comcast.net</a> )
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
April 1:	Deadline for casting ballots

April 8: Deadline for tabulation of ballots  
July 11: Phi Tau Sigma President will present the newly elected individuals to the Membership at the Annual Business Meeting of Phi Tau Sigma

## **Lifetime Member Tribute: Rodrigo Tarté, Ph.D.**

Assistant Professor, Department of Animal Science, Iowa State University

### Why did you become a Lifetime Member?

Because promotion of Food Science and Technology, and recognition of excellence in the field, matter a great deal, not just to us, but to society. Now more than ever, the public needs to be well-informed about what it is we do and the critical contributions food scientists make to social development and well-being, all around the world.  $\Phi T \Sigma$  plays a major role in this by recognizing the scholarly achievements of food scientists, and thus encouraging them to continue to pursue excellence. Also, to be honest, it's very nice to not have to remember to pay dues every year!



### Education:

Ph.D. Food Science and Technology; Meat Science. Iowa State University, 1996

M.S. Food Technology. Iowa State University, 1990

B.S. Food Technology and Science. Iowa State University, 1987

### Experience/Accomplishments:

2015– Assistant Professor, Meat Science & Technology, Department of Animal Science, Iowa State University, Ames, IA  
2012–2015 Director, Research & Development, John Morrell Food Group (Smithfield Foods), Lisle, IL  
2011–2012 Director of Research & Development, Creta Farms USA, Lombard, IL  
1999–2011 Various roles, Research & Development, Kraft Foods/Oscar Mayer, Madison, WI  
1996–1999 Director of Research & Development, Rica Rondo S.A., Cali, Colombia

Areas of Expertise: Meat science; meat processing; meat microbiology; ingredient technology; food product design, formulation, optimization and commercialization

### Awards and Honors (selected list):

2014 Alumni Impact Award, Department of Food Science and Human Nutrition, Iowa State University  
2013 Meat Processing Award, American Meat Science Association  
2008 IFT Muscle Foods Division Special Recognition

### Personal: Family, Interests, Hobbies:

My wife, Mercedes, and I are the parents of two boys, ages 20 and 14. The older is a junior in Food Science at Iowa State University and the younger a freshman in high school. We are currently preparing our move back to Ames, IA, after a nineteen-year absence, so we have a very busy spring and summer to look forward to. In my spare time I mostly like to read or jump on my road bike and go see the countryside.

Advice to university students and career food scientists and technologists:

1. Be very deliberate about your career development. Strive for “career” security and not just “job” security; these are two very different things. If your career is secure, you won’t fret losing a job (which can and does happen, even to the very best), but if you jump from job to job just for the sake of a larger paycheck, or perhaps in search of that oft-elusive greener pasture, you could wind up doing so at the expense of your long-term professional future.
2. Science, technology and society all evolve, so much of what you learn today may not be applicable tomorrow; therefore stay current and learn continuously, always keeping an open mind. And always let science—not emotions or bloggers—have the final say.
3. Develop and nurture your professional network on a continuous and deliberate way, focusing on meaningful and honest lifelong relationships. Don’t wait until you desperately need a good professional network to fall back on; by that time it may be too late to start developing one. Good professional networks aren’t made overnight (see Dr. Kathy Kotula’s editorials on p. 9 of the July 2014 and p. 11 of the October 2014 Phi Tau Sigma Newsletters for some good advice).
4. Remain adaptable, as situations around you will invariably change and affect you. Embrace change and be willing to take detours as you encounter roadblocks or road forks. Oftentimes these detours will present to you exciting new possibilities and opportunities that you never would have planned for.
5. Always stand on principle. Do not compromise professional ethics...ever.

## **Member News: Phi Tau Sigma Scholarship and Award Recipients**

### **Phi Tau Sigma Student Achievement Scholarships:**

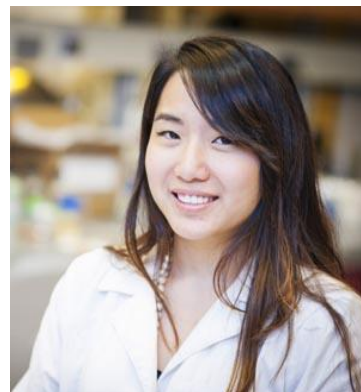
**Chelsey Hinnenkamp, B.S.** is a food science Master’s student at the University of Minnesota (UMN) where she is researching the “Hypoallergenization of Soy Protein Following Targeted Enzymatic Hydrolysis and Maillard Glycation of Glycinin and  $\beta$ -conglycinin.” The goal of her research is to understand how limited enzymatic hydrolysis and Maillard glycation affect the allergenicity and functionality of soy protein.

A passionate student of food science, Chelsey enjoys mentoring and teaching undergraduate students through research project advising, assisting with classes, and engaging with the food science community. A past UMN Food Science and Nutrition club president, Chelsey remains involved in club activities and is an advocate for student involvement in IFT and Phi Tau Sigma. She is also currently a student liaison to the MN-IFT executive committee and the 2014 – 2015 IFTSA National College Bowl Chair. When she is not in the classroom or the lab, Chelsey can be found making messes in the kitchen, exploring the Twin Cities dining scene, and running through Minneapolis.





**Kacie K.H.Y. Ho, B.S.** came to Purdue University from the University of Hawaii at Manoa for the M.S. program in August 2012, and then in 2014 bypassed to the Ph.D. program. Kacie was recognized by the National Science Foundation as an awardee of their Graduate Research Fellowship in 2013. She has interned for Cargill, USDA Agricultural Research Service, and food companies in Hawaii. Her M.S. work focused on investigating microwave-assisted extraction of lycopene from tomato peels. As a Ph.D. student, Kacie continues the investigation of lycopene encapsulation within a nanoemulsion system.



Kacie has made significant contributions to the Phi Tau Sigma Hoosier Chapter at Purdue University. She first joined Phi Tau Sigma in 2013, and became the treasurer for the Hoosier Chapter for the 2013-2014 academic year. She demonstrates staunch dedication for the organization in her current role as the 2014-2015 President. Being passionate about food science, and food science education, Kacie is in her second year serving on the IFT Higher Education Review Board. She served as the Treasurer for the Purdue Food Science Graduate Student Association. Through her current role as Chair of a committee in the Purdue Graduate Student Government, Kacie has organized coveted professional development programs and outreach events to educate local middle school children about food science and graduate research.

Kacie is an outstanding student who truly cares for her fellow peers and strives to make a difference in food science and the surrounding community. With her good intentions and ability to execute them, record of exceptional scholastic achievements, dedication to Phi Tau Sigma, and passion for the greater welfare of food science, Kacie is a most worthy recipient of the 2015 Phi Tau Sigma Student Achievement Scholarship.

**Lichchavi D. Rajasinghe, M.S.** is a Ph.D. candidate in the Nutrition and Food Science Department of Wayne State University where he is working as a teaching assistant. His principal research interests lie in the field of nutrition and food science. His future plans are to build on the foundations of his Ph.D. to serve the community to create more healthful lifestyles in a sustainable perspective by joining a food industry where people work with passion and strive for outstanding results.



He is a truly outstanding student who has accumulated a long list of other academic honors/achievements. His intellect and hard work are clearly demonstrated by his perfect 4.0 grade point average for Graduate studies. He has received different academic recognitions at university and regional levels for his scholarly accomplishments such as the Rumble fellowship, IFT Great Lakes Section awarded Ph.D. Achievement Award 2014 and selected among the 100 Next Generation Young Bio-Leaders in Gap Summit at the University of Cambridge, UK. In addition to his skills, talents and hardworking ability, he has made a few original and significant contributions and important publications.

Apart from academic interests, he has excelled in a range of extracurricular activities. He has served as the IFTSA Wayne State Chapter president and Phi Tau Sigma active member.



He planned and coordinated several activities including student competitions, community service programs and fund raising events.

### **Dr. Gideon “Guy” Livingston Scholarship:**

**Ty Wagoner, B.S.** is pursuing his M.S. in Food Science at North Carolina State University under the direction of Dr. Allen Foegeding. His research project involves the use of whey proteins as functional ingredients in beverages. Many variables must be considered when developing appealing and nutritious whey protein beverages that are stable after thermal treatment, and this project is driven by the need to gain a fundamental understanding of this complex system. He hopes that a better understanding of protein behavior in beverages will aid in the development of nutritious and desirable beverages. The results of this study are currently in final review with authors prior to submission later this year. During the course of this project, he has also worked on the development of a novel beverage after observing unique interactions between polysaccharides and whey protein isolate. This beverage not only provides a high level of protein per serving but also has the added benefit of high heat stability near the protein isoelectric point. He is currently preparing a review article on the interactions between proteins and polysaccharides in beverages for submission in the *Annual Review of Food Science and Technology* later this year. Upon completion of his M.S. Ty will pursue his Ph.D. in the Foegeding lab focusing on connections between food structure, oral processing and satiety.



Ty shows a level of passion, curiosity and attention to detail that makes him a great student, scientist and researcher. He has maintained a 4.0 GPA as a graduate student while also being actively involved in a number of student and professional organizations. He is motivated, hardworking and dedicated to his field. He enjoys interacting with students from other departments and spreading information about the food science discipline. Most importantly, his previous degree in culinary arts and longstanding passion for food give him a unique perspective in his field. Upon completing his M.S. and Ph.D., he plans to combine his culinary, research and teaching experiences in an academic research setting to contribute to the connections between food structure, oral processing and human health.

### **Phi Tau Sigma Special Recognition Award:**

**Stephen G. Campano, M.S.** has worked quietly and in the background of Phi Tau Sigma making significant contributions. A member in good standing of Phi Tau Sigma since his induction in March of 2011, Steve became a Lifetime Member in September of that same year. His rapid investment into Lifetime Member status is a symbol of Steve’s commitment to our Honor Society.

As a member of Phi Tau Sigma, Steve has served with distinction on the Newsletter Committee; the Awards Committee, which he Chaired 2013-2014; and on the Membership and Qualifications Committee, which he has been



selected to Chair next year (2015-2016). Steve is a candidate for At-Large Councilor in the April 2015 Phi Tau Sigma election. Steve has been instrumental in bringing in external funds for the Awards/Scholarship program and Annual Meeting. He has also initiated substantial and sustained donations from his company, Hawkins, Inc., to sponsor one Phi Tau Sigma Achievement Scholarship each year since its inception in 2012. Steve has successfully nominated worthy individuals for membership in Phi Tau Sigma.

As stated in the nomination materials: "The Phi Tau Sigma Special Recognition Award shall be given to a Member of Phi Tau Sigma who has shown exceptional dedication to Phi Tau Sigma - The Honor Society of Food Science and Technology, as evidenced by significant accomplishments towards the goals and/or administration of Phi Tau Sigma."

Steve readily fulfills this concept. Our revitalization and growth as an Honor Society would not be as profound had it not been for the diligent contributions of Stephen G. Campano, M.S.

### **New Position:**



**Dr. Rodrigo Tarté**, Lifetime Member of Phi Tau Sigma, is joining the Meat Science faculty in the Department of Animal Science at Iowa State University on April 1, 2015, as Assistant Professor of Processed Meat Science and Technology. Dr. Tarté has served as Director, Research and Development for the John Morrell Food Group since 2012. He was previously R&D Director for Creta Farms USA, Senior R&D Scientist for Kraft Foods/Oscar Mayer and R&D Director for Rica Rondo. Dr. Tarté is a graduate of Iowa State University, receiving his Ph.D. degree in Food Science and Technology, and Meat Science. At Iowa State University, Dr. Tarté will teach and conduct research on processed meats and value-added product technology. His research will have a strong focus on the development and application of technologies to enable product innovation and increase product value, and on the scientific understanding of—and development of practical solutions to—technical challenges faced by meat processors. His teaching and student mentorship efforts will be aimed at equipping students with both the hard and soft skills necessary for success in industry or academia.

### **Careers: President – ProSense Consumer Research Center**

(Contributed by Rena Shifren, Ph.D.)

#### Introduction/Background:

I have been extremely fortunate to have had a career in the fields of sensory and consumer research. After working part-time in high school in a small, family-owned company that developed and packaged dry mixes, I earned a bachelor's and master's degree in Food Science at the University of Florida. While there, I had the great fortune to manage the sensory laboratory, running and designing tests for food and related products.

I have also worked in Consumer Insights for a major consumer packaged goods company supporting laundry care, home care,



foods, insecticides, and innovations. Working on such a variety of projects and their specific challenges emphasized that what we experience as consumers has as much to do with sensory perceptions as it does with our attitudes, behaviors, social conventions, and other factors – all of which are fascinating! I earned my doctorate from the University of Arizona in Retailing and Consumer Sciences (minor: Social Psychology), while also teaching undergraduate courses in Research Methods and Statistics and working part-time on a project-by-project basis.

Eventually, I opened my own sensory/consumer behavior research company, ProSense Consumer Research Center. Now, I work chiefly as liaison between developers, scientists, and researchers and consumers, designing and conducting sensory evaluations and consumer testing to help improve products and processes. With every project, I get to step into both the industry and consumer worlds - and I love every minute of it.

Qualifications: Consumer research involves knowledge from both the “hard” and social sciences. Many consumer researchers have degrees (Bachelors or Masters) in food science, with an emphasis on sensory science. Background in areas related to understanding people is also beneficial, such as psychology, anthropology, sociology, market research, consumer science, linguistics, and communication. Consumer researchers must also be adept at employing a multitude of research techniques, including quantitative and qualitative methods. Some specialize in one or the other; others prefer careers that use both. A good grasp of statistics and experience testing consumers is certainly desirable, as are skills in survey development.

My qualifications include advanced degrees in both food and consumer sciences, as well as completion of the Applied Sensory and Consumer Science Certificate Program from UC Davis. Coupled with nearly two decades of work in both the academic and practitioner arenas, I have vast experience with all manner of foods, household products, environmental issues, utilities, and more. I also have a firm background in both quantitative and qualitative research (including formal training for focus group moderating), experimental design, and statistics.

Positions: The food industry is probably the best known for its use of sensory/consumer insights but consumer research positions exist in many industries and the field is growing. Jobs within food and packaged goods companies may be in departments related to sensory science, consumer insights, market research, product development, etc. and range from analysts to management, each with different roles and responsibilities. Consumer researchers can also work for companies established specifically for sensory/consumer work.

Duties: Duties may involve recommending and designing testing, managing consumer panels, organizing and executing tests, analyzing and reporting data, etc. In my position, I work with representatives from companies needing consumer feedback at all levels, developing strategies and appropriate testing designs. My company then assembles and manages general consumer testing (quantitative and qualitative) and trained descriptive panels in facilities specifically designed to accommodate all stages of innovation and product development. Recommendations are generated from the results gathered and shared with the client company.

Salaries: Approximately \$54,000 - \$120,000/year, depending on position and years of experience.

**Benefits:** Benefits are often offered to consumer researchers that work within large companies.

**Conclusion:** Consumer research is a great field for people who are creative, inquisitive, adaptable, and enjoy challenges. As the owner of a sensory/consumer behavior company, I work with people from all types of industries and have found that every product and process is different - and so every project I work on is unique. In addition to the welcome variety this brings, the experiences I've gathered gives me a fresh perspective into products and consumption in general. At the same time, I interact with consumers who have their own thoughts, values, and opinions - even if they often cannot always articulate them. Helping translate these attitudes and behaviors in meaningful ways is exciting and being able to help guide future product development is a rich and rewarding experience.

## **Memories of Dr. Carl R. Fellers:** (\*Used with permission of Phi Tau Sigma Member Dr. John J. Powers)

CARL FELLERS, FOOD SCIENTIST IN ACTION By JOHN J. POWERS\*

Dr. Fellers hit the ground running when he moved to UMass. From his days as a graduate student until the day he retired, he was a productive researcher. There were two hallmarks of his endeavors in research. He produced research steadily. Equally important he believed in prompt publication. During the approximately 18 months before research conducted at UMass began to appear in print, Dr. Fellers embarked upon two areas which were critical to advances in food science and UMass. He immediately began to secure grant money to support graduate students and the research they conducted. He recruited graduate students Francis P. Griffiths, Paul D. Isham, John Claque, and Ernest Smith in the late 1920s and early 1930s. Francis Griffiths became a graduate student in 1929. He wasn't awarded the Ph.D. until 1935, but that was because he was a staff member and had separate teaching/research responsibilities to carry on. When Doc Fellers was called into the military in 1942, Dr. Francis Griffiths returned to UMass as Acting Head of the Department.



(We encourage individuals who knew Dr. Fellers to provide us with their memories of Dr. Fellers for this section of the Newsletter.)

## **Videos Worth Watching:**

Baxter Black: "A Vegetarian's Nightmare or A Dissertation on Plants Rights"  
<https://www.youtube.com/watch?v=-zfzT7QfLZc>

## Interesting Forgotten and Current Research:

(Contributed by Anthony W. Kotula, Ph.D., Lifetime Member, Phi Tau Sigma)

*"Water, water, every where, and all the boards did shrink;  
Water, water, every where, Nor any drop to drink."*

This "Rime of the Ancient Mariner", written by Samuel Taylor Coleridge in 1858, describes our future if more attention is not directed toward fresh water conservation and water recovery.

When my daughter Kathy and I were visiting Israel in 1984, she was amazed to find date palm trees growing in the desert. She asked Dr. Sam Angel, a Food Scientist, how they were watered. We were called away before he could answer. In 1988, while she was pursuing her Ph.D. at Cornell University, Sam visited Cornell and was able to answer her question. The date palms were planted at the bottom of hills. During the colder nights, moisture condenses on the surface of stones placed in lines going up the adjacent hill. Thus, when farmers start at the bottom of a hill and place a stone partially covering the stone below it, like shingles on a roof, the moisture condensate dripped from the top stone to the one below until the stones at the tree roots delivered adequate water to sustain the trees.

Last year the TV program '60 Minutes', featured farmers' concern about a lack of water in a segment called "Depleting the Water" (<http://www.cbsnews.com/news/depleting-the-water/>). The United States has satellites monitoring levels of subterranean water around the globe. Two satellites are able to change their speed on the basis of water or lack thereof, in the land below. The second satellite following the first is a variable distance from the first one depending whether the first satellite is over land with subterranean water or lack thereof. The change in the distance between satellites defines the degree of water available. The danger areas in the world are Russia, China, and California. Farmers in California have been paying up to quarter of million dollars to water their almond trees with water as far as 1,000 feet underground. It seems improbable that water from such deep wells will ever be replaced.

More recently, Dr. Patrick Dunne, Phi Tau Sigma Lifetime Member, shared a story of water conservation by Nestle's Cero Agua dairy factory in Jalisco, Mexico. The dairy heats milk, which is about 88% water, under reduced pressure to remove some water as steam. The condensed steam is treated, then used to clean the evaporating equipment. Then the flushed water from the equipment is purified and recycled again within the dairy. It can be utilized repeatedly or used for purposes outside the dairy. The daily water conservation is adequate to satisfy the needs of 6,400 people. They report the dairy saves 1.6 million liters of water per day.

The "Pure Genius" article in the June 2014 issue of Popular Science described the progress of inventor Dean Kamen to turn waste-water into potable water. You will recall he is the inventor of the Segway, the two wheel self propelled vehicle. Mr. Kamen's DeKa Research and Development Company in New Hampshire, has joined with Coca Cola to provide shipping container sized Ecocenters for underdeveloped villages all over the world. The Ecocenters provide toilet paper, canned food, cooking oil, and first aid supplies. But most importantly there are two water faucets that provide free potable water for anyone who wants it. The water purifying unit designed by Mr. Kamen, about the size of an under the counter refrigerator, is called "Slingshot". Utilizing vapor pressure condensation, the unit can purify 250,000 liters of water per year. That will fulfill the needs of 300 people. Figure



1, which is from Popular Science [pp. 49] describes the process. The "Slingshot" does require some energy input. Solar panels could provide some power but Mr. Kamen used the principle of the 1800s in a small Stirling Generator that works by compressing and expanding a compressed gas, such as air or helium, in a closed system by heating and cooling. A description of the Stirling engine is available at: [http://en.wikipedia.org/wiki/Stirling\\_generator](http://en.wikipedia.org/wiki/Stirling_generator). The Stirling Generator can burn leaves, or sticks, to provide the energy needed by the "Slingshot". A six-month trial in Bangladesh, demonstrated burning even cow manure provided adequate energy to maintain the "Slingshot" in operation.

The partnership has established a goal of having 2,000 Eocenters distributed around the world by the end of 2015. Before long we can probably expect to have Ecosystems being sold throughout the United States to ensure an adequate supply of potable water for our citizens.

Reference:

Foster, Tom, 2014. "Pure Genius" Popular Science, pp 47-49, 74-75, June.

## 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 \$15 per year, and Associate Members are \$10 per year. Lifetime Membership is \$300 (just once). Please access the Phi Tau Sigma Membership Renewal Notice at: [www.phitausigma.org/forms.php?do=form&fid=2](http://www.phitausigma.org/forms.php?do=form&fid=2) and provide the requested profile information which is needed to update our directory of members. Proceed on to pay by PayPal.

Dues can also be paid by check payable to Phi Tau Sigma, (made with U.S. Funds and drawn on a U.S. Bank).

Mail to Phi Tau Sigma Treasurer: Daryl Lund, Ph.D.,  
 May 1 to October 31: 151 E Reynolds Street, Cottage Grove, WI 53527.  
 November 1 to April 30: 11815 N 97th Avenue, Sun City, AZ 85351.

You are welcome at any time to give a donation to the Dr. Carl R. Fellers Award Fund, the Dr. Gideon "Guy" Livingston Scholarship Fund, Phi Tau Sigma Student Achievement Awards Fund, Phi Tau Sigma Special Recognition Award Fund, Dr. Daryl B. Lund International



Scholarship Fund, Phi Tau Sigma Founders' Scholarship, Phi Tau Sigma Chapter of the Year Award, Honorary Society Advancement Fund, or the President's Fund.

We also ask each Chapter to send a list of their current, and lapsed, members along with contact information to the Chapter Affairs Committee Chair, M. Wes Shilling, Ph.D., at: [Schilling@foodscience.msstate.edu](mailto:Schilling@foodscience.msstate.edu), to help ensure our records are accurate.

## What does Phi Tau Sigma Mean to Me?

Recently we asked for your answers to the question: "What does Phi Tau Sigma Mean to Me?" These are just some of the responses. (It is not too late for you to send in your 10 to 200 word answer.)

It is the spring membership campaign at NPR and as annoying as the announcers can be, it reminds me about the value of the NPR programs. I really missed Morning Edition, All Things Considered, Car Talk, Wait wait, don't tell me, Whadya Know, and more these last two weeks. I am making an analogy between Phi Tau Sigma and NPR. You don't really know the value until it is not there. Phi Tau Sigma involves a lot of work by many volunteers to meet the core mission. For those who are members or are invited to become members, it is important to remain engaged in the activities, to create even better ways to meet the core mission of Phi Tau Sigma.

Louise Wicker, Ph.D.  
Professor of Food Science Technology  
MFT Coordinator  
University of Georgia  
2003-2004 Phi Tau Sigma President and Lifetime Member



## Editorial: Did you know?

### Did you know that (regarding Dues):

- Phi Tau Sigma Member dues are \$15 per year, and Associate Members are \$10 per year. Lifetime Membership is \$300 (just once).
- Phi Tau Sigma dues are a great bargain. A very quick review shows that other honor society dues are \$35 to \$50. Other professional society dues, no frills, range from \$55 to \$190.
- When paying dues, you can easily make a tax deductible donation for our Scholarships and Awards, for the Annual Meeting program, or for the needs of the Society. Details are in the 'Donors and Sponsors' section below.
- Your dues status is listed in the cover email of your monthly Phi Tau Sigma Newsletter. Still unsure, email the Executive Secretary, Kathryn L. Kotula, Ph.D. [klkotula@msn.com](mailto:klkotula@msn.com).
- April 1 starts the annual dues drive.
- You may pay your dues for multiple years into the future.



- The membership nomination process is not complete until a successful nominee (inductee) has provided current contact information to the Executive Secretary and **has paid their dues.**
- The date of membership (induction) is the date the first dues are paid. (Not the date on the congratulatory email from the Chair of the Membership and Qualifications Committee, the date of the membership certificate, date of Chapter induction ceremony,....)
- Scholarship and Award eligibility is measured from the date of dues payment.

## About Phi Tau Sigma Communications:

The Phi Tau Sigma Newsletter Committee includes: Kanika Bhargava, Ph.D., Vaishnavi Chandrasekar, M.S., Afef Janen, Ph.D., Anthony W. Kotula, Ph.D., Alyssa Pagel, Emily Steinberg, Ph.D., Claire Zoellner, B.S., and Kathryn L. Kotula, Ph.D. (Chair and Editor - [klkotula@msn.com](mailto:klkotula@msn.com)). 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. Please submit this information to the Editor.

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](mailto:klkotula@msn.com). 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 the Phi Tau Sigma website ([www.phitausigma.org](http://www.phitausigma.org)), Click the Documents button towards the top middle OR directly at: <http://www.phitausigma.org/content.php/190-documents>. Be sure to log in to access the attachments/forms.

These include:

Model Chapter ByLaws

<http://www.phitausigma.org/content.php/194-Model-Chapter-By-Laws>

Guide and Checklist for Phi Tau Sigma Membership Nominations

<http://www.phitausigma.org/content.php/256-Guide-for-Phi-Tau-Sigma-Membership-Nominations>

Association Member Nomination Form

<http://www.phitausigma.org/content.php/195-Associate-Member-Nomination-Form>

Member Nomination Form

<http://www.phitausigma.org/content.php/196-Member-Nomination-Form>

Phi Tau Sigma Awards Forms

<http://www.phitausigma.org/content.php/197-Awards-Forms>

Phi Tau Sigma Scholarship Forms

<http://www.phitausigma.org/content.php/198-Phi-Tau-Sigma-Scholarships>

Phi Tau Sigma Constitution and By-Laws

<http://www.phitausigma.org/content.php/201-Constitution-and-By-Laws>

## **Donors and Sponsors:**

Phi Tau Sigma accepts donations and has available sponsorships.

Phi Tau Sigma is a non-profit 501(c) (3) charitable organization, so your contributions are tax deductible to the extent provided by 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://phitausigma.org/>, click Dues & Supplies, then "Donate to this non-profit Honorary Society...read more"), directly at [www.phitausigma.org/content.php/142-donate](http://www.phitausigma.org/content.php/142-donate), or by directly contacting: Treasurer Daryl Lund, Ph.D. ([dblund@wisc.edu](mailto:dblund@wisc.edu)). Please write "Donation" or "Sponsorship" in the subject line.

Contributions of \$500 or more will be recognized publicly by the Society at the annual meeting, on the Phi Tau Sigma website, in printed material associated with relevant programs and events, and in the Phi Tau Sigma monthly Newsletter. Sponsorships of awards and scholarships are also available at levels of contribution sufficient to cover the 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 Symposium, 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, Phi Tau Sigma Founders' Scholarship, and the Dr. Daryl B. Lund International Scholarship Fund. 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.

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

For more information contact the Treasurer, Daryl Lund, Ph.D. ([dblund@wisc.edu](mailto:dblund@wisc.edu)), or the Executive Secretary, Kathryn L. Kotula, Ph.D. ([klkotula@msn.com](mailto:klkotula@msn.com)). Please write "Donation" or "Sponsorship" in the subject line.

### **Sponsors for 2015 Awards, Events, and Activities:**

**Donald W. Schaffner, Ph.D.** is a Distinguished Professor and Extension Specialist in Food Science at Rutgers University. Don is a Fellow of the Institute of Food Technologists, and an Editor of the Journal of Applied and Environmental Microbiology. He is the current President of the International Association for Food Protection.

**Dr. Mary K. Schmidl** is the 2013-2014 President of Phi Tau Sigma, a Lifetime Member, 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 serving on the Audit Committee, 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.