

DEPARTMENT OF FOOD SCIENCE

2014 ANNUAL NEWSLETTER



















FROM THE DEPARTMENT HEAD



DEPARTMENT HEAD Brian Farkas

Greetings! I can hardly believe that it has been nearly a year since I started at Purdue - and what a year it has been! Contained within our newsletter you will be excited to read about faculty, staff, student, and alumni activities including: Dr. Suzanne Nielsen receiving Purdue's top teaching award, Dr. Bruce Hamaker becoming a University Distinguished Professor, and Dr. W. James Harper (Class of 1946) being awarded a Purdue Honorary Doctorate. I don't have room to list all the accolades so you will just have to read about them in the following pages. Suffice to say, we have the finest people in food science and the awards to prove it!

For me, this has been a big year of learning about Indiana. I spent at least a day each month with our Pilot Plant Director, Steve Smith, touring Indiana food companies and getting to know them and their people. As importantly, I wanted to introduce myself and talk about the exciting things going on in our department. From increasing student numbers to

proposed renovation projects, faculty positions to cutting edge research, and engagement to workshops, there was a lot to cover. While the goal for these trips is to get acquainted, I am excited and proud to announce that Urschel Laboratories in Valparaiso donated two new pieces of equipment to our Pilot Plant, a DiversaCut Sprint Dicer and a Comitrol; thank you Rick! Along those lines, Kellogg's donated a beautiful pilot-scale twin-screw extruder; a big thanks to all at the Advanced Innovation group in Battle Creek!

The renovation and upfit of four rooms within Nelson Hall is critical to our continued success. For Purdue Food Science to grow and continue leading the nation in undergraduate and graduate education, we need to provide our faculty, staff and students the facilities and instrumentation required by future employers. We have proposed that the classroom adjacent to the pilot plant be renovated to a Product Development Laboratory/ Commercial Kitchen. We have

also proposed that the two "iTAP" computer classrooms be renovated; the larger into a food chemistry/analysis laboratory and the smaller into a collaborative learning classroom. Lastly, with food chemistry moving to a new laboratory, our existing teaching laboratory would be sole-purposed as a true food microbiology laboratory. While we are still looking for external support and partnerships, these changes will allow growth of the undergraduate program and expansion of our instructional offerings; including addition of advanced instrumentation for analysis and increased depth in microbial detection and identification via molecular techniques.

I will close with a sincere thank you to the faculty and staff in our department for a wonderful first year. I have enjoyed our time together and look forward to the years ahead.

Brian Farkas Department Head

Photo: Dr. Farkas plunged into his first year as Department Head by volunteering in the dunk tank at the College of Agriculture fall 2013 semester kick-off carnival event.

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Photos courtesy of Andrew Hancock, Tom Campbell, Laurie Lambert Swift and other campus photographers



2013-2014 Industry Fellows

(left to right): Jay Gilbert (ConAgra Foods), J.Ana Steen (Cargill), Amber Furrer (Nestle Nutrition), Steven Garrett (General Mills)

ANNOUNCEMENTS



Research Assistant



Scholle Endowed Chair Professor

MORE INFORMATION

The annual newsletter is only a glimpse of what's happening in the Department of Food Science. Please visit our website for more details at www.foodsci.purdue.edu



Follow us on Facebook at www.facebook.com/PurdueFoodScience

Moving? Changing jobs? Keep us updated at foodsci@purdue.edu

FAREWE



STEVE GAUGER

Steve started at Purdue in 1978 and worked in several business offices within the College of Agriculture until 1995 when he became the Administrative Assistant to the Department Head of Food Science, Phil Nelson. In March 2014, we celebrated Steve's 35 year 3 month-long career at Purdue. Steve (middle) is pictured with current department head Brian Farkas and former head Suzanne Nielsen.



LINDA WEBSTER

Linda started her career at Purdue in the Department of Food Science in June 1995. Initially, Linda worked in the main office as the department's receptionist. Linda has served as the Graduate Program Coordinator from July 2000 until her retirement on May 30, 2014.

Graduate students Luis Maldonado-Mejia, Aaron Pleitner, and Simran Kaur joined many other students, faculty, and staff to celebrate Linda's career.



KATIE (VEENHUIZEN) CLAYTON

Katie (Veenhuizen) Clayton (B.S. 2011) has served as the Food Science Extension Outreach Specialist since August 2011. Katie celebrated her last day at Purdue on June 13, 2014 to become Research and Development Food Scientist at Litehouse Foods in Sandpoint, Idaho.

Food Science Club co-advisors Laurie Lambert Swift and Katie Clayton



DR. HUI-MEI "AMY" LIN

Amy joined the Department and Whistler Center for Carbohydrate Research in August 2008 as a postdoctoral scientist conducting research with Dr. Bruce Hamaker. In 2012, she became a research assistant professor in the Department and Managing Director of Strategic Planning and Research Communication in the Whistler Center with 50% appointments of each. In July 2014, she became Associate Professor in starch chemistry and nutrition in the School of Food Science co-administrated by the University of Idaho and Washington State University in Moscow, Idaho.

Mitzi Barnett, Hui-Mei "Amy" Lin, and Anton Terekhov enjoying the Department's annual staff recognition event in December 2013.

RECOGNITIONS

Dr. Bruce Applegate

• Purdue Entrepreneurial Leadership Fellow

Dr. Mario Ferruzzi

• Purdue University Faculty Scholar

Dr. Bruce Hamaker

- Purdue University Distinguished Professor
- Institute of Food Technologists Fellow

Dr. Kevin Keener

- Purdue Entrepreneurial Leadership Fellow
- Institute of Food Technologists Research and Development Award
- American Society of Agricultural & Biological Engineers Rain Bird Engineering Concept of the Year Award
- Distinguished Fullbright Fellowship at Moscow State AgroEngineering University in Russia

Dr. Jozef Kokini

• Scholle Endowed Chair Professor

Dr. Lisa Mauer

• Institute of Food Technologists Marcel Loncin Research Prize

Dr. S. Suzanne Nielsen

- Purdue University Global Affairs Fellow
- Department of Food Science Outstanding Undergraduate Teaching Award
- College of Agriculture
 Richard L. Kohls Outstanding
 Undergraduate Teaching Award
- Purdue University Charles B. Murphy Teaching Award
- Induction into Purdue University's Teaching Academy

Dr. Haley Oliver

- Teaching for Tomorrow Award
- Vance Publishing's 2013 40 Under 40 in Agriculture Award

PROMOTION AND ADVANCEMENT

Dr. Fernanda San Martin-Gonzalez, promoted from Assistant Professor to Associate Professor

Dr. Betty Bugusu, Managing Director of International Food Technology Center, advanced to professional staff rank 4 within the College of Agriculture

Laurie Lambert Swift,

Administrative Director of Corporate and Alumni Relations, advanced to professional staff rank 6 within the College of Agriculture

Anton Terekhov, Managing Director of NMR and Carbohydrate Laboratories, advanced to professional staff rank 5 within the College of Agriculture

Marliese Orr

Outstanding Service to the Department of Food Science Award



Angie Albright, Yuan Yao,
Betty Bugusu, and Qin Xu
delight in Marliese Orr's
surprised response in receiving
the Staff Outstanding Service
to the Department of Food
Science Award. Marliese was
helping someone with travel
via her smartphone when the
award was announced. Her job
is never done!

STUDENT RECOGNITIONS

OUTSTANDING UNDERGRADUATES

Sydney Rivera, freshman Jacob Haury, sophomore Paul Castrale, junior Sasha McCorkle, senior

400 CLUB MEMBER

(cumulative GPA=4.0)

Fall 2013

Alexandra Belias Claire Burtch Lindya Djaputra Pauline Lay Morgan Meiser Kelsey Morris Sydney Rivera Alexandra Tarr

Spring 2014

Claire Burtch Shiyu Cai Zsazsa Daniella Yuezhen He Andrew Hirsch Joseph Lyon Stacey Soendoro

GRAND CRU CLUB

(GPA of at least 3.5 over successive semesters, based on spring 2013 & fall 2013 semesters)

New Initiates

(2 consecutive semesters)
Abigail Bickel
Debby Devina
Morgan Meiser
Kelsey Morris
Ellen Muenz
Jill Seiter
Derico Setyabrata
Alexandra Tarr
Ji'ai Zhang

Secondus

(4 consecutive semesters)
Devon Barbot
Paul Castrale
Jingfan Chen
Sandra Chough
Hannah Doren

Joshua Jackson Iva Na Christina Pranoto Morgan Redemann Stephanie Sandjaja Yinjing Shao

Academic Distinction

(6 consecutive semesters)
Claire Burtch
Lindya Djaputra
Pauline Lay
Sasha McCorkle
Molly McKneight
Patrick Polowsky
Kelsey Tenney

PHI BETA KAPPA NATIONAL HONORARY SOCIETY

2013-14 UNDERGRADUATE SCHOLARSHIP RECIPIENTS

\$148,500 awarded from the Department of Food Science *\$159,000 awarded from the University

Alumni & Friends:

Sasha McCorkle Molly McKneight

Fred Babel:

Abigail Bickel Sheila Brogan Paul Castrale Tess Chamberlain Sandra Chough Karin Doell Melissa Galizio Jessica Hemann Andrew Hirsch Jacob Hoagland Alyssa Hoffman Joshua Jackson Katie Jenkins Mary Ann Kiess Lance Koester Mary Markham Matthew Mavity Sasha McCorkle Kara McKinnev Morgan Meiser Danika Miller

Joel Mohring
Daniel Moore
Kelsey Morris
Ellen Muenz
Arvind Raghothama
Rachel Roh
Sophia Sanders
Monica Schaeffer
Mary Schneider
Corey Seffernick
Caroline Smith
Hannah Weiss
Alyssa West
Elijah Whitney
Katherine Wilkes

Arnold "Bud" Denton

Danielle Bauer
Laura Brenberg
Emma Buegeleisen
Jacob Haury
Alyssa Hoffman
Yahya Ismail
Joshua Jackson
Noah Malm
Ellen Muenz
Patrick Polowsky
Monica Schaeffer
Mary Schneider
Dillon Sheppard
Elijah Whitney

Institute of Food Technologists (IFT)

Claire Burtch Molly McKneight Caroline Smith Kelsey Tenney Kate Wilkes

International Society of Beverage Technologists

Kelsey Tenney

Kellogg's

Claire Burtch Michelle Egger

Mauger - Naas

Danielle Bauer Melissa Galizio Jacob Haury Morgan Meiser

Mid America Food

Paul Castrale Melissa Galizio Joshua Jackson

*Purdue Presidential

Alexandra Belias Abigail Bickel Aimee Buechler Michelle Egger Jessica Hemann Andrew Hirsch Jacob Hoagland Sean Hurst Joshua Jackson Kara McKinney Kelsey Morris Patrick Polowsky Rachel Roh Jill Seiter Dillon Sheppard Caroline Smith Alyssa West Katherine Wilkes

*Purdue Trustee

Laura Brenberg Claire Burtch Molly McKneight Daniel Moore Kelsey Tenney

Red Gold

Stephanie Beck

Ronald Rice

Abby Bickel
Sean Hurst
Katie Jenkins
Lance Koester
Matthew Mavity
Alice Merryman
Kelsey Morris
Morgan Redemann
Tari Straziscar
Katherine Wilkes

Sarah Veil

Devin Armstrong Danika Miller



FOOD SCIENCE CLUB OFFICERS (left to right)

Natalie Donovan, Ag Council Representative - Sasha McCorkle, President - Danika Miller, Ag Week & Spring Fest Coordinator -Audrey Wilson, Vice President - Abigail Bickel, Treasurer - Not pictured: Jacob Haury, Secretary



FOOD SCIENCE GRADUATE STUDENT ASSOCIATION OFFICERS (left to right)

Aaron Pleitner, Secretary - Krystin Marrs, Vice President - Kacie Ho, Treasurer - Sydney Moser, President - Not pictured: Shanleigh Thomson, Social Director



COLLEGE BOWL TEAM (left to right):

Leigh Schmidt, Matt Allan, Simran Kaur, Patrick Polowsky, Claire Burtch, Amudhan Ponrajan, Amber Furrer, Ryan Murphy, advisor Dr. Haley Oliver not pictured

RECOGNITIONS

BERNARD J. LISKA OUTSTANDING GRADUATE TEACHING ASSISTANT (TA)

Fall 2013: Aaron Pleitner (Ph.D. Oliver) TA for FS 363 Food Microbiology Class

Spring 2014: Tristan Lipkie (Ph.D. Ferruzzi) TA for FS 454 Food Chemistry Class

IFT Scholarships

Jay Gilbert Suzy Hammons Chelsey Keeler Cordelia Running

2013-14 GRADUATE DEGREES

August 2013

Alyssa Beatty (M.S., Dr. Butzke)

December 2013

Hua Chen (Ph.D., Dr. Yao)
Titiksha Dikshit (M.S., Dr. Bhunia)
Milena Leon Garcia (M.S., Dr. Ferruzzi)
Stacey Hirt (M.S., Dr. Jones)
Simran Kaur (M.S., Dr. San Martin)
Sravanthi "Priya" Malaypally (Ph.D., Dr. Liceaga)
Sydney Moser (M.S., Dr. Ferruzzi)
Brian Song (Ph.D., Dr. Ferruzzi)
Laura Zimmerer (M.S., Dr. Jones)

May 2014

Ashley Broady (M.S., Drs. Applegate & Morgan)
Dennis Claudis (M.S., Dr. Santerre)
Susan Hammons (M.S., Dr. Oliver)
Joshua Jones (Ph.D., Dr. Mattes)
Chelsea Keeler (M.S., Dr. Mattes)
Na Li (Ph.D., Dr. Mauer)
Tristan Lipkie (Ph.D., Dr. Ferruzzi)
Clara Vasquez-Majia (M.S., Drs. Applegate & San Martin)
Jingjin "Jessie" Wang (M.S., Dr. Oliver)

2014 Food Science Seniors





2014 Spring Food Science Graduate Students

PURDUE CENTER FOR INSTRUCTIONAL EXCELLENCE

Ph.D. student Aaron Pleitner was chosen by undergraduate students as the best Purdue Teaching Assistant of the year and thus the recipient of the Teaching Academy Graduate Teaching Award.

Ph.D. student Jonathan Kershaw has been selected as an, Emerging Leaders In Science & Society Fellow, by The American Association for the Advancement of Science. Jonathan is one of 16 graduate students nationwide to join their inaugural class of Fellows. Jonathan was also awarded the Certificate of Excellence in Research Award from the Purdue Office of Interdisciplinary Graduate Programs poster competition.

Alexandra Tarr, a sophomore from Elburn, Illinois, and Sydney Rivera, a freshman from Indianapolis finished in second place and won \$2,500 in the Roquette America Imagination Creation Finals for their vegetarian meat substitute MexiMOOffin, made with pea protein (Nutralys) and pea starch, two Roquette signature ingredients. Alexandra and Sydney created the sausagelike product that is baked into a corn muffin with beans, corn, chives and Havarti cheese. The top three teams competed at the Roquette University Global Innovation Center in April in Chicago.

HIGHLIGHTS

Joint Projects with Universities in China

Four of Purdue's Food Science faculty visited Shanghai Jiao Tong University in late November 2013, at the invitation of Dr. Liangli (Lucy) Yu, Dean of the College of Agriculture there, and a Ph.D. graduate of Purdue Food Science. Drs. Bruce Hamaker and Kee-Hong Kim spent two weeks at Shanghai Jiao Tong University working with faculty and students on newly established joint research projects. Drs. Haley Oliver and Suzanne Nielsen visited Shanghai Jiao Tong University only a couple days, as part of a trip to visit and make presentations at three Food Science programs in China. Prior to their stop in Shanghai, they spent several days at Zhejiang University in Hangzhou, where Dr. Nielsen serves on the Academic Committee of the Fuli Institute for Food Science. At Zhejiang University, they were hosted by Dr. Xingqian Ye, a Deputy Dean whose daughter is a Food Science student at Purdue. Drs. Nielsen and Oliver also visited the Food Science Program at Jiangnan University in Wuxi, where they were hosted by Dr. Bo Jiang, who has had a long relationship with Purdue's Food Science Department.



From left to right: Kee-Hong Kim, Lucy Yu, Suzanne Nielsen, Haley Oliver, Bruce Hamaker, Genyi Zhang, Genyi Zhang, Dayun ZHao, and Yi Sheng

Keener Award Distinguished Fulbright Fellowship

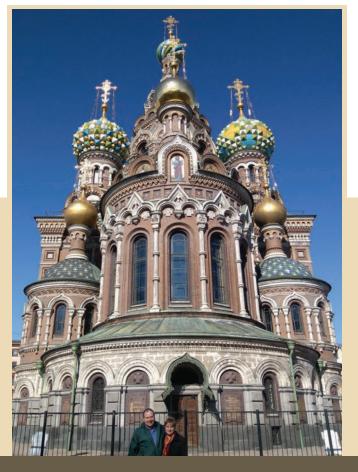
Dr. Kevin Keener was awarded a Distinguished Fulbright Fellowship for the spring semester. He served as the Distinguished Chair in Agricultural Technology and Education from February to May at Moscow State AgroEngineering University in Russia where he taught classes to 120 undergraduate students and 30 graduate students. He also helped train colleagues and industry representatives in Russia on food safety, food technology and food security.

Food Science Academic Advisor Donna Keener visited husband Kevin to see some of Russia's iconic sites in Saint Petersburg.

Embedding molecules in starch may help prevent Type 2 diabetes

Dr. Srinivas Janaswamy, research assistant professor, found that inserting "guest" molecules in the natural structure of potato starch causes glucose to be released more slowly during in vitro digestion. "Having the ability to slow down the digestion of starch would revolutionize the way we approach a number of health issues." Slow, sustained glucose release could help stave off Type 2 diabetes and other health problems associated with elevated blood glucose levels.





HIGHLIGHTS



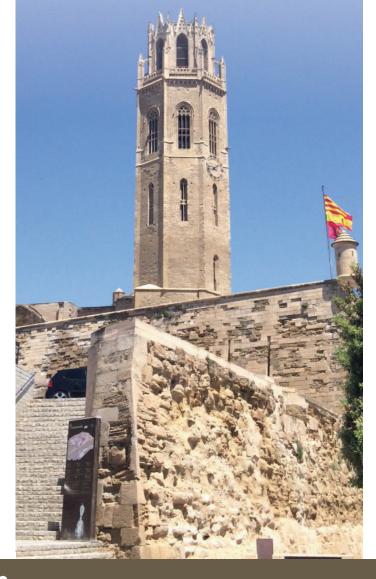
High school students compete to attend World Food Prize Global Youth Institute

In April, 45 Indiana high school students competed on campus for the opportunity to attend the World Food Prize Global Youth Institute. After Dr. Phi Nelson received the World Food Prize in 2007, he arranged for the Department to assist in sending two Indiana high school students per year to DesMoine Iowa to participate in the Youth Institute. The competition, which involves presenting a research paper written on a topic of global food insecurity to a panel of judges, is growing every year and now includes hands-on activities coordinated by several departments within the College of Agriculture. During the competition, students interacted with both of Purdue's World Food Prize Laureates, Professor Emeritus of Food Science Dr. Phil Nelson and Professor of Agronomy Dr. Gebisa Ejeta.

"Purdue's connection with the World Food Prize Foundation allows Indiana youth to explore, learn and be inspired," said Donna Keener, academic coordinator for Purdue's Department of Food Science. "Students work hard on their research and gain a global perspective on major issues and challenges for our world. Students often find this to be a life-changing event leading to additional opportunities and a meaningful career path."

Spain Study Abroad, planning trip (May 2014)

In May 2014, as part of a Study Abroad and International Learning (SAIL) and Office of International Programs (IP) grant, Dr. Liceaga and Dr. San Martin visited different regions of Spain in order to plan site visits for a 2015 Maymester study-abroad course ("Food, agriculture and culture of Spain"). The two food science professors visited the country's capital (Madrid) and the Northern region of Spain including cities such as: Llanes, San Sebastian and Barcelona. Within the 7-day visit, they learned about the Cabrales cheese process which involves mold-ripening the cheese inside caves located in the Peaks of Europe mountains (Asturian region), apple cider production, Idiazabal cheese (made from raw sheep's milk in the Basque country), and olive oil and wine production in the Rioja region. In addition, several cultural, historical and UNESCO world-heritage sites were visited.



Sometimes you just get lucky! By Steve Smith

Sometimes you just get lucky. Last Fall, while attending the Process Expo in Chicago, I was asked if I'd like to be entered in the Visa Travel Sweepstakes. I said, sure, I'll never win. Wouldn't you know it, a month later, they told me I won! My first response was, this must be a scam. However, after thoroughly checking it out, I was the one in 85,000 that won an all expenses paid trip for two to the Winter Olympics in Socchi, Russia.

At first, I turned it down. I didn't want to fly to Russia for three days and then turn around and head back. So, they asked me, "where else in the world would you like to go?" I said, somewhat fecetiously, maybe Italy for a week and then New York for a few days. Surprisingly, they said, "Sure and we'll pay for your travel there too." With that, how could we turn it down!

Our trip to Russia was a whirlwind. We were there for three days and watched ice hockey and figure skating and toured the Olympic Villiage. We also went to the mountains and saw down hill skiing and snow boarding. It was too foggy to see anything else. Contrary to reports, our hotel room was great. We even saw most of the Good Morning America crew. In Italy, we stayed at a beautiful little village built into a hill an hour and a half drive north of Rome called Soriano Nel Cimino. We had a great time wine tasting in the Tuscany Valley and visiting Rome and Assisi. We then spent a couple of days in New York to reduce our jet lag and visit a childhood friend of Faith's. Finally, back home again to Indiana with lots of great memories.



Faith and I in a "curling contest" at the village.



Food Science Student Innovators



Seven food science students participated in the 20th annual Purdue Soy Innovation Competition sponsored by the Indiana Soybean Alliance. A record high of 15 teams competed for the top prize of \$20,000. Team Saucy Soy (pictured) comprised of food science students Helen Logsdon, Stephanie Beck and Kelsey Tenney created an artisan soy sauce brewed with Indiana-gown wine. Their advisors were food science faculty Drs. Christian Butzke and Bruce Applegate. Patrick Polowsky and his team called Project Spor created a soy-based planting container (the SPOR-Cup) under the advisement of food science faculty Dr. Srinivas Janaswamy and Chris McEvoy from Purdue's Entrepreneurship and Innovation Certificate Program. Food Science professor Dr. Kevin Keener along with Dr. Paul Preckel from the Department of Agricultural Economics advised Team Soysense Innovations which included food science students Erika Mendoza and Ryan Murphy. Their product is a polymer material derived from soybean oil and stubble for use in children's toys and related products. Because the product does not use a soybean protein fraction, any allergenic concerns are alleviated. Food Science student Sasha McCorkle and her Team Tile Packers created a soybean derived enhancement to add to traditional tile grout to make the grout antimicrobial, more water resistant, and more environmentally friendly.

HIGHLIGHTS

2013 OUTSTANDING FOOD SCIENCE AWARD RECIPIENTS

Claudia Fajardo-Lira (M.S '96 Ph.D. '99) Professor of Food Science at California State University Northridge, Northridge, California

Mohamed Obanni (Ph.D. '89) Senior Director of Technical Services for Aseptic and Refrigerated Business at The Hain Celestial Group, Modesto, California

Nancie Corum-Oxley (B.S. '02, M.S.-M.B.A. '10) Head Winemaker, St. Julian Winery, Paw Paw, Michigan

Diane Hnat (B.S. '74) Senior Technical Marketing Manager at DSM Nutritional Products, Parsippany, New Jersey

Dianne Ripberger (B.S. '95, M.S. '01) Research and Development Director of Quality Innovation, Information Systems, and Ingredient Quality Assurance at PepsiCo Frito Lay North America, Plano, Texas



2014 DISTINGUISHED AGRICULTURAL ALUMNI AWARD



JIM HARPER RECEIVES AN HONORARY DOCTOR OF AGRICULTURE DEGREE

Willis James "Jim" Harper, of Columbus, Ohio, who retired last August as J.T. Parker Chair in Dairy Foods for the Department of Food Science and Technology at Ohio State University received an honorary doctor of agriculture degree from Purdue on May 17, 2014. Dr. Harper grew up just blocks from Purdue's campus. He completed his B.S. in animal sciences in 1946. Upon the completion of his doctoral degree in 1949, he joined the Ohio State Dairy Technology Department as an assistant professor and rose through the ranks. The department combined with the university's Institute of Nutrition to become the Department of Food Science and Nutrition in 1971, and he developed all the non-dairy technology courses, taught and conducted a research program. He retired from Ohio State in 1981 to join the New Zealand Dairy Research Institute to head up a group of researchers that developed a whey protein concentrate program, with technology that still brings in more than a billion dollars a year to New Zealand before returning to OSU.

Dr. Jim Harper shared highlights of his 70 year-long career with food science faculty, staff and students while on Purdue's campus to receive an honorary doctorate degree.





Department of Food Science Philip E. Nelson Hall of Food Science 745 Agriculture Mall Drive West Lafayette, IN 47907

Urschel Laboratories Donates New Equipment to Pilot Laboratory

