DEPARTMENT OF FOOD SCIENCE

2012 ANNUAL NEWSLETTER
Greetings from the Food Science Department at Purdue, with a new appearance and size to our annual newsletter! We’re including some of the typical information about student, staff, and faculty activities, awards, and research, but in a revised formal with reference to our department website for more details.

We’re focusing in this newsletter on some exciting changes in the department. The first new thing you would notice at the front doors on the north side of our building is a beautiful new entrance, which was made possible by a generous donation from the Reichart Family, owners of Red Gold, Inc. Plans for the entrance were announced two years ago when the building was renamed in honor of Phil Nelson, and finally the job has been completed. As you enter the building and walk down the center hallway on first floor, at the end you’ll now see a door leading into the new Test Kitchen, which also sits adjacent to the Pilot Plant. This facility was very heavily used for the first time this spring semester by senior students working on their product development project for their capstone course.

Large undergraduate student numbers have kept the faculty and staff very busy this school year, and continue to keep Purdue Food Science a priority school of companies recruiting students. The Industry Fellows Program for graduate students, a new partnership between the Department and participating companies, is helping us recruit excellent students into our program.

This coming school year will be a time for us to review our past five years and propose plans for the next five years, as we prepare for our next department review in March 2013. That means it’s also a time to reflect on and work to strengthen our relationships with our alums and the many organizations they represent. We greatly value the encouragement and support of our alums, to the benefit of our new and current students!

We hope you’ll keep in touch!

Industry Fellows Inaugural Class Left to Right: Laura Zimmerer (General Mills), Krystin Marrs (ConAgra), Sydney Moser (Cargill), Aaron Pleitner (Nestlé)
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RECOGNITIONS

DR. HALEY OLIVER, Outstanding Undergraduate Teacher

DR. TAMESHIA BALLARD, Outstanding Undergraduate Counselor

DONNA KEENER, Outstanding Service to Students Award

DR. ARUN BHUNIA, Outstanding Graduate Educator

STEVE GAUGER, received the Food Science Department Outstanding Service Award

DR. MARIO FERRUZZI, promoted from Associate Professor to Professor

MIKE BUDZIK, Network Administrator, advanced from rank 5 to rank 6

DR. KEVIN KEENER, elected to the Board of Trustees of the American Society of Ag. & Bio. Engineers (ASABE)

DR. AMY LIN, received the Young Investigator Award at the 2011 meeting of the International Conference on Food Factors (ICoFF) in Taiwan

DR. BRUCE HAMAKER, selected to receive the W.K. Kellogg International Food Security Award & Lectureship from the Institute of Food Technologists (IFT)

DR. KEVIN KEENER, as a member of the Purdue ZipTrips Team received the College of Agriculture Team Award

DR. MARK MORGAN, selected to participate in the 2012-13 Entrepreneurial Leadership Academy through Purdue’s Discovery Park

INDUSTRIAL ASSOCIATES MEMBERS

Cargill
Clabber Girl
Coca Cola
ConAgra Foods
Dow AgroSciences
Enerfab, Inc.
General Mills
Morgan Foods
Nestle R&D Centers
PacMoore
PepsiCo Beverages & Foods
Red Gold
Roquette America
Sensient Flavors
Skidmore Sales & Distributing Co.
Stanislaus Food Products
The Kroger Company
Zentis Food Solutions
STUDENT RECOGNITIONS

OUTSTANDING UNDERGRADUATES
(based on student’s academic and extracurricular achievements)
Michelle Egger, *Freshman*
Molly McKnight, *Sophomore*
Amber Furrer, *Junior*
Kallen Hovland, *Senior*

400 CLUB MEMBER
(cumulative GPA = 4.0)
Claire Burtch, sophomore

GRAND CRU CLUB
(GPA of at least 3.5 over successive semesters)
New Initiates
(2 consecutive semesters):
Claire Burtch
Mathias Bohn
Tszya Denise Chung
Lindya Djaputra
Stephen Emerick
Amber Furrer
Zhe Allison Ji
Pauline Lay
Sasha McCorkle
Molly McKnight
Anbuhkani Muniandy
Emily Neuenschwander
Patrick Polowsky
Kelsey Tenney
Megan Turik
Weijian Victor Wang

Secundus
(4 consecutive semesters):
Courtney Hayes
Kallen Hovland
Virginia Wright

PHI BETA KAPPA NATIONAL HONORARY SOCIETY
Amber Furrer, Junior
Kevin Na, Junior

2011-12 UNDERGRADUATE SCHOLARSHIP RECIPIENTS
$72,200 awarded from the Department of Food Science
* $157,000 awarded from the University

Alumni & Friends
Claire Burtch

Fred Babel
Catherine Anslinger
Mathias Bohn
Nyssa Boyd
Claire Burtch
Paul Castrale
Sandra Chough
Courtney Hayes
Joshua Jackson
Grace Jang
Stephen Kashdan
Mary Ann Kiess
Yan-Ni Lee
Sasha McCorkle
Molly McKnight
Allison Mercer
Lucas Mitchell
Ellen Muenz
Emily Neuenschwander
Savannah Poe
Patrick Polowsky
Arvind Raghothama
Claire Riehle
Rebecca Samuels
Erin Simon
Megan Turik
Jamie Warren
Jacklyn Whittemore
Carmen Wickware
Katherine Wilkes
Victoria Williams
Virginia Wright

Arnold “Bud” Denton
Courtney Hayes
Bethany Mason
Megan Turik

International Society of Beverage Technologists
Claire Burtch

Mid-America Food Processors
Megan Turik

*Purdue Presidential
Claire E. Adams
Catherine L. Anslinger
Michelle L. Egger
Joshua B. Jackson
Katherine A. Wilkes
Nyssa C. Boyd
Patrick J. Polowsky
Victoria G. Williams

*Purdue Trustee
Laura M. Brenberg
Claire E. Buracht
Ariel K. Pickett
Kelsey N. Tenney
Christopher J. Cheng
Amber N. Furrer
Kallen R. Hovland
Haley L. Keller
Molly M. McKnight
Allison L. Mercer
Catherine V. Shehan

Red Gold
Rebecca Kady

Ron Rice
Courtney Hayes

“BOILIER CULINARY THROWDOWN COMPETITION”
The winning team, the Saccharides, consisted of 4 Food Science students: Jacob Eichinger, Amber Furrer, Virginia “Ginny” Wright, and Allison Mercer

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Courtney Hayes

COMMITTEE OF TEACHING ASSISTANTS (CETA)
Madhuvanti Kale
(PhD with Bruce Hamaker)

2011-2012 GRADUATE DEGREES
August 2011
Claudia Ionita
(PhD, Dr. David Nivens)
Pui Yeu Phoon
(PhD, Dr. Fernanda SanMartin)
Amanda Tuck
(MS, Dr. David Nivens)

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**COLLEGE BOWL TEAM**
Winners of Regional Competition
(will compete at the National Competition held at the 2012 Institute of Food Technologists annual meeting)
**Team Members:** Laura Zimmerer – captain, Josh Jones, Jenn Farrell, Amber Furrer, Kallen Hovland, Catherine Shehan, Carmen Wickware, 
**Team Coach:** Dr. Haley Oliver

**FOOD SCIENCE CLUB OFFICERS**
President: Jennifer Farrell
Vice President: Gina LaRose
Treasurer: Chris Cheng
Secretary: Stephanie Zeider
Ag Council Rep.: Chelsea Ramsey

**FOOD SCIENCE GRADUATE STUDENT ASSOCIATION OFFICERS**
President: Emily McKenzie
Vice President: Cordelia Running
Treasurer: Rebecca Lipasek
Secretary: Na Li
Social Directors: Tristan Liptie & Eileen Duarte

**BERNIE J. LISKA OUTSTANDING GRADUATE TEACHING ASSISTANT**
Fall 2011: Shellen Goltz (PhD with Mario Ferruzzi), TA for Food Processing 442 class.
Spring 2012: Jason Mueller (MS with Andrea Liceaga), TA for Food Analysis 469 class.

**COMMITTEE OF THE EDUCATION OF TEACHING ASSISTANTS (CETA) TEACHING AWARD**
Madhuvanti Kale
(PhD with Bruce Hamaker)

**2011-2012 GRADUATE DEGREES**

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Claudia Ionita
(PhD, Dr. David Nivens)
Pui Yeu Phoon
(PhD, Dr. Fernanda SanMartin)
Amanda Tuck
(MS, Dr. David Nivens)

**December 2011**
Lin Bin
(PhD, Dr. Yuan Yao)
Dawn Dahl
(MS, Dr. Bruce Hamaker)
Choon Young Kim
(PhD, Dr. Kee-Hong Kim)
Hyochin Kim
(PhD, Dr. Arun Bhunia)
Udit Minocha
(PhD, Dr. Bruce Applegate)
Cordelia Running
(MS, Dr. Janaswamy Srinivas)
Richa Vaid
(PhD, Dr. Mark Morgan)
Jessica Wiersma
(MS, Dr. Connie Weaver)
Bicheng Wu
(PhD, Dr. Brad Reuhs)

**May 2012**
Wenqi Cui
(MS, Dr. LiFu Chen)
Shellen Goltz
(PhD, Dr. Mario Ferruzzi)
Amandeep Kaur
(PhD, Dr. Bruce Hamaker)
Byoung-Hoo Lee
(PhD, Dr. Bruce Hamaker)

**First Row:** Brandon Johnson, Hannah Smith, Jennifer Farrell, Christopher Cheng, Jessica Harris, Alexandra Aubrey, Kallen Hovland

**Second Row:** Chuhan Liu, Hechen Wei, Lauren Ewer, Emily Neuenschwender, Angela Baker, Dr. Suzanne Nielsen, Jingjin Wang, Melissa Arndt, Emiria Soendjojo, Sarah Princehorn, Yi Niu, Phillip Kass

**Third Row:** Catherine Anslinger, Elizabeth Kryger, Sergiy Mosezdn, Carmen Wickware, Stephen Cook, James Brooks, Stephanie Zeider, Steven Chambers, Mathias Bohn, Peter Cook, Jordan Ash, Paola Flores

Verdad Ixta Not Pictured: Jaehoon Huh, Moon Won Kwak, Vanja Pistalo, Catherine Shehan, Tianlin Xu, James Schnepf, Yi Xiao

"BOilER CUliNARy ThROwdOwN COMPETiTiOn"

The winning team, the Saccharides, consisted of 4 Food Science students: Jacob Eichinger, Amber Furrer, Virginia “Ginny” Wright, and Allison Mercer
E. COLI, SALMONELLA MAY LURK IN UNWASHABLE PLACES IN PRODUCE

Sanitizing the outside of produce may not be enough to remove harmful food pathogens, according to Amanda Deering, postdoctoral researcher in food science and Robert Pruitt, professor of botany and plant pathology, who demonstrated that Salmonella and E. coli can live inside plant tissues. Results were published in separate papers in the Journal of Food Protection and Food Research International.

PASS THE LYCOPENE: SCIENTIST CAN PROTECT SUPPLEMENTS INSIDE FOOD

Srinivas Janaswamy, research assistant professor of food science, has developed a way to encase nutritional supplements in food-based products so that one day consumers might be able to sprinkle vitamins, antioxidants and other beneficial compounds right onto their meals. He said many of the nutraceuticals, or nutritional supplements, added to foods today are not structurally stable. Heat, light, oxygen and other external factors could degrade the supplements, rendering them ineffective. “There are many methods for adding nutraceuticals to foods, but the one thing they all have in common is instability due to non-rigid structures,” said Janaswamy, whose findings were published in the journal Food & Function.

RED WINE, FRUIT COMPOUND COULD HELP BLOCK FAT CELL FORMATION

A compound found in red wine, grapes and other fruits is able to block cellular processes that allow fat cells to develop, opening a door to a potential method to control obesity, according to a Purdue study. Kee-Hong Kim, an assistant professor of food science, and Jung Yeon Kwon, a graduate student in Kim’s laboratory, reported in the Journal of Biological Chemistry that the compound piceatannol blocks an immature fat cell’s ability to develop and grow. While similar in structure to resveratrol – the compound found in red wine, grapes and peanuts that is thought to combat cancer, heart disease and neurodegenerative diseases – piceatannol might be an important weapon against obesity. Resveratrol is converted to piceatannol in humans after consumption.

PESTICIDE ADDEDitives CAUSE DRIFTING DROPETS, BUT CAN BE CONTROLLed

Chemical additives that help agricultural pesticides adhere to their targets during spraying can lead to the formation of smaller “satellite” droplets that cause those pesticides to drift into unwanted areas, Purdue University researchers have found. Carlos Corvalan, an associate professor of food science, said understanding how the additives work together means they could be designed to decrease the health, environmental and property damage risks caused by drift. Corvalan, Osvaldo Campanella, a Purdue professor of agricultural and biological engineering; and Paul E. Sojka, a Purdue professor of mechanical engineering, published their results in a February issue of the journal Chemical Engineering Science.

PIll SometIMes MAY PREvENt SErIOUS FOoD BORNE illNESSES

Modified probiotics, the beneficial bacteria touted for their role in digestive health, could one day decrease the risk of Listeria infection in people with susceptible immune systems, according to research by Arun Bhunia, professor of food science; Mary Anne Amalaradjou, postdoctoral researcher; and Ok Kyung Koo, a former Purdue doctoral student. They found that the same Listeria protein that allows the bacteria to pass through intestinal cells and into bloodstreams can help block those same paths when added to a probiotic. “Based on the research, it looks very promising that we would get a significant reduction in Listeria infections,” said Bhunia, whose findings were published in January in the journal PLoS One.

PASS THE lyCOPENE:

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PILL SOMEDAY MAY PREVENT SERIOUS FOODBORNE ILLNESSES

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ADDITIVES MEANT TO PROTECT VITAMIN C IN SOME CASES CAUSE MORE HARM

Anti-caking agents in powdered products may hasten degradation of vitamin C instead of doing what they are supposed to do: protect the nutrient from moisture. Lisa Mauer, professor of food science; Lynne Taylor, professor of industrial and physical pharmacy; and Mauer’s graduate student Rebecca Lipasek study deliquescence, a reaction in which humidity causes a crystalline solid to dissolve. In Mauer’s laboratory, different anti-caking agents were blended with powdered sodium ascorbate, a common form of vitamin C, and were exposed to different relative humidities. Once vitamin C changes chemically, it no longer holds its nutritional value. The findings suggest that foods made with powdered vitamin C may lose the nutritional value at a lower humidity than once thought. The team’s findings were published in the September 2011 issue of the Journal of Food Science.

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

Moving? Changing jobs? Keep us updated at foodsci@purdue.edu
Department of Food Science
Philip E. Nelson Hall of Food Science
745 Agriculture Mall Drive
West Lafayette, IN 47907

2011 OUTSTANDING FOOD SCIENCE AWARD RECIPIENTS (LEFT TO RIGHT)

NICHOLAS ROZZI (BS 1997, PhD 2000), Director, Global Commercialization for Godiva Chocolatier, Inc.
LIANGLI “LUCY” YU (PhD 1999), Professor & Acting Chair of the Dept. of Nutrition and Food Science at the University of Maryland
GEORGE ABIDE (PhD 1992), President of the Abide Idea Company
RENEE MELLICAN (MS 1994, PhD 2001), Director of Product Development in Research, Quality, and Innovation for ConAgra Foods
GEORGE SADLER (PhD 1984), Chief Technical Officer of Prove It, LLC

LIANGLI (LUCY) YU
PhD 1999
2012 Distinguished Ag Alumni Award