

DEPARTMENT OF

FOOD SCIENCE AND HUMAN NUTRITION

FALL 2012

NEWSLETTER



INSIDE THIS ISSUE:

- + **NUTRITION STUDENTS** study abroad
- + **OBESITY PREVENTION** transdisciplinary program
- + **NEW** ingredient course
- + **SUGAR** doesn't melt
- + **ALUM** appears on **FOOD NETWORK**
- + **AND MORE...**





GREETINGS

from the Department of Food Science and Human Nutrition at the University of Illinois

Dear Friends and Alumni:

This has been another productive year in our department, and I want to thank the faculty, staff, students, and you, our alumni and friends, for making it a very successful year. I want to share with you that I announced last spring that I plan to retire at the end of the 2012 calendar year. It has been a privilege and an honor to have served as the head of the Department of Food Science and Human Nutrition since August 2002. I believe that due to our team efforts, the department is in a position of strength, both in the areas of teaching and research. We also recognize that Illinois is a renowned university, and its grassroots culture and the exceptional people who live, work, teach, discover, and learn here will continue to sustain its excellence. This has been an exciting and fulfilling 10 years for me, and I have many people to thank for their trust and support: the faculty, the staff, our graduate students, our undergraduate students, our alumni and friends, and my family. I also deeply appreciate the strong support I have received from the ACES Deans (Dr. Bob Easter and Dr. Bob Hauser) and Associate Deans, the current and past department heads in ACES, the ACES Business and HR Offices, and campus administration and support staff.

Thank you for all that you do for us—volunteering your time to come to campus, attending our receptions at professional meetings, offering us your suggestions and feedback, providing donations, and staying in touch. Your support is very valuable to us and we appreciate all that you do.

My very best wishes and thanks to you, and in 2013, please join me in welcoming the new department head!

All the best,

NEWSLETTER STAFF

Marla Todd – Editor
Dr. Faye Dong – FSHN Head
DCC Marketing – Design

CONTRIBUTING WRITERS

Phyllis Picklesimer
University of Illinois News Bureau

CONTRIBUTING PHOTOGRAPHERS

David Riecks
Joyce Seay-Knoblauch
University of Illinois News Bureau - Brian Stauffer

CONTACT INFORMATION

Department of Food Science and Human Nutrition
260 Bevier Hall
905 S. Goodwin Ave.
Urbana, IL 61801
P – 217-244-4498
F – 217-265-0925
e-mail – fshn-general@illinois.edu
website – www.fshn.illinois.edu

TABLE OF CONTENTS:

Faculty and Staff Updates	3
FSHN Departmental News	7
Student News	16
Alumni News.....	19
Donor Recognition	22
Friend Updates	23



FACULTY AND STAFF CELEBRATIONS

RETIREMENTS



Dr. Bill Artz, far right with his wife Elisangela and daughter Ana Celina.

Dr. William Artz, associate professor of food science, retired on May 15, 2012. He came to the University of Illinois in 1984. His research interests

included the analysis of fats and oils using supercritical fluid technology. He also closely examined the effect of selected food processes on fat and oil stability. As part of his research, he developed a fat substitute, a competitor for Olean/Olestra.

Dr. Artz plans to continue to teach in the online master's program. He also plans to teach overseas, likely in Brazil. His research interests will continue focusing on bourbon. He and his wife Elisangela look forward to spending more time together raising their daughter Ana Celina.



Dr. M. Susan Brewer, professor of food science, retired on June 16, 2012. She joined the Department of Food Science in 1989. Dr. Brewer conducted research in the areas of enhancing meat safety,

including irradiation and use of organic acids; and meat product enhancement to improve quality. Additionally, during her time at the University of Illinois, she created a product development course for the food science curriculum. She has continued to serve as the main instructor for that course for several years. She was also involved in the development of the HACCP training program in compliance with USDA requirements for meat-processing plants for the state of Illinois.

When her husband retires, they plan to relocate to Wyoming, their home state. In the meantime, she is enjoying gardening, traveling, and reorganizing her home. She hopes to write a book in the coming years. Although she has many plans for retirement, she does intend to stay closely tied to the department.



Dr. Bruce Chassy enjoying the view at Schweitzer Mountain Ski Resort in Sandpoint, Idaho, near his new residence.

Dr. Bruce Chassy, professor, retired on July 1, 2012. He joined the University of Illinois faculty in 1989. In retirement he hopes to continue to teach online, and have an interest in science communication about food safety and foods in general. He plans to

continue to expand his webpage <http://academicsreview.org>.

Dr. Chassy and his wife Carol will be relocating to Priest River, Idaho, where they expect to spend time enjoying skiing, boating, hiking, biking and generally exploring nature. They enjoy woods, water and the mountains in the far north. Additionally, they have taken pleasure in learning to play the banjo, guitar and mandolin, as well as dancing. It is their hope that these hobbies will sustain them through the long Idaho winters.



Dr. Faye Dong and her husband Willie.

DEPARTMENT HEAD PLANS TO RETIRE

Dr. Faye Dong, professor and head of FSHN, has announced that she will retire effective January 1, 2013. Dr. Dong became head on August 1, 2002. Prior to coming to Illinois, she was a professor in the School of Aquatic and Fishery Sciences at the University of Washington in Seattle.

She and her husband Willie will be relocating back to Seattle after retirement. She looks forward to taking some time after the relocation to explore how she plans to spend her days in retirement.

As she reflects on her ten years as head, she shares the following, "Our successes can be attributed to the outstanding teams of people in our department. I am extremely proud of the achievements of our faculty, students, and staff, and I have been happy to see many of them recognized for their excellence through various awards and grants. I am also very pleased that we had the opportunity to hire seven assistant professors since 2002, particularly because they were hired on special initiatives during the years when we had to give back vacant faculty lines to meet budget reductions. With the help and leadership of Greg Knott, Marla Todd, and Louise Rogers, and through the generosity of outstanding alumni and friends, we were able to transform outdated facilities in Bevier Hall into the modern and functional showpieces that we have today: Bevier Café, the kitchen, the Spice Box; the Food Labs, and the Commons. With Greg Knott's expert help and negotiations for campus funding, we have been able to renovate various classrooms, rebuild the Bevier north elevator, and improve the lighting of the hallways in Bevier Hall. Altogether, these new facilities have improved morale and the quality of the students' learning experience. We are making significant progress to improve the pilot plant as well. Through Hatch funding, assistance from the College, and some endowed funds, we were able to renovate research laboratories for nine faculty members."

NEW FACULTY AND STAFF



Dr. Pawan Takhar joined FSHN as an Associate Professor of Food Engineering on August 16. He was previously a faculty member at Texas Tech University. He earned his Ph.D. in agricultural and biological engineering from Purdue University, M.S. in food engineering from Asian Institute of Technology, Thailand, and a bachelor's degree in agricultural engineering from Punjab Agricultural University in India. He has also worked as a software programmer and a design engineer in a food machinery manufacturing company in Thailand.

In his research, Dr. Takhar studies food and bioengineering processing using multiscale mathematical models and experimental techniques.

Dr. Takhar and his wife Suneet have two children, Jashan (7) and Inaaya (2). In his spare time, he enjoys playing with his kids, taking walks and photography.



Dr. Mark Lippi joined FSHN as a teaching associate and the coordinator of industry relations in May 2012. He is overseeing interactions with faculty and industry partners to improve and optimize processing facilities in FSHN, including the pilot plant. He also will be teaching portions of the food science product development course and ingredient functionality. Dr. Lippi spent 25 years working in various scientific and management roles in the food industry, most recently spending 16 years with Kellogg's.

He earned his Ph.D. and M.S. in food science and B.S. in Biology, at the University of Illinois. He grew up in Pekin, Illinois. In his free time, he enjoys working out, golf, reading and playing tennis.

Mark and his wife Marianne, also a FSHN alumna, have relocated to the Champaign area with their yellow lab, Brinkley. They look forward to being closer to some family in Illinois and backing the Fighting Illini again!



Betsy Lancaster joined FSHN as office support associate in January 2012. She can be found at the front desk of the FSHN business office assisting faculty, students, and business office staff with various needs, including keys, equipment and much more! Prior to coming to FSHN, Betsy worked at the University in Capital Programs and Real Estate; and Materials Science and Engineering.

In her spare time, Betsy enjoys playing with her kids, gardening, motorcycle riding, traveling, crafts, and scrapbooking. She and her husband Dave have two children, Trenton (12) and Kallie (4), as well as two dogs, Red and Ruby.

Justine Karduck joined FSHN as a teaching associate and director of the didactic program in dietetics in July 2012. She is providing academic advising to Dietetics students, teaching courses, maintaining the didactic program accreditation and serving as a liaison between FSHN and the Academy of Nutrition and Dietetics.



She earned her M.S. degree in nutritional sciences at Illinois, working with Dr. Karen Chapman-Novakofski, and earned her B.S. in dietetics at Eastern Illinois University. She also completed the University of Illinois graduate dietetic internship. She is a Certified Diabetes Educator and has a Certificate in Adult Weight Management from the Academy of Nutrition and Dietetics.

Prior to coming to FSHN, she was the Sportwell Coordinator at the McKinley Health Center on campus. She counseled students on weight management, eating disorders, sports nutrition, and provided medical nutrition therapy for various nutritional issues. She oversaw the McKinley Nutrition Peer Education Program, a group of senior dietetics students that present nutrition workshops on campus. She has also worked as a clinical dietitian and diabetes educator. She is a past president of the Eastern Illinois Dietetic Association and has been a clinical adjunct instructor in FSHN.

Karduck and her husband have twin boys, Wilhelm and Henry (4).



Carter Phillips joined FSHN as the quantity foods manager in June 2012. He is responsible for the daily operation

of Bevier Café, which includes overseeing students in the lab portion of the quantity foods course. Prior to coming to FSHN, he worked in University Catering, where he oversaw the operation of the hospitality aspects of the sky boxes at Memorial Stadium. A fun family fact for Carter is that his grandmother, Thrasilla, also worked in the Bevier Cafeteria at one time.

He received his B.S. in hospitality management at Illinois, which included his own experience as a student in the Bevier Café. Carter and his wife Amanda have two children – Colby (2) and Ava (1).

Keri Dean joined FSHN as an office support associate in July 2012. She is



providing office support to Dr. Faye Dong, assisting with the coordination of the FSHN graduate seminar, interacting with departmental committees, and organizing special events.

Keri received her B.S. in education from Eastern Illinois University. Prior to joining the FSHN business office, she served as an administrative assistant to Dr. Hans Blaschek in the Center for Advanced Bioenergy Research. She will be continuing in this role, in addition to her new duties. She also has experience teaching middle and high school for 15 years.

Keri and her husband Brian have two daughters – Karli (10) and Kate (8).

FACULTY AND STAFF AWARDS



Dr. Munir Cheryan received the Illinois Corn Growers Association's 2011 Ethanol Award for his contributions to the ethanol industry. Dr. Cheryan is credited with assisting Prairie Gold Inc. in licensing five patents on the corn oil and protein extraction (COPE) process for the production of high-value co-products in corn-based ethanol plants. These include zein protein that can be used as a substitute for films and plastics, and a unique edible corn oil that, unlike today's commercial oil, is red-colored containing health-promoting components.



Dr. Nicki Engeseth received the William V. Cruess Award, presented by the Institute of Food Technologists. This award recognizes an IFT member who has achieved excellence in teaching food science and technology. Dr. Engeseth teaches courses addressing food chemistry and the chemistry of lipids.



Dr. John Erdman was recognized with the Dannon Institute Mentorship Award by the American Society of Nutrition. This award is presented annually to a nutrition educator who has demonstrated outstanding mentoring qualities by developing successful investigators of nutritional sciences. The Dannon Institute sponsors this award.



Dr. Soo-Yeun Lee received the University of Illinois Campus Award for Excellence in Undergraduate Teaching. Dr. Lee uses demonstrations and experiments that offer students hands-on interactions. During breaks in her lectures, students work through complex concepts by way of practical examples that call for problem-solving.



Dr. Mike Miller received the North American Colleges and Teachers of Agriculture (NACTA) Teacher Fellow Award. Criteria included in the evaluation for this award are the instructor's philosophy; evaluations submitted by current students, alumni, administrative officers and peers; a self-evaluation as well as factors such as availability to students, teaching innovations and departmental activity.



Dr. Kelly Tappenden received the Excellence in Nutrition Education Award from the American Society of Nutrition. This award is given for outstanding contributions to teaching nutrition. Dr. Tappenden teaches several clinical nutrition courses at the undergraduate and graduate levels.



Dr. Yuan-Xiang Pan received the Norman Kretchmer Memorial Award from the American Society of Nutrition. This award is presented to a young investigator for a substantial body of independent research in nutrition and development with potential relevance to improving children's health. Dr. Pan's research addresses early nutrition programming with an emphasis on molecular mechanisms of developmental origins of chronic diseases in offspring.

Dr. Pan was also selected to serve as the chair-elect of the Nutrient-Gene Interaction Research Interest Section (RIS), which is one of 15 in the American Society for Nutrition (ASN). RIS were established in the early 1990s "to ensure representation of and support for the various areas of nutritional research, and provide a mechanism for effective involvement of the membership in the affairs, and enhance the participation of and contact with scientists in other disciplines who have interest in the scientific fields related to nutrition."



Dr. Margarita Teran-Garcia was elected as the Mexico representative to the Council of the Obesity Society. The Obesity Society is the leading scientific society dedicated to the study of obesity.

DONOVAN APPOINTED



Dr. Sharon Donovan has been appointed as a member of the Institute of Medicine of the National Academy of Sciences Food and Nutrition Board. Her term began on July 1, 2012 and will end June 30, 2015

The board addresses issues of safety and adequacy of the nation's food supply; establishes principles and guidelines of adequate dietary intake; and renders authoritative judgments on the relationships between food intake, nutrition, and health.

Its major focus is to evaluate emerging knowledge of nutrient requirements and relationships between diet and the reduction of risk of common chronic diseases and to relate this knowledge to strategies for promoting health and preventing disease in the United States and internationally. The board also assesses aspects of food science and technology that affect the nutritional quality and safety of food and influence health maintenance and disease prevention.

DE MEJIA RECOGNIZED



Dr. Elvira de Mejia received the McCormick Science Institute Research Award from the American Society of Nutrition. This award is presented to an investigator conducting clinical, translational, in vitro and/or ex vivo research, whose scientific contributions have advanced the understanding of the potential health benefits of culinary herbs and spices. Dr. de Mejia's research focuses on molecular mechanisms of chemoprevention of bioactive food components, mainly proteins and flavonoids, and their safety.

Dr. de Mejia also was promoted from associate professor to professor in August 2012. Dr. de Mejia joined FSHN in 2002.



Dr. Guy Johnson, FSHN alumnus, presents the McCormick Science Institute Research Award from the American Society of Nutrition to Dr. Elvira de Mejia.



Dr. Karen Chapman Novakofski received the College of ACES Faculty Award for Excellence in Extension. This award recognizes outstanding professional achievement and demonstrated excellence in extension. Dr. Chapman-Novakofski's extension and outreach program addresses a fundamental issue of the 21st century – the health of our burgeoning geriatric population. She addresses the economic and emotional costs of chronic illness, including weight management, osteoporosis, and diabetes, with pro-active healthcare approaches focused on prevention.



Dr. Bill Helferich received the Paul A. Funk Recognition Award. This award is presented to faculty for outstanding achievement and major contributions to the betterment of agriculture, natural resources, and human systems. Dr. Helferich conducts research in nutritional toxicology and breast cancer. He teaches human nutrition courses.



Dr. Shelly Schmidt received the Spitze Land-Grant Professorial Career Excellence Award. This award is presented to encourage and recognize the professorial career of tenured faculty in their performance and commitment to teaching and advising; research and publications; extension and public service; faculty governance; and participation in professional associations. Dr. Schmidt's teaching, research and outreach efforts embody all aspects of the land-grant university mission.



Beth Reutter received the College of ACES Professional Staff Award for Excellence, Innovation and Creativity. This award recognizes outstanding performance and demonstrated professional excellence by professional staff members of the college. The award for Innovation and Creativity recognizes a special initiative. Reutter is a hospitality management program director, teaching associate and undergraduate advisor.

DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION AWARDS

GEORGE H. LANTER OUTSTANDING STAFF
Dr. Karl Weingartner

OUTSTANDING ADVISER/MENTOR
Dr. Mike Miller



TAPPENDEN NAMED KRAFT FOODS HUMAN NUTRITION PROFESSOR

Kelly Tappenden, professor in food science and human nutrition, has been named the Kraft Foods Human Nutrition Endowed Professor. The endowed professorship is part of a \$1 million permanent endowment from Kraft Foods to the College of Agricultural, Consumer and Environmental Sciences (ACES) Division of Nutritional Sciences (DNS).

"Dr. Tappenden is exceptionally qualified for this recognition because of her stellar contributions spanning each dimension of the U of I's mission: research, teaching, and extension," said ACES Dean Robert Hauser.

Tappenden's research is focused on regulation of small intestinal function by various nutrients and gastrointestinal-specific peptides. A campus leader, Tappenden has served in many capacities, including her current role as University Distinguished Teacher-Scholar.

"Kelly's internationally recognized contributions to this field continue to enhance the lives of children and adults with intestinal failure by providing key information needed to establish novel therapies that are now reaching the clinical arena," said Rodney Johnson, director of the U of I's Division of Nutritional Sciences.

Tappenden is steadfastly committed to fostering student learning. "These efforts have resulted in her receipt of multiple teaching awards, her inclusion on the List of Teachers Ranked as Excellent by Their Students on 18 occasions, and her educational leadership is evident within the College of ACES and across the Illinois campus," Johnson added.

Johnson is enthusiastic about the benefits the Kraft endowment provides. "This endowment allows the Division of Nutritional Sciences to recruit and retain the highest-quality students and faculty, which will enable us to meet our vision of training the leaders in our discipline far into the future," he said.

In addition to the endowed professorship, the endowment also provides two Kraft Foods Human Nutrition Graduate Fellowships in the Division of Nutritional Sciences and the Kraft Foods Human Nutrition Undergraduate Scholarship Program in the Department of Food Science and Human Nutrition.

INTERNSHIPS BENEFIT STUDENTS, FUTURE EMPLOYERS

Internship experiences continue to be a valuable component of undergraduate education and this is certainly the case in the University of Illinois hospitality management program. Students are required to complete practical and professional internship experiences prior to graduation. After completing their freshman year, students must work in the food service industry. They can hold any type of position related to food service. This helps them confirm what the real world is like in the hospitality industry and learn if it is truly the field they wish to pursue, said Beth Reutter, hospitality management internship coordinator and program director.

Students participate in a second internship typically during the summer between their junior and senior years. This experience, referred to as the professional internship, is an entry-level management position.

“The students get hands-on experience on campus but the internship adds credence to the education and training we give them,” said Jill Craft, hospitality management teaching associate. The students exhibit maturity and confidence after completing their professional internship. Then when enrolled in the capstone fine dining course in their final semester, they are more comfortable in the environment, their role and the daily decisions that they make, she added.

Students recognize that these internships are a necessity and make them more prepared to get a job. Because the professional internship requires the students to take on supervisory roles, their ability to obtain an entry-level management position increases, Reutter said.



Melissa Doll, a hospitality management alumna, interned with LA Gourmet Catering and later accepted full time employment with them.

Reutter works closely with the students and the supervisors before, during and after the internship experience. Prior to leaving campus for the summer, the students, working in conjunction with the supervisors, must develop internship objectives and a timeline for those objectives. This helps the student obtain the full benefit of the experience and motivates them to reach those objectives. The students are also required to keep a journal of their experiences, including contact information to build their professional network; and they are encouraged to communicate with each other and Reutter about their experiences. They have even been known to trade stories about celebrity sightings!

Because student interests vary widely, the internship experiences are diverse. Summer 2012 found students at hotels, restaurants, country clubs and event planning companies in Illinois, Colorado and China. Reutter encourages the students to expand their horizons exploring varied geographic locations and job responsibilities.

Additionally, she has observed in her previous experiences that although it is more of a financial challenge, unpaid internships can often be the most beneficial for the student. “Employers recognize that students are volunteering and give them flexibility to experience all aspects of the job,” she said. “Often times in the paid positions, the students are hired for a specific role and don’t receive as much exposure to other aspects of the business.”

Students are not the only ones benefitting from the internship program. Employers have the opportunity to expose students to the benefits and reality of the field and try them out as potential future hires. “This is an awesome opportunity for industry partners to mold future leaders, interest them in the industry, and keep them in the industry,” Craft said. “These students are hard workers.”

Businesses or organizations interested in providing an internship experience or full-time employment for hospitality management students should contact Beth Reutter at breutter@illinois.edu or 217-333-2024 or Jill Craft at jnorth@illinois.edu or 217-333-8805.

STUDY ABROAD FOCUSES ON FOOD AND NUTRITION SECURITY

An ACES study abroad program in international food science and nutrition is uniting education, research and service learning in an intense, four-week program for undergraduate students. The experiential learning opportunity immerses students in the culture of Honduras, while exposing them to a variety of aspects of agriculture, food systems and food and nutrition security issues. The program is led by Dr. Juan Andrade, assistant professor of food science and nutrition; Dr. Bill Helferich, professor of nutrition; Dr. Nicki Engeseth, professor of food chemistry; and Julio Lopez, Ph.D. student working under Helferich.

“Students are not only observing a Latin American culture; they are experiencing it at a different level,” Andrade said. “They are doing work that can impact nutrition in rural areas, where most help is needed.”

During the first two weeks of the program, students live with families in St. Lucia’s Valley, southeast of Tegucigalpa. They learn Spanish and experience the culture first hand, working with collaborators from Centro Hondureño de Español (CEHDE). Students spend their days visiting various rural neighborhoods and conducting field research, often exposing them to poverty-stricken areas.

“I’ve heard a lot about the quality of some people’s lives inside and outside of the U.S, but sitting in their homes was an eye opening experience,” said Elise Ellinger, sophomore in human nutrition.

Participants and instructors also engage in several community service experiences during these first two weeks. Summer 2012 found the students collecting anthropometrics (height, weight, and arm circumference) in one of the area schools. “School leadership can use these data to make a stronger case for the nutritional needs of the children; we can assess more children each year,” Andrade said. ACES participants said they enjoyed interacting with the children while they were gathering the anthropometric information.

They also tour family owned food micro-industries, such as jelly and bread manufacturers while staying with the host families. “This type of activity allows students to familiarize themselves with small food processing systems in developing countries” Lopez said. Students also visit community centers, a resort, and a local farm.

The students also built a small wooden theater in a school to have a place to give a puppet presentation about nutrition and health. Schools are the easiest venue in which to disperse information about nutrition to youth, Andrade said. The theater will now be available to the school for other purposes.

“Our program started a couple of years ago” Andrade said. Projects from previous years have been directed at understanding the acceptance of a fortified product, Nutrigems™, mixed with rice among school-age children. School lunches are provided to more than one million students in Honduras, Andrade said. This can be a major conduit for improving nutrition within this population.

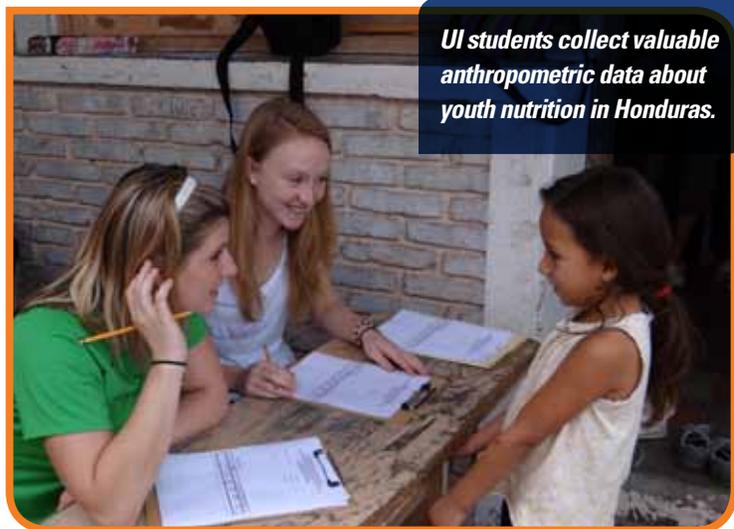
Students learn about agriculture in a higher education setting for the second two weeks of the study abroad experience. While visiting Zamorano University, students work with dairy cattle, poultry, aquaculture, in honey, dairy and meat processing plants, and even in a small retail

shop. “They see the whole system from production to harvest to processing,” Andrade said.

“This is a unique opportunity for our undergraduate students because they are immersed in an interactive, hands-on learning experience,” Lopez said. “They have a unique experience working in the fields and laboratories beside students from more than 20 countries in Latin America” he added.

Jahna Goldman, senior in dietetics, noted that her time at Zamorano was likely the biggest learning experience for her on the trip. Seeing where food originates and following it through with hands-on work from farm to table increased her understanding of the food system.

Research is a significant component of the experience abroad. Students are serving as junior scientists as they conduct food security surveys and interviews. Field data enrich faculty understanding of current nutrition and health issues and facilitate



graduate student projects in human nutrition. "This research will benefit both us and the population, making it easier to understand how to develop better programs and strategies directed at designing nutritious foods that are impactful," Andrade said.

In addition to collecting research data, the students are also participants of educational research on study abroad. Andrade and other nutrition faculty are reviewing student journals, videos and photographs to determine how this short but intense study abroad experience impacts students.

"Our program is very successful at impacting student perceptions of global issues," said Lopez. Preliminary results indicated that students experience significant growth in areas such as multicultural and multiethnic adaptation.

"I have studied international nutrition a little," Ellinger said. "I knew statistics and read articles, but in this case, it wasn't just a number, it was under-nourishment embodied right in front of me."

The results are evident. "We see fundamental changes in how students approach the world around them," Andrade said. "We follow them before and after the trip and I am both excited and proud of the change," he added.

2012 marked the third year for Andrade and Lopez to take students on this trip. They hope to continue the program in the future and expand it to other countries, if possible. "We had 26 applicants for the program this year, and we were only able to take six with us," Andrade said.

This program started from a USDA NIFA grant awarded to Helferich, Engeseth and Andrade aimed at propelling the international dimension of the FSHN curriculum. "I think we are making significant progress, but we can certainly do more," Andrade said. Student participants have paid less than \$3500 each to participate. With the grant funding running out, program leaders are seeking alternative funding sources for the program.

To learn more about how to support this unique study abroad program, contact Andrade at jandrade@illinois.edu or 217-333-9653; or Marla Todd, Associate Director of Advancement at martodd@illinois.edu or 217-244-2875.



Students engage in all aspects of the food system while visiting Zamorano University in Honduras.



Hillshire Brands (formerly Sara Lee) employees welcomed FSHN students enrolled in Ingredient Functionality to the Kitchens of Sara Lee in April 2012.

NEW COURSE ADDRESSES INGREDIENTS

A new ingredients course being offered in Food Science and Human Nutrition is better preparing graduates for the experiences they will face in the food industry. The elective course, Ingredient Functionality, was taught by

Dr. Dawn Bohn, FSHN instructor, during the Spring 2012 semester, and was open to undergraduate and graduate students.

The food science coursework is very thorough in food processing, food chemistry, and food microbiology, Bohn said, but when it came to actual ingredients, the existing course material was not specific. Based on feedback from recent graduates and other alumni, departmental leadership realized the need for students to have the option to focus on ingredients, particularly before taking the required product development course and eventually positions in the food industry.

"I appreciate that leaders listened to feedback from alumni noting that this was something that needed to be done, moving beyond an altruistic standpoint in to action," said Brad Meyers, a FSHN alumnus working for Nutrasweet.

"Ingredient suppliers will do analytical work with the ingredients in the food industry," Bohn said. "This course focused more on how to interact with those ingredient suppliers."

In addition to being the impetuses for the course, alumni and other industry partners have played a key role in the success of the course. During the semester, guest lectures were provided by representatives from Hillshire Brands (formerly Sara Lee), Nutrasweet, FONA, IFP, Tate and Lyle and a retired ADM employee.

"Because we had so many great industry people who wanted to contribute to the success of the students, this is absolutely what made the course a success," Bohn said. Presenters shared their stories, and how they work with ingredients as suppliers or users, providing examples of specific products.

"I appreciated that the course was not just a lecture," said Claire Zoellner, a May 2012 FSHN graduate. "There were demonstrations, guest presentations, field trips, small group interactions and it was more interactive."

The class took a field trip to Hillshire Brands (formerly Kitchens of Sara Lee) in Downers Grove. The visit included tours, presentations on GMPs, labeling and other topics; lunch with employees; and a mock vendor interaction where the students took on the role of either the ingredient vendor or product developer.

Stephanie Andler, a FSHN senior, felt this course was a nice fit for her between food chemistry and product development. In the future, she looks forward to using the resources that were introduced, including contact information for the speakers.

Bohn plans to offer the course again in spring 2013. Any food industry professionals interested in being involved in the course should contact her at 217-333-0881 or dbrehart@illinois.edu or Marla Todd, Associate Director of Advancement, at 217-244-2875 or martodd@illinois.edu.

GROUNDBREAKING PROGRAM ADDRESSING CHILD OBESITY PREVENTION

THE ILLINOIS TRANSDISCIPLINARY OBESITY PREVENTION PROGRAM (I-TOPP), AN INNOVATIVE RESEARCH-BASED PROGRAM COMBINING A PH.D. WITH A MASTER'S IN PUBLIC HEALTH (MPH) DEGREE FOCUSED ON CHILD OBESITY PREVENTION HAS HAD AN INTERESTING FIRST YEAR.

"This exciting new program, administered in the Division of Nutritional Sciences, allows us to develop novel hypotheses and approaches as researchers come together from their individual areas of expertise to solve the problem of child obesity," said Sharon Donovan, the Melissa M. Noel Professor in FSHN and I-TOPP director.

Students in this program are being taught to think broadly about child obesity because research has shown that no single approach adequately addresses the problem, said Donovan.

The new degree integrates innovative research in nutrition, child development and family studies, physical activity, public health science and practice, economics, practices in child care centers, and the effects of media. Students develop and test transdisciplinary interventions to prevent childhood obesity, Donovan said.

"By combining training in research and public health interventions, these students will be uniquely qualified to develop, implement and evaluate programs targeting childhood obesity prevention," she added. Four I-TOPP scholars began in fall 2011 in different Ph.D. disciplines – community health, nutritional sciences, kinesiology, and FSHN. Four more students will begin in fall 2012.

Maggie Phan, Ph.D. student in FSHN, is studying with Drs. Sharon Donovan and Soo Yeun Lee. She spent summer 2012 working with Restaurants Opportunities Centers United, a New York organization that works to improve conditions for restaurant workers. She interviewed restaurant workers on work conditions, health hazards, and food safety. She then analyzed her findings.

"I'm mainly interested in smell, taste, and food flavors, but I-TOPP allows me to utilize these interests with the application for the prevention of obesity, which is one of the largest public health issues in the United States," Phan said. "It's very meaningful to be able to explore my research from not only the standpoint of sensory science, but also from a public health perspective."

I-TOPP is building on the transdisciplinary projects currently under way in the university's Synergistic Theory and Research on Obesity and Nutrition Group, also called the STRONG Kids program, a cells-to-society approach that examines how genes, family, community, child care providers, culture, and media contribute to the development of childhood obesity. The project team involves investigators from five colleges and seven departments.

"We can't yet envision the research programs of the next generation of scientists. They'll learn to ask the kinds of questions and think in ways that we haven't been trained to do. This program really puts us on the cutting edge of what graduate education should look like," said Barbara Fiese, the director of the U of I's Family Resiliency Center and holder of the Pampered Chef Ltd. Endowed Chair in Family Resiliency, and the I-TOPP co-director.



NIH GRANT FUNDS BOTANICAL RESEARCH

AN ONGOING RESEARCH INITIATIVE INTO THE HEALTH EFFECTS OF BOTANICAL ESTROGENS IS RECEIVING AN \$8 MILLION BOOST FROM THE NATIONAL INSTITUTES OF HEALTH.

“The types of botanical estrogens that are being marketed are getting more and more potent,” said William Helferich, a professor of food science and human nutrition at Illinois and director of the new center. “We want to see if they really are effective or detrimental.”

The recently funded Botanical Research Center, based at the University of Illinois, draws on the expertise of a multidisciplinary team of researchers to address the many unknowns associated with use of botanical estrogens. These plants and plant-based compounds are often marketed as aids to prevent cancer, promote healthy aging or relieve menopausal symptoms. Researchers from Illinois, the University of Mississippi, Oregon State University and the FDA's National Center for Toxicological Research are contributing to the five-year project.

This is the second \$8 million grant from the NIH to Illinois to conduct research into the health effects of botanical estrogens. The first five-year initiative focused on soy isoflavones, compounds found in soybeans that previous studies indicated had potential as anti-cancer and cholesterol-lowering agents. That grant yielded studies that showed that the positive or negative health consequences of exposure to soy isoflavones depends on the timing of the exposure (whether it occurs in early, mid, or late life), tissue type (breast or brain, for example), and dose.

The new grant supports three projects led by Illinois faculty. The projects will explore whether and how phytoestrogens from soy, licorice root, dong quai and wild yam affect various tissues, influence gene expression or other cellular processes, increase or decrease the growth and metastasis of breast cancer tumors, influence bone loss or alter the rate of cognitive decline in aging. Two core areas will provide support to the three projects by authenticating and standardizing the botanical samples used in the studies and analyzing how the various compounds are utilized in the body.

Helferich is leading a project to investigate the effects of botanical estrogens on bone, uterus and mammary glands, and their effects on the growth and progression of breast cancer and its metastasis to bone, lung or other tissues.

For more information about the Botanical Research Center visit <http://vetmed.illinois.edu/botanical/index.html>.



The program has an ongoing seminar series, is developing two new courses, promotes broad cross-disciplinary interactions between U of I faculty and international leaders through its visiting faculty and lecture series, and hosts a biennial symposium, which was held for the first time Oct. 6-7, 2011.

The I-TOPP lecture series hosted two visiting lecturers in the 2011-2012 academic year. Myles Faith, University of North Carolina, presented on family-based treatment of early childhood obesity. Ellen Wartella, Northwestern University, addressed food marketing and the childhood obesity crisis.

This program is funded through a \$4.5 million grant from USDA's National Institute of Food and Agriculture.

SPICING UP BROCCOLI BOOSTS ITS CANCER-FIGHTING POWER

Teaming fresh broccoli with a spicy food that contains the enzyme myrosinase significantly enhances each food's individual cancer-fighting power and ensures that absorption takes place in the upper part of the digestive system where you'll get the maximum health benefit, suggests a new UI study.

"To get this effect, spice up your broccoli with broccoli sprouts, mustard, horseradish, or wasabi. The spicier, the better; that means it's being effective," said Elizabeth Jeffery, professor emeritus of nutrition.

In the study, when fresh broccoli sprouts were eaten with broccoli powder, the scientists were able to measure bioactive compounds in the blood 30 minutes later. When these peaked at three hours, they were much higher when the foods were eaten together than when either was eaten alone. Urine samples corroborated the blood results, said Jenna Cramer, who earned her Ph.D. working with Jeffery.

It's no secret that many people cook the benefits right out of broccoli instead of steaming it lightly for two to four minutes to protect its healthful properties, she said.

"However, this study shows that even if broccoli is overcooked, you can still boost its benefits by pairing it with another food that contains myrosinase," she said.

Myrosinase is the enzyme necessary to form sulforaphane, the vegetable's cancer-preventive component, explained Margarita Teran-Garcia, assistant professor of nutrition.

Note what happened with the fresh broccoli sprouts and broccoli powder eaten in this experiment. The powder doesn't

contain myrosinase, but it does contain the precursor to the anti-cancer agent sulforaphane. Eaten together, the sprouts were able to lend their myrosinase to the powder. As predicted, both foods produced sulforaphane and provided greater anti-cancer benefit, Jeffery said.

Other foods that will boost broccoli's benefits if they are paired together include radishes, cabbage, arugula, watercress, and Brussels sprouts.

"Here's another benefit of protecting and enhancing the myrosinase in your foods," Jeffery said.

"If myrosinase is present, sulforaphane is released in the upper intestine, the first part of your digestive system. Absorption happens well and quickly there, which is why we saw bioactivity in 30 minutes."

An earlier Jeffery study showed that microbiota are capable of releasing sulforaphane in the lower gut, but absorption happens more slowly in the colon than in the upper intestine, she said.

Scientists say that as little as three to five servings of broccoli a week provide a cancer-protective benefit.

"But it pays to spice it up for added benefits and find ways to make it appealing so you don't mind eating it if you're not a broccoli fan. I add fresh broccoli sprouts to sandwiches and add them as one of my pizza toppings after the pie is out of the oven," Cramer said.



Dr. Dawn Bohn teaches FSHN 101: Introduction to Food Science and Human Nutrition. This large course is one in which TAs play an important role.

CHICAGO SECTION IFT SPONSORS TEACHING ASSISTANT

The Chicago Section Institute of Food Technologists (CSIFT) are positively impacting both undergraduate and graduate students by sponsoring a teaching assistant for the 2012-2013 school year.

Because of continual decreases in state funding for the University of Illinois, FSHN has had to trim funds available for teaching assistants. Recognizing this deficit, the CSIFT provided a \$7000 gift to support a teaching assistant for a food science course. A graduate student will benefit from receiving the assistantship funds, as well as the opportunity to gain teaching, supervisory, and mentoring skills.



COMPOUNDS IN MATE TEA INDUCE DEATH IN COLON CANCER CELLS

Could preventing colon cancer be as simple as developing a taste for yerba mate tea? In a recent University of Illinois study, scientists showed that human colon cancer cells die when they are exposed to the approximate concentration of bioactive compounds present in one cup of this brew, which has long been consumed in South America for its medicinal properties.

“The caffeine derivatives in mate tea not only induced death in human colon cancer cells, they also reduced important markers of inflammation,” said Elvira de Mejia, professor of food chemistry and food toxicology.

That’s important because inflammation can trigger the steps of cancer progression, she said.

In the *in vitro* study, de Mejia and former graduate student Sirima Puangpraphant isolated, purified, and then treated human colon cancer cells with caffeoylquinic acid (CQA) derivatives from mate tea. As the scientists increased the CQA concentration, cancer cells died as a result of apoptosis.

“Put simply, the cancer cell self-destructs because its DNA has been damaged,” she said.

The ability to induce apoptosis, or cell death, is a promising tactic for therapeutic interventions in all types of cancer, she said.

De Mejia said they were able to identify the mechanism that led to cell death. Certain CQA derivatives dramatically decreased several markers of inflammation, including NF-kappa-B, which regulates many genes that affect the process through the production of important enzymes. Ultimately cancer cells died with the induction of two specific enzymes, caspase-3 and caspase-8, she said.

“If we can reduce the activity of NF-kappa-B, the important marker that links inflammation and cancer, we’ll be better able to control the transformation of normal cells to cancer cells,” she added.

The results of the study strongly suggest that the caffeine derivatives in mate tea have potential as anti-cancer agents and could also be helpful in other diseases associated with inflammation, she said.

But, because the colon and its microflora play a major role in the absorption and metabolism of caffeine-related compounds, the anti-inflammatory and anti-cancer effects of mate tea may be most useful in the colon.

“We believe there’s ample evidence to support drinking mate tea for its bioactive benefits, especially if you have reason to be concerned about colon cancer. Mate tea bags are available in health food stores and are increasingly available in large supermarkets,” she added.

Numerous undergraduate students will be positively impacted by receiving more personal attention in the course, as well as simply being able to enroll in the course because the size of the class can be expanded when a TA is available to support the faculty member instructing the course.

Additionally, this gift will allow a faculty member to more easily balance his/her teaching, research, outreach and advising with the assistance from a graduate student teaching assistant.

FSHN thanks the CSIFT for its new support of a graduate assistantship and continued support of undergraduate scholarships and summer outreach programs.



NEW INFANT FORMULA INGREDIENTS BOOST BABIES' IMMUNITY

BY FEEDING THEIR GUT BACTERIA

Adding prebiotic ingredients to infant formula helps colonize the newborn's gut with a stable population of beneficial bacteria, and probiotics enhance immunity in formula-fed infants, two University of Illinois studies report.

"The beneficial bacteria that live in a baby's intestine are all-important to an infant's health, growth, and ability to fight off infections," said Kelly Tappenden, professor of nutrition and gastrointestinal physiology. "Breast-fed babies acquire this protection naturally. Formula-fed infants get sick more easily because the bacteria in their gut are always changing."

The idea is to make formula more like breast milk by promoting the sorts of intestinal bacteria that live in breast-fed babies' intestines, she added.

Prebiotics are carbohydrates that resist digestion by human enzymes and stimulate the growth and activity of beneficial bacteria in the gastrointestinal tract.

Probiotics are actual live bacteria that are beneficial to intestinal health, she said.

Infants have a special need for stimulation of their gut microbiota because they are born with a sterile intestine, Tappenden said.

"A strong, robust population of microbes in the gut provides colonization resistance, and pathogens can't invade and infect an infant who has that resistance as easily," she added.

The researchers compared the effects of feeding pre- and probiotics with infants fed breast milk and control formulas. They also compared the enhanced formulas' effects in both vaginally and Caesarean-delivered babies.

"The probiotic formula significantly enhanced immunity in formula-fed infants," Tappenden said.

Also, babies delivered by C-section had an especially improved immune response, an important finding because C-section babies are a more vulnerable group, she said.

Why? "Babies delivered naturally are exposed to the mother's bacteria as they travel through the birth canal, and they develop a healthier population of gut bacteria as a result. Babies delivered by C-section enter a sterile environment, and their gut microbiota is quite different," Tappenden noted.

In the probiotics study, scientists at five sites divided 172 healthy six-week-old infants into two formula-fed groups and a breast-fed group. Beginning at six weeks of age, the formula-fed groups received either a control formula or a formula that contained the beneficial bacteria *Bifidobacterium animalis* subspecies *lactis* (Bb12) for a six-week period. The infants receiving the probiotic formula had increased concentrations of secretory, anti-rotavirus, and anti-poliovirus-specific immunoglobulin A (IgA).

Fecal samples from babies receiving the probiotic formula revealed significantly heightened immunity, especially among Caesarian-delivered infants, Tappenden said

Infants who consumed the formula containing the prebiotic ingredients also benefited. In that study, 139 healthy babies were divided into three groups. Breast-fed infants were compared with babies fed either a control formula or a formula supplemented with galacto- and fructo-oligosaccharides for six weeks.

Oligosaccharides found in breast milk contribute to the healthy population of bacteria found in the guts of breast-fed infants.

When fecal samples were tested, babies fed the probiotic formula showed modest improvement in the number of beneficial bacteria and decreases in the types of bacteria that are often associated with illness.



CLEAN SEEDS

ARE SECRET OF SAFE SPROUT PRODUCTION

A UI Food Science and Human Nutrition study that uses new technology to assess and compare the safety of radish, broccoli, and alfalfa sprouts concludes that the secret to keeping sprouts free of foodborne pathogens lies in industry's intense attention to cleanliness of seeds.

"Once seeds have germinated, it's too late. Sprouts are extremely complex structures with a forest-like root system that conceals microorganisms. Just a few *E. coli* cells can grow to a substantial population during germination and sprouting, and it's very difficult to get rid of them all," said Hao Feng, associate professor of food and bioprocess engineering.

In his experiments, Feng used both the FDA-recommended dose of chlorine to kill microorganisms and a new sanitizer that was a combination of surfactant and organic acid. He used a laser-scanning confocal microscope to look at micro-slices of seeds, then employed computer software to get a three-dimensional view of their surface structure. This allowed him to calculate each seed's surface roughness.

Although *E. coli* could be eliminated on the alfalfa seeds because of their relatively smooth surface, broccoli and radish seeds have rough surfaces. Their texture renders these rougher seeds more susceptible to the attachment of pathogens and makes these microorganisms very difficult to remove, he said.

Low doses of irradiation can be successfully used on broccoli and radish seeds, but that treatment runs the risk of losing sprouts' quality and nutritional value. And sprouts do have immense nutritional value. Broccoli sprouts have been linked to cancer prevention; radish sprouts have lots of vitamins A and C, he noted.

He also found that better results were achieved with broccoli sprouts when the sanitizer is used on small batches rather than large ones.

Feng assured consumers that International Specialty Supply, which is one of the largest suppliers of certified sprouting seeds and sprouts, tests the water during sprouting and if there is one positive, the whole lot is discarded. This is a model that other suppliers should follow.

He suggested some ways these sprouts could be more safely incorporated into your diet. "In Asian cultures, sprouts are used in stir-fry recipes. Again, it's a trade-off. Heat kills the pathogens, but you lose some of the sprouts' nutritional punch," he said.

Asian cooks also use sprouts in dishes that use natural antimicrobials, such as vinegar, garlic, green onion, and spices, he said. "These ingredients can inhibit the growth of *E. coli*, even kill pathogens, but there is still some risk involved," he said.

Feng said this research demonstrates the importance of eliminating all pathogens on seeds before sprouting. "The food industry must maintain very strict control in the sprout production process, focusing on the cleanliness of seeds and expending money and effort on prevention. Then consumers can be assured that these nutritious food products are safe to eat," Feng said.



FSHN PILOT PLANT UPDATE

Efforts to improve the FSHN pilot plant facilities continue with the addition of two full-time staff members heading up the upgrades. Dr. Mark Lippi is focusing on increasing interactions between the University and food processing industry partners. Brian Jacobson has spent extensive time organizing the pilot plant equipment and supplies, while also developing standardized processes for entering and using the facilities. Brian also oversees the scheduling and maintenance of equipment.

The space and location of the pilot plant are modern and well cared for. However, much of the current equipment needs to be replaced. There also is a great need to add novel equipment for various research and instructional capabilities.

Contributions of equipment and funds to repair and replace the food processing equipment are essential to the teaching and research missions of the University of Illinois. Individuals and companies are encouraged to make a tax-deductible gift of new or used processing equipment.

For more information contact Marla Todd, Associate Director of Advancement, at 217-244-2875 or martodd@illinois.edu.

STARTLING NEW TRUTH ABOUT SUGAR

FLYING IN THE FACE OF YEARS OF SCIENTIFIC BELIEF, FSHN RESEARCHERS HAVE DEMONSTRATED THAT SUGAR DOESN'T MELT, IT DECOMPOSES.



"This discovery is important to food scientists and candy lovers because it will give them yummiier caramel flavors and more tantalizing textures. It even gives the pharmaceutical industry a way to improve excipients, the proverbial spoonful of sugar that helps your medicine go down," said Shelly J. Schmidt, professor of food chemistry.

In a presentation to the Institute of Food Technologists about the importance of the new discovery, Schmidt told the food scientists they could use the new findings to manipulate sugars and improve their products' flavor and consistency.

"Certain flavor compounds give you a nice caramel flavor, whereas others give you a burnt or bitter taste. Food scientists will now be able to make more of the desirable flavors because they won't have to heat to a 'melting' temperature but can instead hold sugar over a low temperature for a longer period of time," she said. Candy makers will be able to use a predictable time-temperature relationship, as the dairy industry does in milk pasteurization, to achieve better results, she said.

Schmidt and graduate student Joo Won Lee didn't intend to turn an established rule of food science on its head. But they began to suspect that something was amiss when they couldn't get a constant melting point for sucrose in the work that they were doing.

"In the literature, the melting point for sucrose varies widely, but scientists have always blamed these differences on impurities and instrumentation differences. However, there are certain things you'd expect to see if those factors were causing the variations, and we weren't seeing them," Schmidt said. The scientists determined that the melting point of sugar was heating-rate dependent.

"We saw different results depending on how quickly we heated the sucrose. That led us to believe that molecules were beginning to break down as part of a kinetic process," she said.

Schmidt said a true or thermodynamic melting material, which melts at a consistent, repeatable temperature, retains its chemical identity when transitioning from the solid to the liquid state. She and Lee used high-performance liquid chromatography to see if sucrose was sucrose both before and after "melting." It wasn't.

"As soon as we detected melting, decomposition components of sucrose started showing up," she said.

To distinguish "melting" caused by decomposition from thermodynamic melting, the researchers have coined a new name—"apparent melting." Schmidt and her colleagues have shown that glucose and fructose are also apparent melting materials.

Another of Schmidt's doctoral students, Sarah Scholl, is investigating which other food and pharmaceutical materials are apparent melters. She says the list is growing every day. The scientist said that new instruments are making it possible to probe some of the processes scientists have taken for granted in a way they couldn't do before.

STUDENT NEWS AND AWARDS

David Bloom placed second in the Sensory and Consumer Sciences Division Oral Competition and third in the Marketing and Management Division Poster Competition at the 2012 Institute of Food Technologists Annual Meeting. Bloom is studying in the lab of Dr. Soo-Yeun Lee.

Panchalee Pathanibul placed second in the Biotechnology Division: Food Processing and Packaging poster competition at the 2012 Institute of Food Technologists Annual Meeting. She is studying with Drs. Mike Miller and Yong Su Jin.

Emily Radlowski graduate student in the Division of Nutritional Science working with Dr. Sharon Donovan, received the North American Colleges and Teachers of Agriculture Graduate Student Teaching Award. Criteria included in the evaluation are the graduate student's teaching philosophy, statement of support from supervising faculty, evaluations submitted by students and an administrative officer, a self-evaluation, involvement in teaching outside the classroom, and a description of the candidate's specific teaching involvement. Emily has been a teaching assistant for several nutrition related courses, including FSHN 120: Contemporary Nutrition, a large lecture course.

IFT SCHOLARSHIPS

The following students received scholarships for the 2012-2013 academic year from Feeding Tomorrow, the Foundation of the Institute of Food Technologists.

Aly Becraft – Feeding Tomorrow Freshman Scholarship

David Bloom – Sensory and Consumer Sciences Division Scholarship

Bethany Richardson – Feeding Tomorrow Graduate Scholarship

Ariel Cavazos – Feeding Tomorrow Junior/Senior Scholarship

Sarah Scholl – Feeding Tomorrow Graduate Scholarship

Joey Donovan – IFT Education Division Scholarship

Merry Wang – Dr. John and Irene Powers Scholarship

STUDENT NEWS AND AWARDS

BRONZE TABLET

Three FSHN graduates earn bronze tablet recognition.

Inscription on the Bronze Tablets recognizes sustained academic achievement by undergraduate students at the University of Illinois. Students must have at least a 3.5 cumulative grade point average through the academic term prior to graduation, and rank in the top three percent of the students in their graduating class to receive this recognition. The following Food Science and Human Nutrition students have been recognized with the Bronze Table distinction.

Jacob Cross, Food Science from Bloomington, IL
Amanda Krause, Human Nutrition from Wilmette, IL
Citra Rahardjo, Food Science from Jakarta, Indonesia

STUDENT RECEIVES RESEARCH AWARD

Jennifer Barnes, a doctoral student in the Division of Nutritional Sciences, received the 2012 Harry M. Vars Research Award from the American Society for Parenteral and Enteral Nutrition (ASPEN) for her work in producing therapies for use in pediatric intestinal failure.

Barnes was presented the award for her work on the paper "Intestinal Adaptation Is Stimulated by Partial Enteral Nutrition Supplemented with the Prebiotic Short-Chain Fructooligosaccharide in a Neonatal Intestinal Failure Piglet Model," which will be published in an upcoming issue of the *Journal of Parenteral and Enteral Nutrition*.

She is in the lab of Dr. Kelly Tappenden.

"The Vars award is a highly respected honor," said Debra S. BenAvram, ASPEN chief executive officer. "We are pleased to honor Jennifer Barnes with this award for her hard work and dedication to advancing clinical nutrition and metabolism. The future of our field depends upon emerging investigators like Ms. Barnes to tackle difficult questions through basic science or clinical research."



GRADUATE FELLOWSHIP RECOGNITION LUNCHEON

FSHN graduate students were recognized during the annual ACES graduate fellowship luncheon.

Pictured back row (l to r) – Mike Miller, Qiaosi Wei, Man Van Tassell. Front row (l to r) Itzel Vazquez Vidal, Taksawan Thongaram, Tim Turner, Bethany Richardson, Sarah Scholl, Wendan Wang, Yaowapa Lorjaroenphon, Clarissa Koga, Anthony Cam, Erin Burnside.

Not pictured – Dexter Chen.



FSHN DEPARTMENTAL AWARD WINNERS



OUTSTANDING TEACHING ASSISTANT

Brett Loman

STUDYING IN THE LAB OF

Kelly Tappenden

HOMETOWN

Springfield, Illinois

GRADUATE STUDY TOPIC

How the delivery of butyrate through the utilization of probiotics and prebiotics can stimulate gastrointestinal development and affect microbiota during the short bowel syndrome disorder

UNDERGRADUATE STUDY:

University of Illinois dual degree in animal sciences and human nutrition with a minor in chemistry

TEACHING

3 time teaching assistant of FSHN 120: Intro to Human Nutrition

FUTURE PLANS

Pursue a career in academia, conducting research & teaching

OUTSTANDING M.S. STUDENT

Hee Jin Kim

STUDYING IN THE LAB OF

Yong-Su Jin

HOMETOWN

Morton Grove, Illinois

GRADUATE STUDY TOPIC

Yeast metabolic engineering for production of value-added products

UNDERGRADUATE STUDY

University of Illinois Food Science and Human Nutrition and minor in Chemistry

FUTURE PLANS

Pursue a Ph.D.

OUTSTANDING PH.D. STUDENT

Josh Quarterman

STUDYING IN THE LAB OF

Yong-Su Jin

HOMETOWN

Roswell, Georgia

GRADUATE STUDY TOPIC

Rapid and efficient galactose fermentation by engineered *Saccharomyces cerevisiae* for production of bioethanol

UNDERGRADUATE STUDY

Georgia Tech Chemical and Biomolecular Engineering

OUTSTANDING UNDERGRADUATE STUDENT LEADER

Ariel Cavazos

HOMETOWN

Schaumburg, Illinois

STUDENT ACTIVITIES

Association of Food Technologists, Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS), Phi Mu sorority, undergraduate research in the lab of Dr. Elvira de Mejia, summer internships with Kraft

FUTURE PLANS

Enter the food industry in research and development after graduation

OUTSTANDING UNDERGRADUATE STUDENT RESEARCHER

Claire Zoellner

HOMETOWN

New Lenox, Illinois

UNDERGRADUATE RESEARCH

Characterization of LGAS_1719 in *Lactobacillus gasseri*; working in the lab of Dr. Mike Miller

AFTER GRADUATION

Pursuing a Master's Degree in food microbiology at Cornell University with aspirations to work in food safety or regulatory affairs

OUTSTANDING SENIOR IN DIETETICS

Marisa Mozer

HOMETOWN

Wilmette, Illinois

STUDENT ACTIVITIES

Student Dietetic Association – activity coordinator, vice president, co-president; Sigma Delta Tau sorority

AFTER GRADUATION

Rush University Medical Center combined dietetic internship and master's degree in clinical nutrition

OUTSTANDING SENIOR IN FOOD INDUSTRY AND BUSINESS

Daniel Krause

HOMETOWN

Wilmette, Illinois

AFTER GRADUATION

Launching food truck business, Cracked, in Champaign-Urbana

<http://crackedtrucks.com>

FSHN OUTSTANDING SENIOR IN FOOD SCIENCE

Rosemary Nash

HOMETOWN

Savoy, Illinois

STUDENT ACTIVITIES

Association of Food Technologists
Treasurer and ExplorACES
representative

AFTER GRADUATION

ADM quality control in corn processing



OUTSTANDING SENIOR IN HOSPITALITY MANAGEMENT

Ben Werner

HOMETOWN

Elmwood Park, Illinois

STUDENT ACTIVITIES

Alpha Zeta, Relay for Life,
James Scholar, and three
undergraduate research projects.

AFTER GRADUATION

Employed at Wildfire
Schaumburg, Illinois

FSHN OUTSTANDING SENIOR IN HUMAN NUTRITION

Amanda Krause

HOMETOWN

Wilmette, Illinois

STUDENT ACTIVITIES

Alpha Zeta, Relay for Life,
James Scholar, and three
undergraduate research projects.

AFTER GRADUATION

Two year post-baccalaureate position
with National Institutes of Health conduct-
ing research in the section on growth and
obesity; plans to attend medical school
after this experience

ALUMNUS CAST ON FOOD NETWORK SHOW

A FSHN alumnus was recently spotted on Food Network's Next Food Network Star working under the mentorship of Alton Brown.

Judson Allen, a 2003 FSHN grad, owner of Healthy Cuisine LLC, and top-rated star of his own cooking show, broadcast live from Chicago's Kenmore Live Studios, was one of 15 finalists cast for the eighth season of the show.

"I first auditioned for Next Food Network Star in 2009, was a semifinalist in 2010, then took a year off to travel and study cooking at Le Cordon Bleu and the Ritz in Paris.

Allen learned to love cooking from his grandfather, a New Orleans native who used Creole seasonings, fresh seafood, and sausages to bring food to life, and from his grandmother who was "fearless in the kitchen—she could make a soup out of anything."

"I think the U of I has one of the best food science programs out there. I use what I learned about food chemistry, flavor profiling, and sensory analysis every day, especially in my food product line. My teachers there taught me how to use flavor and texture to provide the ultimate eating experience," he said.



ALUMNA LAUNCHES BOOK ON CAMPUS

Nationally recognized nutrition expert and University of Illinois alumna Roberta Larson Duyff launched her latest book, the “American Dietetic Association Complete Food and Nutrition Guide (4th ed.),” at the Illini Union bookstore on campus on March 16. She also gave a presentation to numerous students and dietetic professionals titled “Let’s Talk Nutrition: Communicating the Positives.”

Duyff’s easy-to-read “Complete Food and Nutrition Guide” is filled with positive, practical information and tips for every age and stage of life. Another of her books, “365 Days of Healthy Eating,” brims with tips for taking one easy step at a time toward fitness. She was also a guiding force behind--and a contributor to--the American Dietetic Association’s regional cookbook “Cooking Healthy across America.”

In 2010, she wrote “Food, Nutrition & Wellness,” a textbook built on the concept that a solid food and nutrition education includes teaching kids how to make good food choices, how to shop wisely, and how to store, prepare, and serve healthful meals. She has also written children’s books on nutrition, including “All Our Fruits and Vegetables” and “It’s a Sandwich,” and a textbook for teens.

Duyff has appeared in such popular national media as the CBS Early Show, Fox News morning news program, USA Today, Parenting, Better Homes and Gardens, and Cooking Light. She also writes a weekly column for the St. Louis Post-Dispatch.

ALUMNI UPDATES



Kirstie Canene-Adams, '02, Ph.D. Nutritional Sciences '07, is an assistant professor in the nutrition and foods program in the School of Family and Consumer Sciences at Texas State University in San Marcos. She and her husband, David Adams, '02 MS '03 Mechanical Engineering, welcomed a daughter, Karina Marie Adams, on October 11, 2011. She weighed 7 lbs. 1 oz. and was 18 ¾” long.

Suraya Gabel, '08, was promoted to the Director of Quality and Food Safety with Greenwood Associates.

Katheryne Stoll Rehberg, '04, and her husband, Aaron, welcomed a baby boy, Logan on August 21, 2011.

Dr. Karen Plawecki, Ph.D. Nutritional Sciences '09 and former didactic program in dietetics coordinator, was inducted into Purdue University Nutrition Science Hall of Fame. The Hall of Fame Award honors alumni of the department who have made a significant contribution to the varied fields of foods and nutrition and established a unique record in their work and life.

She also began a new position with Benedictine University in Lisle, Illinois as an assistant professor in the Department of Nutrition.

Dr. John Litchfield, M.S. '54, Ph.D. '56 Food Technology and Microbiology, donated his papers (correspondence, publications, presentations, and patents concerning industrial microbiology, enzyme technology, advancing the science and technology of microbial production of food and food ingredients, food plant sanitation, food production and the Clean Water Act, and service as President (1991-92) of the Institute of Food Technologists) to the University of Illinois Library.

Dr. Toan Thanh Ha, M.S. '95, Ph.D. '99, current Rector/President at Can Tho University in Vietnam, visited campus in June 2012.

Andre Young, '09, welcomed a son Andre Gregory Young on July 2, 2011.

ALUMNI RECEIVE ACES AWARD OF MERIT



Steve Hill (M.S. '90, Ph.D. '92) and **Nancy Moriarity** ('79 Biology, Ph.D. '87) were each presented an Award of Merit by the University of Illinois College of Agricultural, Consumer and Environmental Sciences (ACES) Alumni Association. The Award of Merit annually honors College of ACES graduates who have made significant contributions to their chosen profession.

Dr. Steve Hill is an accomplished food scientist, community volunteer, mentor, and leader. His responsibilities and accomplishments within Kraft, where he has been employed since graduation, have expanded exponentially. He is now the Director of the Cheese and Dairy Food Research and Development Team. Dr. Hill holds more than 20 patents. In addition to his professional accomplishments at Kraft, he has served in numerous leadership roles for the American Oil Chemists' Society, most recently completing terms as Secretary and Treasurer of this national professional organization.

Dr. Hill serves on the FSHN External Advisory Committee, interacts with students and potential recruits through the Research Apprentice Program (RAP), and is spearheading an effort to establish a graduate fellowship for students from under-represented groups in Food Science and Human Nutrition.

Dr. Hill is an active member of his community, volunteering his time at St. Alphonsus School as well as at his church. He is also a regular participant in Kraft Cares Community Service projects. He and his wife Laura, also a University of Illinois alumna, live in Prospects Heights, Illinois with their two daughters, Erica, 16, and Kelly, 14.



Dr. Nancy Moriarity has built a successful career at PepsiCo by blending her extensive knowledge of human nutrition and food science.

She currently leads PepsiCo Nutrition's initiatives that help bring sustainable nutrition to some of the world's most vulnerable and underserved

populations. Prior to this, she led a team focused on the identification and development of ingredients and technologies delivering benefits beyond basic nutrition. At Frito-Lay, Nancy held a number of positions of increasing responsibility through her 16 year career. She was an Associate Research Consultant, coordinating the work of suppliers and product developers to screen and optimize materials, enabling development of new products that deliver new nutritional benefits to consumers. While at Frito-Lay, Nancy developed products for both domestic and international markets. Her work encompassed all phases of product development from prototyping to product launch. She focused on bringing innovation to all aspects of product development throughout her Frito-Lay career.

Nancy led efforts at PepsiCo to support a RAP team and continues to give time and energy to this program annually as a speaker, presentation judge and interviewer. Additionally, she is mentoring undergraduate students in FSHN and served on the FSHN EAC. Being from the first generation in her family to attend college, Nancy has established the Moriarity Family Scholarship in Food Science to benefit students who are the first generation in their family to attend college.



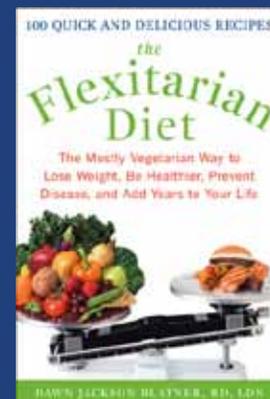
ALUMNA RECEIVES ACES YOUNG ALUMNI AWARD

Dawn Jackson Blattner ('97 dietetics) received the College of Agricultural, Consumer and Environmental Sciences Young Alumni Award.

To qualify for the ACES Young Alumni Award, the candidate must be under the age of 40, demonstrate outstanding professional achievement and have enhanced others through outstanding leadership or service.

Dawn owns her own business, Nutrition Strategies, LLC, and is the nutrition consultant for the Chicago Cubs. She appears regularly in national media outlets such as *The Dr. Oz Show*, *USA Today*, *Dateline*, *Newsweek*, *Cooking Light*, *Lifetime Television* and *WebMD*. She blogs for *USA Today* and *Huffington Post* and is the nutrition expert on the advisory board of *Fitness* magazine.

Dawn has also authored a book, *The Flexitarian Diet*, which encourages more vegetarian meals.



THANK YOU TO OUR GENEROUS DONORS

The Department of Food Science and Human Nutrition would like to express sincere appreciation to the following people and organizations for contributing to our programs from July 1, 2011 to June 30, 2012. It is with the support of alumni and friends that FSHN is able to implement outstanding education, research and outreach programs.

\$25,000+

Dr. James J. Albrecht
Kraft Foods Global
Martek Biosciences Corporation
Nestle Purina PetCare Company
Phibro Animal Health, Inc.

\$10,000-\$24,999

Communique, Inc.
Dairy Management Inc.
Dr. John W. Erdman Jr. and Mrs. Edith A. Erdman
Monsanto Company
Mr. William P. and Mrs. Adele D. Myers
Mrs. Hiro Nishida and the late Dr. Toshiro Nishida
Dr. Fred W. Rath
Swagger Foods Corp. – Dr. Tai R. and Mrs. Catherine Shin
United Soybean Board

\$5,000-\$9,999

ADM Specialty Ingredients
IFMA Educational Foundation
Illinois Amvets Service Foundation
Dr. Shwu-Kuan Sarah Jaw-Tsai
Mr. Howard M. Katz
Kellogg's Corporation
Dr. Nancy J. Moriarity and Ms. Kris Sherred
Prof. Manabu T. Nakamura
PepsiCo Foundation
WhiteWave Foods

\$1,000 - \$4,999

Caja Rural Spain
Dr. Michael F. and Mrs. Susan K. Campbell
Dr. Elizabeth H. Jeffery
Jarrow Formulas, Inc.
Dr. Guy H. and Mrs. Jean G. Johnson
Drs. Barbara P. and Miles V. Klein
Dr. John H. Litchfield
Mr. Thomas E. Niedoborski
Mrs. Alberta F. Perkins
Prof. Arthur J. and Mrs. Doris J. Siedler
Wm. Wrigley Jr. Company

DONORS

Archer Daniels Midland Company
Mr. Jonathan M. Baner
Dr. Adriane Fugh Berman
Dr. Radha M. Bheemreddy
Dr. Dawn M. Bohn
Mr. William C. Burnside (deceased)
Dr. Francis F. Busta
Dr. Steve S. Chen
Ms. Lily C. Chinn
Mrs. Charlotte W. Coltman
Ms. Molly E. Connor
Ms. Jill Craft
Diageo Global Supply
Dr. Faye M. Dong
Mr. John W. Fellows and Mrs. Kristi J. Sternberg
Dr. Henry P. Fleming
Mrs. Judith T. Foster
Mr. James Mark and Mrs. Evelyn Gim Gate
Mr. Jay N. Gordon
Ms. Wilma H. Graesser
Dr. Carl Wayne and Mrs. Carolyn Jean Hastings
Dr. Wanda Haschek-Hock
Mr. Tom and Mrs. Jennie Hong
Mr. Stuart and Mrs. Wendolyn Lee Iritani
Dr. Glen A. Jacobson
Dr. Michael G. and Mrs. Ellen R. Johnson
Ms. Anna S. Keck and Mr. Jason K. Lindsey
Kraft Foods Inc.
Ms. Jacqueline Kong
Ms. Kimberly L. Kramer
Mrs. Marjorie C. and Mr. Robert A. LaFont
Dr. Donald K. Layman
Mr. Bill Y. and Mrs. S. H. Lee
Dr. Kenneth W. and Mrs. Darlene Quon Lem
Dr. Henry K. and Dr. Cecilia T. Leung
Dr. Chi-Hua (Peter) Lu
Mrs. Pamela Jo Markin
Carol J. Martin MD
Mr. Nathan Vincent and Mrs. Amy Matusheski
Mr. Timothy C. McConnell
Dr. Robert J. McGorin Jr. and Mrs. Marlene A. McGorin
Dr. Luis A. Mejia

DONORS (continued)

Mr. and Mrs. William C. MacLeod
Mrs. Diane K. and The Honorable George S. Miller
Ms. Susan P. Monckton
Mr. Eleftherios (Terry) E. Moros
Mr. Gene J. and Ms. Kathryn M. Neri
Mrs. Hope H. Niedling
Mrs. Penelope G. Roth
Mr. John C. Sailor
Sargento Foods, Inc.
Dr. Joseph E. Schlessler and Ms. Judith L. Aulik
Mrs. Mary R. Snoeyenbos
Ms. Diane K. and Mr. G. Barnes Stevenson
Mr. Jon D. and Mrs. Kendra H. Stewart
Mrs. Susan K. Niemczyk Studzinski
Ms. Sharon B. Sugerman
Ms. Lauren C. Tamamoto
Mr. Thomas M. and Mrs. Joanne Tanabe
Mr. Julian C. and Mrs. Lillian R. Timm
Mr. Tony and Mrs. Sally E. VanNatta
Mr. Corey Joseph and Mrs. Laura Lynn Waldinger
Ms. Lai G. Webster
Mr. Neil R. Widlak
Mr. Arthur T. and Mrs. Lily Y. Wong
Mr. and Mrs. Dennis Wong



EMERITUS PROFESSOR PASSES

Dr. Toshiro Nishida, 86, passed away on Wednesday, Aug. 15, 2012, at Carle Foundation Hospital in Urbana, Illinois.

Dr. Toshiro Nishida served on the faculty of the Department of Food Science and Human Nutrition at the University of Illinois at Urbana-Champaign for more than 40 years. During that time, he made fundamental research contributions to our understanding of the pathways, enzymes, and proteins associated with lipid metabolism and transport. He was internationally recognized for his research contributions and was a recipient of the National Institutes of Health Award of Merit and the College of Agricultural, Consumer and Environmental Sciences Paul A. Funk Award. He taught courses related to food chemistry and nutrition, as well as a graduate course on the metabolism of lipids. He also was an active part of the off-campus M.S. program in food science in Chicago. Professor Nishida trained many students who have gone on to successful and productive careers in science.

Dr. Nishida was also a University of Illinois alumnus, having received his Ph.D. in Food Science in 1956 under the direction of Dr. Fred Kummerow.

On the occasion of Professor Nishida's retirement in 1998, the Toshiro Nishida Fellowship for Excellence in Research Fund was established by his friends, family, and colleagues. He and his wife, Hiro, continued to support the fund that provides opportunities for undergraduate and graduate students to excel in their research.

FRIEND NEWS



Munir Cheryan, research professor and his wife Leela, welcomed their first grandson, Damin Neil Shah, on August 20, 2011.

Dr. Gary List, adjunct professor, was selected as recipient of the 2012 American Oil Chemists' Society (AOCS) Stephen S. Chang Award. This award recognizes scientists or technologists who have made decisive accomplishments in research for the improvement or development of products related to lipids.

Dr. Zonglin (Lewis) Liu, adjunct associate professor, was elected chair of the Division of Fermentation and Biotechnology, American Society for Microbiology (ASM) for the 2011-2012 term.

Dr. Liu also was invited to provide a Division Lecture during the ASM 2011 General Meeting in New Orleans, LA.

He also published a monograph book focused on microbial stress tolerance for biofuels using a systems biology approach. It is available at www.springer.com.

SUPPORT THE DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

The Department of Food Science and Human Nutrition appreciates contributions in support of its programs and facilities. The generous donations of alumni and friends assist in maintaining an excellent educational experience for undergraduate and graduate students. You are encouraged to make a general donation or to direct your contribution to a specific program or project of your choice (for example: undergraduate scholarships, graduate scholarships or fellowships, FSHN Facilities and Equipment Fund, pilot plant).

If you are interested in providing a gift to the Department, please make your check payable to University of Illinois Foundation. Send it to 203 Mumford Hall, 1301 W. Gregory Ave. Urbana, IL 61801. You may also submit a gift online at www.giving.illinois.edu.

For more information on supporting the Department of Food Science and Human Nutrition, contact Marla Todd at 217-244-2875 (martodd@illinois.edu).

WE WANT TO HEAR FROM YOU!

Please take a moment to fill out this form and mail it to the Department of Food Science and Human Nutrition, fax it to 217-333-9689, or e-mail to the address below. This helps us to stay in contact with you and to update our records. Additionally, any news that you would like to share will be included in next year's newsletter.

Name _____ Year of Graduation _____

Street Address _____

City, State, Zip _____ E-mail _____

News to share: (i.e., a move, job change/promotion, award or recognition, retirement, accomplishments)

Please share if your company has internship or job opportunities for FSHN graduates.

Send to FSHN, Attn: Marla Todd, 260 Bevier Hall, 905 S. Goodwin Ave. Urbana, IL 61801, (F) 217-333-9689, or martodd@illinois.edu.