Greetings from Cal Poly FSN. Since the last newsletter, there is much to report, and we hope you enjoy the good news in this issue.

First and foremost, I’m pleased to announce that Dr. Gour Choudhury has accepted the position of FSN Department Head, and we look forward to welcoming him to campus in late spring or early summer. Currently Choudhury is professor of food science and director of the Center for Food Science and Nutrition Research at Fresno State University, where he has been a productive and innovative leader. We are excited by his vision, creative ideas for resource generation and program development, and strong interest in all aspects of our departmental programs.

Over the past year, we did a lot of self-reflecting in FSN as we completed comprehensive five-year program reports for both the food science and nutrition majors, followed by site visits from external review teams and action plans for program improvement. We have much to be proud of. Did you know Cal Poly is the only CSU campus with both an ADA-accredited dietetics (DPD) program and an IFT-approved food science program, and one of only two such universities in the state? That the academic preparation of incoming students in our majors is stronger than ever, with GPAs and test scores among the top three or four majors in the College of Agriculture, Food & Environmental Sciences?

I feel proud to be part of a student-centered faculty, where we take seriously our mission to “empower students to nourish the world.” Part of self-reflection, however, is looking at areas for improvement. We are dedicated to continual strengthening of the educational experience for our students, and value the constructive suggestions we get from program review teams, alumni, and employers of our graduates. Given California’s budget crisis, and the shrinking contribution from the state to public higher education, we know we’ll need the support of alumni, friends, and industry partners to continue and enhance the learn-by-doing tradition that is at our core. Please think about contributing to improve opportunities for students: investing in assistantships, maybe through the Bob Noyes Student Development Fund; donating to the Food Science or Nutrition discretionary fund accounts for equipment and other resources; providing internships for our students; sharing ideas and contacts; or visiting campus to share your professional experiences with the next generation of food science and nutrition leaders.

Please take a look at our new “Alumni & Friends” pages on the FSN website. We’ll keep you posted on more exciting developments coming up in 2011.

I hope this newsletter finds you happy, healthy, and off to a great start on the new year! Thanks for your support, and keep in touch.
Congratulations on your Retirement!

Congratulations to Professors Tom Neuhaus and Madoka Watabe-Belzel on their retirement! Fortunately for our FSN students, retirees can continue to teach for five years. Thank you for your combined 31 years of teaching service to Cal Poly students.

Professor Paphathakis joins WHO advisory committee on nutrition guidance.

Cal Poly Nutrition Professor Peggy Papathakis accepted an invitation to serve on the World Health Organization (WHO) Nutrition Guidance Expert Advisory Group (NUGAG), subgroup on Nutrition in Life Course and Undernutrition. The assignment is for two years and focuses on developing evidence-based nutrition policy and program guidelines for WHO member states in the area of nutrition and infection. Papathakis is internationally recognized for her expertise in the area of nutrition and HIV/AIDS and tuberculosis.

Last November, the NUGAG met in Amman, Jordan, for its second meeting. Standing L to R: Paul Kelly, Australian National University; Tony Castleman Academy of Education and Development; Nils Grede, World Food Program; Dan Raiten, National Institutes of Health; Saskia de Pee, World Food Program; Maureen Forsythe, World Food Program; Simon Sadler, University of Australia; Kathy Mulligan, UC San Francisco; Ruth Bland, Africa Center South Africa; Maria del Carmen Casanovas, World Health Organization; seated L to R: Ian Darton Hill, Tufts University; Knut Lomroth, World Health Organization; Randa Saadeh, World Health Organization; Christine Wanke, Tufts University; Peggy Paphathakis, Cal Poly University; David Sinclair, Cochrane Reviews.
Food Media Club
Iron Chef Competition

What would you cook if you were given chicken, red quinoa, Greek yogurt, fresh apricots, and dried hibiscus flowers to prepare a meal?

Iron Chef Champions!
Malorie Comer, Kelsey Gibson and Afton Martell
To the right, their pan-seared chicken breast with sautéed vegetable quinoa and curried apricot-hibiscus yogurt sauce.

Hayden Richter, Katie Rollins, Cecilia Beauchamp, Simon Zhao
To the left, their chicken curry with Greek yogurt, sweet quinoa salad and grilled zucchini.

Colleen Mooney, Annie Faller and Sophia Cappa
To the right is their “Star of Eden” -- green pepper stuffed with quinoa, carrot, zucchini and chicken with sweetened cinnamon Greek yogurt topped with apricots and hibiscus flowers.

Lauren Matthews, Kelly Barmann, Clay Rasor
Left, tangerine-ginger spiced chicken topped with cucumber yogurt and hibiscus-apricot relish, sautéed chard with bacon and onions, and caramelized carrots and quinoa medley.

Jessica Ebert, Linnea La Vallette and Lnea Modrell
At right, apricot and reduced hibiscus chicken with quinoa, sautéed zucchini and onions, and yogurt sauce.
Learning through Community Service

Nutrition students Kohleen Ervin, Kayla Teal, Gabriella Vetere, Kristine Kreveling and Courtney Odum shared their nutrition knowledge to help a family in nearby Nipomo. Simon and Ruby Todd were selected by Cal Poly’s industrial and manufacturing engineering project management class to receive a home renovation to assist the Todd’s 9-year-old son, Caleb. This yearly service project course for graduate students at Cal Poly is known as “PolyHouse.”

The Todd family was chosen because Caleb has achondroplasia dwarfism and hydrocephalus, which has caused him to undergo 10 brain surgeries. Further complicating his conditions, Caleb is overweight. The students partaking in the PolyHouse project renovated portions of the home to make it more suited to Caleb’s needs. Because of his weight condition, PolyHouse asked Nutrition Professor Peggy Papathakis and a volunteer team of students from her clinical nutrition class to make nutritional recommendations to help Caleb lose 20 pounds, as recommended by his doctor.

The students and Papathakis met with the Todd family once a week for four weeks to assess the family’s food habits and to develop a plan to improve the quality of the family’s meals, as well as help Caleb stop gaining weight. Part of this plan involved developing a recipe booklet tailored to the family’s needs, which included healthy revisions of their favorite meals.

Ervin felt the rigorous coursework at Cal Poly truly prepared her for the clinical setting of these visits, which involved advance preparation of lessons and “take-homes” for each visit.

This hands-on project taught Ervin and her teammates about the many factors that can come into play when interacting with a client in a professional setting, versus a one-dimensional homework assignment.

“As a nutrition student, it is far too easy to just assume people will follow MNT (medical nutrition therapy) and then be cured,” Ervin said. “It’s easy to stand on the outside and dictate changes that need to be made. It’s easy to blame the client/patient for not understanding/following therapeutic directions. It’s easy to assume that the patient will make changes and that these changes will change their life. This project was a reality check! There are so many factors that play into a person’s life that may prevent them from applying the skills/knowledge we teach them.”

In the end, in spite of challenges, the nutrition team was able to assist Caleb in losing some weight, and in helping the family plan for future healthy eating.

For more information about the PolyHouse project, pictures of the renovations made to the Todd’s house, and stories from the students’ experiences, please visit the PolyHouse blog at http://polyhouse.wordpress.com/.

Left to right, Rachael Todd, Caleb Todd, and Kohleen Ervin make hummus from scratch.

Tasting fresh hummus, left to right, Kristine Kreveling, Courtney Odum, Caleb Todd, Rachael Todd, and Gabriella Vetere.

Kayla Teal (front right) takes Caleb Todd’s (front left) tricept skin fold measurement.

For more information about the PolyHouse project, pictures of the renovations made to the Todd’s house, and stories from the students’ experiences, please visit the PolyHouse blog at http://polyhouse.wordpress.com/.
Aydin Nazmi, assistant professor in the Department of Food Science and Nutrition, presented findings from the Cal Poly FLASH Longitudinal College Health Study at the 28th Annual Scientific Meeting of the Obesity Society in San Diego in October. The Obesity Society Meeting is the largest national conference dedicated to the multidisciplinary study of obesity in the nation.

Nazmi’s study, titled “The impact of parental education on BMI in young adults: Findings from the FLASH cohort,” examined body mass index (a common indicator used to estimate body fat) among Cal Poly freshmen in relation to their parents’ education level. Maternal and paternal education levels were relatively high (more than 60 percent of parents were college graduates), and the students’ BMI levels were in line with national averages (about 22 kg/m² in women and 23 kg/m² in men -- both in the “normal” category). Each higher level of parental education -- less than high school diploma; high school diploma; some college; and college graduate -- was associated with nearly a half BMI unit (in kg/m²) lower BMI in freshmen, such that the average BMI in students whose parents had not completed high school was about 23.5 kg/m², compared to 22.3 kg/m² in students whose parents had completed college. Moreover, among students whose mothers had not completed high school, overweight/obesity prevalence was nearly 30 percent, whereas it was only 15 percent among students whose mothers had completed college.

“These findings highlight the effects of long-term and inter-generational influences of social determinants of health,” Nazmi said. “In the United States, nearly all health outcomes are strongly mediated by socioeconomic status, such that poor and less educated groups suffer disproportionately compared to richer and more educated groups. In other words, money buys good health in this country, and we do not believe that this is just, moral or sustainable in a democratic society. A much-improved and more equitable distribution of social and health services is urgently needed in the U.S. to ensure the well-being of all people, regardless of social class or economic considerations.” Nazmi has published widely on the social determinants of health in the context of the U.S. and internationally. In addition to his presentation at the Obesity Society conference, two other studies using data from the Cal Poly FLASH Study were presented: Soma Roy from the Statistics Department examined the non-alcoholic drinking habits of freshmen students, and Ann Y. McDermott, director of the STRIDE Institute, assessed the implications and possible causes of the relatively common finding of elevated blood pressure and pre-hypertension on campus.
Food Science Research

Algae Photobioreactor Development

A new crop is growing at Cal Poly, and Professor Brian Hampson is investigating new technology for algal cultivation. Photobioreactors are nothing new, but making efficient use of them for algal biomass production is nowhere near perfected. Algae are, in a sense, vegetables. These single-celled microscopic plants lie at the bottom of the food chain and have great potential because of their fast growth rates, simple nutritional requirements (micronutrients plus sunlight plus carbon dioxide), and production of a variety of valuable end products. Some algae are propagated for their whole cell mass and are marketed that way as a nutritional supplement (Chlorella and Spirulina). Other algae are grown specifically for their protein or lipid components, including omega-3 fatty acid and carotenoids (e.g., astaxanthin). The Office of Naval Research and the CSU Agriculture Research Initiative sponsor Hampson’s research. USDA funding is being requested, and Hampson is hopeful that he will be able to maintain and expand this research, development, and education program. Collaborative partners include faculty of Cal Poly’s BioResource and Agriculture Engineering Department, and the primary industry partner is Paul Cathcart, president of Phycotech Inc., who is donating the photobioreactor equipment.

Food Science Algae Research Team: (l to r) Christina Brox (food science senior), Derek Fougere (food science senior), Brian Hampson (seated), Augie Cooper (food science senior), and Stephanie Percival (biology senior) in front of the 200-L photobioreactor prototype with Chlorella vulgaris under cultivation in the Food Science Pilot Plant.

Will your employer match your gifts to Cal Poly?

Special thanks to Mr. Ron Graf (FS ’79) for his generous contributions matched by his employer, Sempra Energy Foundation. We were able to use these gifts to leverage other departmental funds to purchase a texturometer and viscometry equipment, important to hands-on work in quality assurance, product development, and other courses and projects.

More than 13,000 companies have programs that match employee charitable contributions. Some companies will match gifts from retirees and spouses, and some will automatically match gifts made through payroll deductions. Matching gift programs are a powerful way to expand the potential impact of your gift. To find out if your company will match your gifts, go to www.giving.calpoly.edu/matching.
Professor Khalil trains Egyptian women in solar dehydration techniques

Food Science professor Hany Khalil traveled to Egypt in June in order to lead an educational seminar for Egyptian women about tomato dehydration using solar technology. The seminar was organized by Noubia Gribi-Hussain, director of the Middle East and North American (MENA) Farmer to Farmer Program at ACDI/VOCA, a nonprofit whose focus is economic development and improved living standards in 145 countries.

The goal of the seminar was to increase and extend the value of the tomato crops grown by rural farmers. In addition to being taught how to dehydrate tomatoes, Khalil’s students, all women farmers, were shown a variety of ways dehydrated tomatoes could be prepared in meals.

In order to improve dehydration, Professor Khalil developed a new solar dryer (middle image below) which will be used to by the farmers to increase shelf life and profits.

Khalil introduced several tomato recipes, including tomato leather, similar to a fruit roll-up.

Awad Hussein, director of the West Noubaria Rural Development Project (below, left-hand side, middle picture) was instrumental in coordinating the seminar.

Enology Student Tymari LoRe Takes National Competition

Senior Tymari LoRe was honored for her wine and grape research presentation at the American Society for Enology and Viticulture (ASEV) National Conference in Seattle, Washington. LoRe’s poster presentation “Effect of Bentonite Additions Prior to Fermentation on Protein Stability in Edna Valley Sauvignon Blanc” took first place in the wine and grape research presentations sponsored by Lelland. Students are judged on the content and quality of their oral or poster presentation. The conference was attended by more than 500 wine industry leaders, researchers and other academic representatives. The ASEV is committed to supporting North America’s next generation of wine and wine grape growing researchers. This year over $60,000 in scholarship money was awarded to 13 different enology and viticulture students throughout the United States and Canada.

Tymari LoRe and her faculty advisor Professor Gerry Ritchie
Thank You to our Donors!

Your support of “learn by doing” enhances our mission to empower students to nourish the world.

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2010 Savor the Central Coast

Cal Poly College of Agriculture, Food and Environmental Science exhibited at the inaugural Savor the Central Coast sponsored by Sunset Magazine. More than 7,000 foodies attended the October event at the historic Santa Margarita Ranch.

Nutrition students Jaclyn Goldsmith, Sheila Casey and Rosalia Rochan.

Chef Tyler Florence strikes a pose with student volunteers.
Melinda Lynch, Cal Poly floral design instructor, and 17 students dedicated a total of 90 hours to create the nine backdrop panels for the booth. The panels showcased all the delicious food items produced by CAFES students.