

To: Alumni, USU Food Sciences Program

December 19, 2006

Dear Alumni,

Best Wishes for a Happy Holiday Season! Here in the NFS department, finals are over, and the break is welcome! Six students completed requirements for the BS in food sciences in 2006 (Shaun Adams, James Bond, Seth Finch, Jennifer Mortensen, Heidi Shields, Sydney Pate). All received good offers for employment (Glanbia Nutritionals (2), Kroger, Horizon Snack Foods (2), Cox Honeyland).

We have 4 new faculty in 2005-2006;

Karin Allen, Instructor, Science of Food Preparation (Experimental Foods)

Dr. Silvana Martini, Sensory Evaluation and Lipid Chemistry

Dr. Brian Nummer, Extension Food Science Specialist

Dr. Robert Ward, Food Analysis and Milk Chemistry

**Dr. Brennand** takes pride in the fact that it takes 3 new people to replace her! Karin is a PhD candidate in Cornforth's lab, studying the role of iron in oxidation of lipids and pigments of fresh meats. Silvana finished her PhD at the University of Guelph, Ontario, Canada. In addition to sensory work, she is an expert on differential scanning calorimetry to study lipid crystal stability. Brian is a food microbiologist employed at the University of Georgia before coming to USU. Robert comes to us from the University of California, Davis. His PhD work dealt with characterization of milk glycoproteins. Please visit the department website at <http://www.nfs.usu.edu/> to view new faculty photos, and learn more about these great additions to our staff. While there, I encourage you to complete our new food science alumni survey (completely anonymous). We welcome your suggestions on ways to improve our programs.

#### **Faculty News**

**Karin Allen** will teach the revised course "Science of Food Preparation", and serve as lab instructor for Food Microbiology.

**Jeff Broadbent** is now Associate VP for Research Integrity and Support, but continues his departmental research program. He and Department Head Charles Carpenter have received funding from several sources to investigate the effectiveness of levulinic acid to inhibit *Listeria monocytogenes* in ready-to-eat meats.

**Chuck Carpenter** continues to teach the meat processing course, in addition to his administrative duties.

**Carl Brotherson** is associate director of the Western Dairy Center. He and Bart Weimer have a joint project to investigate effects of oxidation-reduction potential on metabolism of lactic acid bacteria. He also is investigating mathematical models for diffusion processes in cheese.

**Daren Cornforth** teaches food chemistry, and works on packaging methods and new antioxidants (milk mineral, cloves, ginger, fennel, and raisins) to improve color stability and prevent lipid oxidation in meats, with graduate students Avanthi Vissa, Karin Allen, Saumya Dwivedi, and Mihir Vasavada. He and USU extension agent Kevin Heaton published work on effects of delayed castration on beef carcass traits and acceptability. Cornforth and Carpenter's work on low carbon monoxide modified atmosphere packaging was also in the national news as a new method to increase retail beef color stability. PhD student Mihir Vasavada landed a job in the shelf life studies group with Wrigley, Chicago, IL. Avanthi Vissa has a new sensory scientist position with Kraft, Cookies and Crackers Division, Hanover, NJ. Saumya Dwivedi is a sensory scientist with the Institute for Sensory Research in White Plains, NY. New students Ranjeeta Wadhvani (India) and Rossarin Tansawat (Thailand) joined the lab this year.

**Conley Hansen** teaches food engineering, and works on utilization of manure and other waste products to generate electricity from methane, for on-farm or local use. He received the 2006 award

for “Entrepreneur of the Year” from the USU Technology Commercialization Office. He also continues work on the patented process for high-pressure injection of flavors or other ingredients into cheese or meat products.

**Don McMahon** received recognition as “Mr. July” for the USU Research Office 2007 calendar, for his efforts to maintain and expand the popularity of “Aggie Ice Cream”, working with dairy store accountant Kathy Mildenerger, dairy plant manager Randall Bagley, assistant manager Steve Larsen, and dairy plant coordinator David Campbell. Don currently has projects funded by the dairy industry (DMI) on low fat cheese development, and improving the melt characteristics of cheese with regard to proteolysis – Think Pizza!

**Silvana Martini** will teach a graduate course on Crystallization of Foods, in addition to the sensory analysis class. Under her direction, the sensory lab has been updated with new computers in booths for rapid product evaluation and statistics. Her major research interest is to replace trans-fatty acids in lipid-based products while maintaining their quality and consumer acceptance. Dr. Martini has one Masters student (Megan Tippetts) and one undergraduate (Jennifer Thurgood) that are enthusiastically working in these areas.

**Brian Nummer** will teach Food Microbiology, in addition to his extension duties. He has obtained funds from the college of agriculture to develop an extension test kitchen in room 208. A new door has been installed between the sensory lab in 207 and room 208, creating a more useable joint facility, soon to be available to the Utah food industry for food product development. Another project of Nummer and Cornforth and **Meat Lab Manager Dick Whittier** was the evaluation of new high humidity or marinade cooking steps to pasteurize jerky, funded by the USDA FSIS.

**Marie Walsh**'s lab has been busy this year finishing another extrusion project. Alisha Joseph defended her MS thesis. Researchers in the lab this past year included Melinda Moss and Lance Andreason. Melinda Moss accepted a job at Schiff Nutritional, Alisha Joseph is working in Provo, and Lance is a sophomore in Food Science. New to our lab is Kristian Sorensen who is an undergraduate in chemical engineering. I was fortunate to be able to visit Dr. Brad Taylor at Meade Johnson and Andrea Hale this fall. Our food science club made the finals of the IFT product development competition. The team leader was Heidi Shields and her product was Carmapple, apples high pressure injected with a caramel flavor. We have high hopes for the 2007 product development and college bowl competitions.

**Robert Ward** last spring completed his first year of teaching the food analysis course. He as obtained a state of the art GC-Mass Spec head space analyzer, and is actively seeking grant monies for his work to characterize milk glycoproteins and lipids.

**Dick Whittier**, meat lab manager, teaches the sanitation course and team-teaches the meat processing course with Dr. Carpenter. He also contracts with faculty and individual companies on a variety of processing projects, including jerky, cooked salmon and summer sausage for the department holiday packs.

**Paul Savello** is currently on assignment for the US Department of State, in Baghdad, Iraq, where he serves as advisor to the US Embassy and the Iraqi Ministry of Agriculture on food processing and distribution issues. He continues to teach the Food Laws/Regulations course via the internet.

**Secretaries Pamela Neilson, Pam Zetterquist, Carolyn Adams, and Gayla Johnson** kept everyone in line, and the department running smoothly in 2006.

Our list of alumni e-mail addresses is very incomplete, especially prior to 2005. Please forward this message to other USU food science alumni. Contact me to update your e-mail address.

Again, Happy Holidays!

Daren Cornforth (Food Science Program Director), [darenc@cc.usu.edu](mailto:darenc@cc.usu.edu) (435 797 2114)