

Food Science Newsletter

December 2007



From the Chair – Srinivasan Damodaran

Greetings from the Department of Food Science at the University of Wisconsin-Madison! Since my last communication with you in June 2007, several positive and elating things have happened in the Department and I would like to share them with you.

Our graduate and undergraduate students have performed extremely well in the IFT annual competitions: Three out of the six finalists out of a total of 250 applicants for the 2007 IFTSA/Phi Tau Sigma Graduate Research Paper competition were from UW-Madison! In the final contest at the Annual IFT Meeting UW-Madison won the first and the third place! In addition, one of our students won the first place in the Muscle Foods Division Graduate Paper competition. Our Product Development Team won the second place in the IFT annual national competition with their entry of “Kudamushi Fruit Sushi”. Our students also won the second place in the Almond Innovation Contest with their entry of “Almond Sereni-Tea”.

Our undergraduate enrollment continues to increase: Currently we have 83 students and expect to pick up at least 10 more transfer students by Spring 2008. Our target is to have around 100 undergraduate students in the department – it would be difficult to manage above that because of laboratory instructional space and other infrastructure limitations.

On the faculty front, I am very pleased to inform you that our Department is ranked #1 in the 2007 Top Research Universities Faculty Scholarly Productivity Index issued by the Chronicle of Higher Education! This achievement, in spite of deteriorating laboratory and other facilities in the Department, which impede our research and other scholarly activities, is truly exhilarating. I am also happy to report that Dr. Veronika Somoza has joined our Department as Associate Professor. Her research focus will be in the bioactives/nutraceuticals and functional foods area. The College has released an Assistant Professor of Extension position to fill the position being vacated by Dr. Bill Wendorff in July 2008. A search is now underway to fill this position. Dr. Mike Pariza, formerly with but now disbanded Department of Food Microbiology and Toxicology has moved to our Department as his tenure home. With these new additions, we now have a nucleus of five faculties in the probiotics/ bioactives/ functional foods area and we are well positioned to forge ahead with our vision of setting up a Food and Health Research Center with participation from faculties across the campus.

Our Food Science Education Investment Initiative campaign to raise \$7.2M in endowment for various educational activities in the Department has stalled after reaching \$5.2M, mostly in deferred gifts. We will continue our efforts with the food industry to raise much needed funds for the renovation of dilapidated facilities. We are requesting all our alumni to help us in our efforts to build a stronger Department for the present and the future.

Last but not least, I am very happy to inform you that the Department has established a full tuition Fennema Minority Student Scholarship for 20 years starting from Fall 2008 in recognition of Professor Fennema’s long and distinguished service to the Department and to the University.

Until next time...Have a Wonderful New Year.

Fall Semester Welcomes New Students

Raechel Bartz
 Davin Bong
 Stefan Buhalog
 Kate Bukowski
 Mark Dufek
 Annaliese Eberle
 Caitlyn Groose

Gabrielle Hatas
 Tara Lucas
 Kelsey McCreedy
 Calen Nimmer
 Kali Robinson
 Joel Rupani
 Destanie Schneider

Yoo Jin Seo
 Christina Slatky
 Maria Surianto
 Madeleine Thatcher
 Devin Thorson
 Grace Timmerman

Dairy Product Judging Team Results

On Monday, October 15 the Dairy Products Evaluation Team, participated in the 86th National Collegiate Dairy Products Evaluation Contest that took place in Las Vegas, Nevada. The team, trained by professors Bob Bradley and Scott Rankin, consisted of 3 undergraduate students: Mathias Baumhardt, Jeffrey Grummer, and Amanda Liewen, and 1 graduate student: Luis Jimenez-Maroto. More than 15 teams from US and Canadian universities were present in the competition. Luis Jimenez-Maroto won the first place in the Ice Cream and Butter judging contest. Marianne Smukowski (Dairy Safety Applications Coordinator at CDR) was recognized for her involvement in the national butter evaluation competition for the last 18 years. Previously, in the regional competition (September 29th, Chicago, IL), Amanda Liewen won first place in butter evaluation and Luis was placed 1st in milk, and 2nd in yogurt and cheddar cheese, the UW Team won the 2nd place overall in butter and milk in the regional competition.

Arnoldo Lopez

Student Awards

The 2007 Phi Tau Sigma IFTSA Graduate Research Paper Competition received over 250 applicants and UW-Madison had three students among the final six heading into the meeting. UW-Madison took first and third place. Hui Cai working in Dr. Jim Steele's Lab took first place with a paper titled: Genotypic and Phenotypic Characterization of *Lactobacillus casei* Isolated from Different Ecological Niches. Priya Kathirvel working in Dr. Mark Richard's Lab took third place with a paper titled: Flavonol aglycone is a better inhibitor of lipid oxidation in muscle tissue than its glycoside: possible mechanisms of inhibition. Priya Kathirvel also took first place in the Muscle Foods Division graduate paper competition.

Wiparwee Sakaorattanakul was selected to compete in the undergraduate research paper competition at IFT.

The 2007 Product Development team took second place in the Institute of Food Technologists annual competition with their entry of Kudamushi Fruit Sushi. Team members are: Jennifer Baeten, Renee Lietha, Amy Jacobs, Jordan Gosz, Annaliese Eberle, Stephanie Pauk, Caroline Lynch, Katherine Elia, and Joshua Hambali.



Faculty News



Dr. Veronika Somoza

Dr. Veronika Somoza has joined the Department as Associate Professor with tenure. She received her PhD in Human Nutrition from the University of Vienna, Austria in 1995. Before coming to the Department, she was the Vice Chair of the German Research Center for Food Chemistry, Garching, Germany. Her research focus at UW-Madison will be in the nutraceuticals / phytochemicals / functional foods area.



Dr. Michael Pariza

Dr. Mike Pariza was formerly a professor in the Department of Food Microbiology and Toxicology (FMT). After the dissolution of the Department of FMT in July 2007, Dr. Pariza has decided to move to Food Science as his tenure home. The Department is very fortunate to have Dr. Pariza in its faculty roster as he is well known in his field of research and often referred to as the discoverer of CLA (conjugated linoleic acid).

Food Science Club Update

The Food Science Club is off to a great start this year! We kicked off the year by satisfying our sweet teeth with an Ice Cream Social, featuring Babcock's delicious ice cream, and recruiting potential food science majors at the CALS picnic and at the career fair. With a strong value for community involvement, we adopted a street block to clean and have more volunteering plans in the works. Tom Blattner led some of the current food science undergrads on a personalized tour of the Babcock Dairy Plant, which proved to be both fun and educational. Company recruiters were in full force this year, and the FSC hosted info sessions twice a week for the first two months--and that was, on top of our monthly meetings! Our product development teams have also been meeting and are eager to get into the heat of competition. Overall, this semester and school year looks very promising and we can't wait to see what our talented members have up their sleeves.

Kelsey Banaszynski

Food Science Donors

Since the June 2007 newsletter, the following people and food industry foundations have graciously donated to the Food Science Education Investment Initiative campaign. Details on various named scholarships and on how you can provide your gift are included in the newsletter.

Daniel P Berg
Jay Russell Bishop
Thomas M Blattner
Gary G Bushland
Yvonne K S Bushland
Srinivasan Damodaran
Linda G Felton
Patricia Gabarra
Peggy E Henninger

Galloway Company
Barbara H Ingham
Larry W Hicks
Hormel Foods Corporation
Lakeside Foods Inc
Sharon A Platt
Chetan S Rao
Kevin P Ronayne
Elliot T Ryser

Ellen Simenstad
Francis J Tangney
Tate And Lyle North American Inc
Jean W Wallberg
Lih-Ling Wang
Wrigley Wm Jr Company Foundation
Steven D Braun
Richard G Jacobus Family Foundation

Foodservice Advisory Council

The Department hosted the third annual Foodservice Advisory Council on Tuesday April 3, 2007. The Council welcomed new members Susan Quam, Executive Director of the Education Foundation for the Wisconsin Restaurant Association and Jennifer Boaz, Manager of National Accounts for U.S. Foodservices. The program highlighted new initiatives in research and curriculum and, for the first time, students were invited to present their accomplishments as interns within programs that were initiated by the Council. Jenny Allen and Kari Krenz, seniors in the dietetics program, described their experiences at Madison Metropolitan School District. During the afternoon session, Patricia Schmidt and Christine Klover-Spettel, juniors in the program described projects they completed in local healthcare organizations.

The afternoon working session generated many ideas on how the industry and the department can partner on issues currently challenging the foodservice segments. Specific issues include trans fats, food safety, allergens and organics. The Council shared that what they need is a credible source of information on these and other food and health topics. It was agreed that the Department would work to add a "Hot Topics in Foodservice" to its website as a means to meet this need within the foodservice industry.

The 2008 meeting is scheduled for Tuesday March 18th.

Monica Theis

Food Science Educational Investment Initiative: Creating the Future Campaign

Greetings from Babcock Hall! We are taking advantage of the newsletter mailing to inform you of an opportunity to support the Department of Food Science. Since its founding in 1893, the Department has relied on public funding to gain a national and international reputation. In past years, public funding enhanced with private support has been the key to the Department of Food Science's success. This public and private funding partnership is taking on increased significance in the Department's efforts to maintain excellence.

Private support has provided funding for the addition to and remodeling of Babcock Hall, and private funding is responsible for the department's first endowed chair – The Fritz Friday Chair in Vegetable Processing. Now we need to turn our attention to private support for scholarships for undergraduates and research fellowships for graduate students.


Excellence of the Department's academic program is evidenced by the IFT New Product Development Team's success in national competitions. In all, the annual teams have brought 4 national titles to Babcock Hall. That's quite an accomplishment, and we want to continue this excellence by recruiting outstanding undergraduate and graduate students. To do that, we need to enhance the financial support that we can offer to students and be competitive with other food science departments.

We know that you truly value the Department. So that we can continue to be attractive to the best students, this year we have launched the Food Science Education Initiative (FSEI) in which we hope to raise significant endowment for undergraduate and graduate student support.

Elsewhere in this newsletter is a description of naming opportunities (based on level of contribution) and opportunities to contribute to the chairman's fund or other previously named scholarships and fellowships in the Department. We hope we can count on you to assist us in providing assistance for the future food scientists. Please fill out the pledge card accompanying this newsletter and help us secure the future.

For now, we wish you the very best and thank you in advance for your support.

James Behnke, PhD 1971



Daryl Lund, Professor



Food Science Education Investment Initiative

The fiscal reality facing the University of Wisconsin is that the State's share of its total budget continues to erode. It is now less than 20% of the total...and decreasing. This means that private support will become increasingly important to sustain the standard of excellence achieved over the years.

Historically, private dollars have been critically important to the Department of Food Science. They provided a significant share of the total funding for the last (1986) addition and remodeling of Babcock Hall. Private support is also responsible for the Department's first endowed chair...the Fritz Friday Chair in Vegetable Processing, and subsequently the William C. Winder Bascom Professorship.

Given the importance of private funding to the Department and the University, the Department of Food Science launched its Food Science Education Investment (FSEI) Initiative to raise \$7.2 million for endowed professorships (\$2.2million), undergraduate scholarships (\$1.5 million), graduate research assistantships (\$2.5 million), and instructional equipment (\$1.0 million). To date, we have raised \$5.1 million (71%) toward our original \$7.2 million goal, leaving us with a \$2.1 million shortfall. Our immediate concern however, is that \$4.3 of our \$5.1 million commitments are in deferred gifts. Thus, based on current pledges, we only have \$800 thousand presently available for our stated needs. It is therefore critically important that we raise the remaining \$2.1 million in dollars immediately available for the purposes outlined in this brochure.

Student Scholarships: Our Most Pressing Need

Over the past 3 years, the state portion of support to the UW has dropped from over 25% to less than 19% of the total budget. As a result, student tuition has increased faster than increases in student aid. The unmet need for student support has increased over 16% in the last 3 years. Last year, over 50% of the graduates had some student loan debt at graduation. Ten years ago, the average student loan debt at graduation was about \$10,000 while last year the average debt was nearly \$18,000. More than 40% of UW-Madison students received financial aid this past year.

Currently, the Department of Food Science has 22 scholarships, offering a total of \$33,000 – \$35,000 through private funds. The scholarships range from \$1,000 to \$2,000, with the average at \$1,500. With resident tuition in '06-'07 at \$6,730 and non-resident tuition at \$20,730, our current scholarships do not offer sufficient support to recruit the top quality students that can meet the UW's entrance requirements; currently, the average high school GPA of entering freshmen is 3.85. Notwithstanding the fact that our graduates are highly sought after by the food industry and we have 100% placement (which attest to our program excellence), 5 of 6 top recruits in the past 2 years did not come here because we could not offer full-tuition scholarships similar to other neighboring food science departments. Our greatest current need is to provide competitive scholarships to deserving students in order to off-set the inevitable increasing cost of education.

Graduate Student Support

Departmental Research Assistantships: \$700,000*. Graduate research assistants are vital in our training of outstanding researchers for the food industry. It is essential for the department to have the means to recruit the finest available graduate students for its research program. Research Assistantships will allow the department to offer an assistantship to a potential graduate student at the time a student applies for admission, rather than wait until funds are available through a specific grant. Admitting students only when funds are available through a research grant has caused the department to lose a number of outstanding students. In addition, these funds will provide faculty members with a base for increased exploratory research. Our goal is to establish an endowment fund of \$700,000 for each assistantship which would yield approximately \$35,000 per year.

Gifts in kind: The department throughout its history has been the recipient of pilot plant equipment as "gifts in kind". Such gifts will become increasingly more important in the future. Processing equipment suitable for pilot plants and teaching is a major need of the department.

Undergraduate Student Support

Undergraduate In-State Tuition Scholarships: \$135,000*. Our goal is to have scholarship support that will cover tuition costs for the best and brightest students for a four year period. Increasing costs in tuition and living expenses make undergraduate recruitment and retention increasingly difficult. In the near future, resident tuition will exceed \$7,000 per year.

Undergraduate Out-of-State Tuition Scholarships: \$375,000*. Our goal is to have scholarship support that will cover all non-resident tuition costs for a four year period. The department wants to attract outstanding undergraduate students both nationally and internationally to enhance the quality and diversity of our undergraduate program and to offer the best possible student population for recruitment by the food industry. In the near future, out-of-state tuition will exceed \$21,000.

In-State Minority Tuition Scholarships: \$135,000*; **Out-of-State Minority Tuition Scholarships: \$375,000***. To expand diversity within the department's student population, both resident and nonresident full-tuition scholarships are essential to attract excellent minority students.

Undergraduate Research Awards: \$50,000*. These awards allow undergraduate students to design, conduct, analyze and interpret research under the guidance of a faculty research mentor. Such training is increasingly vital in the educational process of our most talented students and attracting young people into the department. Our intent is to offer two \$1,000 research awards annually.

(*Endowment per scholarship)

Student Recruitment Materials

Student Recruitment Material Development and Production Funds: \$30,000. Attractive materials to recruit students are essential in marketing our Food Science undergraduate programs to top quality high school students. Funds to cover development and production costs of these materials are not included in our normal budget.

Instructional Equipment: \$1,000,000.

Modernizing and maintaining laboratory and pilot plant equipment has become increasingly difficult. Budget cuts have limited the department's ability to maintain equipment, especially pilot plant equipment. Students have criticized the use of old or obsolete equipment in pilot plants. One-time funding, as is sometimes available through the normal budget process, simply does not allow for continued replacement and maintenance requirements. We aim to establish an endowed fund to modernize and maintain laboratory and pilot plant equipment and to accept gifts in kind that will upgrade pilot plant equipment suitable for the department's teaching and research mission.

Although our needs are wide-ranging, the department has chosen to focus on instructional needs for food processing and engineering classes, including short courses. The following list is ranked in general order of priority:

- Freeze Drier – A pilot-scale tray freeze dryer is needed to provide facilities for faculty research and to support industry development work.
- Air Drier – A multi-tray, pilot-scale air drier is needed to provide up-to-date instruction and to support industry development work.
- Ultrafiltration/Microfiltration Unit – A small, lab-scale UF/MF system is needed for instruction in polymer and membrane technology.
- Reverse Osmosis/Nanofiltration Unit – A lab-scale RO/NF system is needed for instruction.
- Cryogenic Freezer – A cryogenic freezer for vegetable processing, which allows control of freezing rate, is needed.
- Plate Heat Exchanger – A heat exchange system with appropriate pumps and measurement devices (temperatures, pressure, etc.) is needed for the engineering laboratory.
- Drum Drier – A lab or pilot-scale drum drier is needed to ensure students learn the principles of drum drying.
- Juice Press – A modern unit is needed to demonstrate expression of juice from fruits.
- Twin-Screw Extruder – A small, lab-scale twin-screw extruder is needed for instruction.

Food Science Education Investment Initiative: Creating the Future

I/we wish to join other students, alumni, industry and friends in enhancing the teaching, research, and outreach programs in the Department of Food Science by contributing as indicated below to the Food Science Educational Investment Initiative campaign.

\$250 \$500 \$1000 \$5000 \$10,000 Other

I/we wish to pledge \$_____ each year for ___ years beginning in _____ (year). Please remind me of the annual amount I have pledged in _____ (month).

I/we wish to make a single gift at this time. Enclosed is the contribution of \$_____.

Please charge my gift of \$_____ to my: Master Card Visa Am. Exp.

Card number _____ Exp. Date _____

Cardholder's name (please print) _____

Cardholder's Signature _____

I/we wish to designate this gift toward: Graduate assistantships

Undergraduate scholarships Instructional equipment

Other _____

Name: _____

Address: _____

Please make your gift payable to **UW-Foundation-Food Science Campaign**, University of Wisconsin Foundation, 1848 University Avenue, PO Box 8860, Madison, WI 53708-8860. The University of Wisconsin Foundation is an independent non-profit, tax-exempt corporation that raises, invests and distributes funds for the benefit of the University of Wisconsin-Madison. Your gift, whatever size, is needed and appreciated by the University. For those contributors whose level of support represents a special commitment to excellence at UW-Madison, the Foundation provides recognition through annual giving honor clubs. For exceptional support, the UW Foundation invites donors to membership in The Bascom Hill Society. For more information about giving opportunities, contact Jodi Wickham, director of development for the College of Agricultural and Life Sciences, 608-263-2027. **Please send me information about the following:**

College of Agricultural and Life Sciences
Dean's Club

Including the UW Foundation in my will

Gifts of real estate

Life income agreements

Establishing a permanently endowed scholarship named for a relative or friend

The Bascom Hill Society

We would like to hear from you. This information not only allows us to update our files but also provides us with news to pass on to your classmates and friends. Please remember if you relocate in the future to send us your new address. Also, if there are changes or mistakes in your address as we now have it, please notify us.

Name _____ UW Degree(s) _____
Year(s) _____

Newsworthy items for the next Newsletter:

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