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I am delighted to report on yet another spectacular year for your Department. You may remember that last year I reported on our wonderful ranking in the University Survey (#1 in student satisfaction) and National ranking (tied for the #2 ranking of Food Science Departments from the Top Research Universities).

This year I am proud to report that our top rankings continue. Nationally, in a second study, conducted by Academic Analytics and published in the Chronicle of Higher Education, of Faculty Scholarly Productivity in the top research Universities we ranked #3 with the University of Wisconsin at Madison and Rutgers at New Brunswick ranking #1 and #2 respectively and the University of Illinois, Urbana and Cornell ranking 4th and 5th respectively. Of note is the fact that we were the only Food Science Department to be ranked in the top 3 in both 2005 and 2007.

For the second time in a row we ranked #1 in the University in Student Satisfaction in the Graduating Senior Survey out of all Departments. Rankings from this survey are based on the average of data obtained from the most recent three year period. Thus last year's rankings were the average of results from 2004, 2005 and 2006 and this year's rankings are averages from 2005, 2006 and 2007 so it is an excellent indication of student response.

In addition to these wonderful accomplishments our Alumni continue to be remarkable Ambassadors for the Department

with their great success and recognition. Charlie Feldberg, past Executive Vice President of Best Foods and Founding Chair of our Food Science Advisory board was awarded an Honorary Doctorate Degree at the University of Massachusetts Amherst Commencement on May 24, 2008. As you probably know Charlie initiated the formation of the Food Science Advisory Board which began in 1990 and has been a tremendously positive force for the Department since its inception. Charlie served for 11 years as Chair and then at his retirement passed the chair to Noel Anderson who continues the tradition of outstanding leadership for the Board. It was most fitting then that Noel, who is Vice President at PepsiCo, was also honored this year by being selected as the College of Food and Natural Resources Honoree on the occasion of the 100th Anniversary of the Graduate School. The Graduate School asked each College in the University to select an Alumni as an Honoree to represent the College at its 100th Anniversary Celebration which was held on April 9, 2008.

We were also most delighted and proud to learn that Gil Leveille, yet another member of our Advisory Board, received the Nicholas Appert Award from IFT this year. This is the highest award given by the IFT and Gil's selection was not only well deserved but way overdue. I know all of you join us in offering our heartiest congratulations to Charlie, Noel and Gil for their most well deserved honors.

Not only our Alumni/ae but our Students and Faculty received wonderful recognition this year. The Student Awards will be covered in a separate section but kudos go to Dr. Yeonhwa Park who was this year's single awardee of the Armstrong Fund for Science from a University Endowment and open to the entire university. Dr. Park was also appointed to an IOM/NAS committee on School Meals. Dr. Eric Decker was the recipient of the Stephen S. Chang Award sponsored by the American Oil Chemists Society and presented at their spring meeting. In addition, our newest faculty member, Dr. Hang Xiao and Dr. McClements were awarded a grant by the IFT/ASN/IFIC Committee to attend an NIH grant writing workshop in Washington and I was fortunate to be named the recipient of the 2008 Sterling B. Hendricks Memorial Lectureship sponsored by the USDA and presented at the American Chemical Society Meeting in August.

Our Symposium on "Obesity and Health: Modifying Behavior, Modifying Food or Using Policy to Optimize Both" was held June 4 and 5 and was extremely successful. This was the second Symposium in our Policy Alliance Series and a meeting of the Policy Alliance followed the Symposium on June 5.

I hope you agree we did indeed have a spectacular year due, in no small measure, to having the most generous, supportive, loyal, enthusiastic and finest alumni/ae in the world.

STUDENT AWARDS

Our students once again had a stupendous year and were the recipients of a wide variety of scholarships.

NEIFT Awards

Our students were once again most fortunate, winning six of the eight

scholarships generously given by NEIFT this year. The NEIFT is doing a magnificent job of supporting Food Science students with their wonderful scholarships. They are to be congratulated for all the effort they put in to raising this money.

The awardees were:

Undergraduate: Alana Jakas. Graduate: Jean Alamed, Chandrakant Ankolekar, Caitlin Boon and Thaddao Waraho. Christina Kriegel won the Supplier's Award.

National IFT Award

Nell Finegan, a high school senior who will enter our program this fall was named a Freshman Scholarship Alternate.

AOCS Award

Jean Alamed, Caitlin Boon and Christina Kriegel were all named "Honored Students" at the AOCS Annual Meeting.

Caitlin Boon was also the recipient of the 2008 Hans Kannitz Award of the North East Section of the AOCA and the Peter and Claire Kalustion Scholarship.

ACS Awards

Christina Kriegel received the American Chemical Society best Graduate Student Paper Award "The Whithycombe-Charalambous Award" for her presentation at the New Orleans ACS Meeting.

College Awards

Caitlin Boon Received a continuation of her Lotta M. Crabtree Fellowship from our College.

International Association of Confectioners

Ms. Danielle Kelly and Ms. Ameena Saleh, undergraduate seniors, were awarded travel grants to attend the Production Conference of the International Association of Confectioners in Hershey, PA in April. Alumni gifts also supported their travel expenses, in part, in order to accept these awards.

Graduation Speaker

Mr. Ed Ryan, an undergraduate Food Science Senior, was one of four students selected to speak at the 2008 College of Food and National Resources Graduation Dinner.

TRIENNIAL ALUMNI/AE WEEKEND, OCTOBER 3, 4 2008

I hope all of you have your calendars marked. If we have your email address you will have received an “Evite” by now but if you haven’t, one will be coming with information about a super weekend with many exciting events and an opportunity to see old friends and meet many new ones. Our planning committee once again headed up by the triumvirate of Cory Bryant, Amanda Kinchla and Cassandra Knight have done a terrific job so please plan to be a part of this wonderful weekend.

ENDRESEN LECTURE

Ms. Sylvia Rowe, President of SR Strategy, LLC presented the nineteenth Endresen Lecture on March 26, 2008. Ms. Rowe is also an Adjunct Professor in Food Science at the University of Massachusetts Amherst and at Tufts Friedman School of Nutrition Science and Policy. She is very active in our Food Science Policy Program.

She served as president and chief executive officer of the International Food Information Council (IFIC) and IFIC Foundation, in Washington, DC, (nonprofit organizations) that communicate science-based information on food safety and nutrition issues to health professionals, journalists, government officials, educators and consumers. IFIC’s programs are primarily supported by the broad-based food, beverage and agricultural industries.

During her eleven –year tenure, IFIC established itself as a leader in consumer

research and consumer-based communications in nutrition, food safety and health. Rowe’s leadership resulted in national public-private partnerships and coalitions between IFIC and preeminent government agencies and health organizations committed to developing science-based consumer communications on healthful lifestyles.

Rowe’s background in media and expertise in issues management are also reflected in her professional history as a producer and on-air host of several television and radio talk shows covering social, political, economic, and consumer issues. She also previously held positions in public relations, marketing, and membership development for the American Tort Reform Association, the American Association of University Women, and the Sugar Association.

Ms. Rowe is extremely active on a wide variety of Professional Boards and Advisory Committees and received a Bachelor’s Degree from Wellesley College and was awarded a Masters Degree from Harvard University, both with honors.

The title of Ms. Rowe’s presentation was “Scientific Communication: The Growing Gap Between Scientist and Consumer” and she approached this in an up to date, detailed and entertaining fashion with her background in analyzing, synchronizing and bringing together divergent issues. She framed the challenge and discussed all the current hot issues, Food as Energy, Food as Ethics, Food as Risk, and Food as Medicine. She also provided valuable insights into consumer and media understanding and challenged the audience to take part in this critical educational endeavor. It was a wonderful, thought provoking presentation and one which our students do not often hear.

We were indeed honored and fortunate to have Ms. Rowe as our nineteenth Endresen Lecturer.

FOOD SCIENCE CLUB

The UMass Food Science club started the spring semester focused more on building local community awareness about food science. Starting in March, I represented the department by giving a presentation to sophomores at Monson High School. I presented the uses of food science by demonstrating the basic fundamentals, industry jobs, and research applications. Luckily I was able to interest a few sophomores who approached me afterwards, eager to know what steps were necessary in becoming a food science major. Later in the month Dan Vollmer and Jackie Matthews participated in the Massachusetts Science Olympiad held at Assumption College in Worcester. There they used various experiments such as melting butter to analysis of nutrition labels to demonstrate to middle school students the science of food. The club plans to use these types of demonstrations in the future to further educate others about the rewarding opportunity in becoming a food science major.

In other news, the food product development team produced a ready to eat on the go fruit bite called Fruogies. Which consisted of a mix of buckwheat and whole wheat that had a dried fruit and jam interior aimed for the health minded consumer. It was submitted to the IFT competition, however did not make it to the finals. As for the college bowl, due to unforeseen circumstances the team could not participate in this year's competition. However in an effort to participate in the IFTSA area meeting at Penn State, I attended the conference to announce UMass Food Science Club achievements.

In April, the annual NEIFT Student Recognition Night was held in Plymouth, Massachusetts. Prior to the dinner, UMass Food Science students who came to the event attended a tour on the art of food photography by Ed Nute. Afterwards a dinner was held at a Thai cuisine restaurant and student award scholarships were presented. Out of the 8 scholarships, 6 were awarded to UMass students!

Our club elections this year showed a substantial increase in participation. The officers for 2008-2009 are Kaitlin Ewald (President), Chris Aurand (Vice President), Russell Fortin (Treasurer), Ashley Han (Secretary), Dan Vollmer (Activities Coordinator), Trisha Terry (NEIFT Representative), and Professor Jochen Weiss (Junior Advisor).

To end the semester, the club sold Food Science departmental T-shirts as a fundraiser at the annual picnic. Furthermore, we plan to have our club website redesigned and updated.

Thanks to all faculty, students and the alumni for your continuing support for the department and the food science club. We wish all of the graduating students the best in their new endeavors!

Edward Ryan Jr.,
On behalf of the Food Science Club

IFT MEETING AND BREAKFAST

Once again we will be providing financial support for students presenting papers at the IFT as well as for the President of the Food Science Club. (Please note we also provide support to students presenting papers at other scientific meetings). We would be unable to do this without your generous support and their participation is a key to our visibility at the meeting.

PLEASE REMEMBER, the UMass breakfast will be held at 7:00a.m.,

Tuesday July 1, at the New Orleans Hotel, New Orleans, LA. Please note that tickets must be purchased at least one day in advance. We are expecting another outstanding turnout and with all the exciting events going on with our alumni/ae, students and faculty I'm sure we can set another new record for attendance.

I am really looking forward to seeing you there so I can thank you in person for all your wonderful support and loyalty.

STRATEGIC RESEARCH ALLIANCE/ADVISORY BOARD

We held our 12th Annual Strategic Research Alliance meeting on campus April 30 and May 1, 2008 with some 35 scientists from 24 member companies participating.

Members arrived on April 30 to meet with individual faculty and/or visit the posters set up throughout Chenoweth. This was followed by a reception from 5:30 p.m. – 7:00 p.m. and dinner.

On May 1 we had an outstanding meeting with presentations by the Food Science Faculty and Faculty members from the Department of Kinesiology and Mechanical and Industrial Engineering as well as Computer Modeling demonstrations by Dr. Micha Peleg, Maria Corradini and Mark Normand.

Dr. Micha Peleg gave a presentation entitled, "News from Modeling Fairyland: Interactive Software to Assess Sterility and Heat Resistance Determinations without Isothermal Survival Data". Dr. Hang Xiao spoke on "Cancer Prevention by Dietary Components: A Promising Approach to Controlling Cancer" and Dr. Ron Labbe presented a paper "An Inconvenient Truth: *Bacillus cereus* as a Foodborne Disease Agent: You can't be serious".

As is our tradition we had speakers from other Departments give SRA members a view of related research going on

elsewhere in the University. Dr. Barry Braun from the Kinesiology Department spoke on "Intelligent Design of the Exercise Drug to Prevent Type – 2 Diabetes and Dr. Sundar Krishnamurty, Department of Mechanical and Industrial Engineering spoke on "The Pneumatic Vest: An Integrated Approach to Treatment of People in Mental Health using Sensory Modulation".

A Food Science Advisory Board meeting was held May 2 in conjunction with the SRA meeting with its usual outstanding attendance including the participation of our new Dean, Steve Goodwin, our former Dean, Cleve Willis, who is doing a terrific job helping out the College in Development on a part time basis since retirement and CNRE Director of Development, Tom Hastings.

RESEARCH CORNER

As is our tradition we have one of our outstanding Faculty discuss his/her research in every issue of our Newsletter. In this issue, Dr. Micha Peleg talks about the wonderful advances they have made in developing interactive software to simulate and assess the efficacy of thermal processing of foods. Further, he goes on to explain how you can access and use this software on line to assess your thermal processing efficacy.

The following is in Dr. Peleg's words:

Traditionally, heat preservation of foods has been based on the assumptions that microbial mortality follows first order kinetics and that the temperature effect on the 'D value', or exponential rate constant, follows the log linear model, or Arrhenius equation, respectively. Growing evidence suggests that more often than not the inactivation of bacterial cells and spores follow the Weibull-Log Logistic ('WeLL') model rather than the conventional kinetics.

Software to simulate pasteurization and sterilization processes using this model developed in our Department by Mark Normand and myself has been available for some years as free downloadable programs written in MS Excel[®] - See <http://www-unix.out.umass.edu/~aew2000/GrowthAndSurvival.html>. [Because first order kinetics is just a special case of the Weibullian ('power law') model, the software is applicable to both the traditional linear and the newer nonlinear inactivation kinetics.] Recently, Wolfram Research, Inc., the maker of Mathematica[®], has made available a rich collection of user-created animated graphic demonstrations on the Wolfram Demonstrations Project's web site at <http://demonstrations.wolfram.com/>. A user with a web browser can view online Flash[®] previews of any of the thousands of existing demonstration files and also download the files. Then, using its Mathematica Player[®] program, also available for free from the site, any computer that has Mathematica Player[®] installed can run any downloaded demonstration file and the user can manipulate the shown images' parameters with sliders on the screen and watch the effect.

A set of five such demonstrations, for use in food thermal processing, has just been accepted by Wolfram Research, Inc. and is now part of the Project's collection. IT is based on the same temperature profile and inactivation models as the MS Excel[®] programs. The difference is that the five demonstrations allow the user to generate and adjust the temperature profile and modify the targeted organism's survival parameters by moving sliders on the screen interactively and *continuously*. The result is the almost instantaneous appearance of the corresponding semi-logarithmic survival curve of the targeted organism or spore or the process's equivalent isothermal time at a reference temperature, which can also be set

by moving a slider. To download the Mathematica Player[®] program got to <http://www.wolfram.com/products/player/download.cgi>. To see a Flash[®] preview 'movie' of each of the five demonstrations, go to <http://demonstrations.wolfram.com/> and enter 'food sterilization' in the Search box. Click on the desired demonstration image and then on 'watch web preview' in the top right corner.

This set of free program allows food microbiologists, technologists and engineers to examine a large number of heat processing scenarios or options and immediately assess their potential safety implications. It can therefore be used to screen for effective, or ineffective, processes or to evaluate the safety risk associated with the presence of new heat resistant organisms in food. The demonstrations can also serve as a most effective training and educational tool in industry and academia, a feature already recognized by several universities.

WRAP UP

As in our practice I would like to conclude the Newsletter with a few selected activities of the Faculty to give you a snapshot of what is going on.

Dr. Jochen Weiss presented several invited papers including a paper at Tufts Friedman School of Public Health, another at a Food Structure Symposium at the AOCS meeting in Seattle in May. As well, he was invited to Italy under an Italian Mobility Grant to spend 10 days at the National Research Council of Italy Research Laboratories and also is serving on the IFT Annual Meeting Scientific Program Committee.

Dr. Ron Labbe continues his work as Graduate Program Director and responded to numerous inquiries from the public and industry on microbial food safety issues including an interview with industry on

bacterial spores on a food safety issue in cured meats.

Dr. Bob Levin among his many activities was kept busy as Chair of the University Faculty Senate Service Department Committee throughout the 2006-07 academic year as well as continuing his leadership role on our Seafood Safety Federal line item grant. In addition, he was invited to make a presentation on “Removal of PCR Inhibitors from Food” in Hungary and has recently completed a book chapter on “PCR Detection of GMO’s”.

Dr. Mahoney served on an IFT Awards Jury and continued his work with the Faculty Senate International Studies Council. His introductory course entitled “The Nature of Food” attracted 60 students and he worked with local industries on the development of shelf stable fudge.

Under the leadership of Dr. Lynne McLandsborough we have become an integral part of the UMass/Cornell Food Science Summer Scholar Program for undergraduate research funded by PepsiCo. In conjunction with this, Dr. McLandsborough was invited to participate in a meeting at PepsiCo to discuss future funding and expansion of this program. In addition she has been appointed to the Commonwealth of Massachusetts Food Establishment Advisory Committee whose mission is to promote food safety by advising the Director of the State Food Protection Program.

Dr. Kalidas Shetty presented a number of invited papers and short courses including a seminar on “Metabolic Biology of Dietary Ingredients for Type 2 Diabetes Management at the Pioneer Valley Life Science Institute at Bay State Medical Center in Springfield, MA and an invited short course on “Environmentally Sustainable Food Systems” in the high Amazon of Peru for the Living Routes-UMass Program. In addition Dr. Shetty

continues to interact internationally with governments and industry, part of which, is a continuation of his service as a Jefferson Fellow with the State Department as well as serving domestically on the NSF Biotechnology SBIR – STTR Grant Panel and providing technical assistance to many industries.

Dr. Peleg, whose research is featured in the Research Corner of the Newsletter this edition gave several invited papers and short courses including a seminar on “New ways of looking at three old problems: A Fermi solution to microbial risk assessment, predicting shelf life from acrylamide formation in foods, “at the University of Karlsruhe, Germany, another on “Central issues in texture evolution of foods” at the Agricultural University of Valencia, Spain and an invited short course for graduate students on Rheology at the UPV – Polytechnical University of Valencia, Spain.

A paper authored by Dr. Julian McClements and Dr. Demet Guzey in the Journal of Agricultural and Food Chemistry. 2007; 55(2), 475, entitled “Impact of Electrostatic Interactions on Formation and Stability of Emulsion Containing Oil Droplets Coated by β – lactoglobulin – Pectin Complexes” was the most highly cited paper in this Journal for the year 2007. In addition, Dr. McClements continues his many activities with Symposia, professional societies and the ACS Colloids and Surfaces Division. Julian has also been widely interviewed by the press for stories on his research controlling lipid digestion using multilayer emulsions.

Dr. Hang Xiao, our newest Faculty member, whose research was featured in our last issue, is extremely busy working with the University on his laboratory renovation, equipment and getting equipment and supplies. He is writing an invited review paper for the International Journal of Cancer and an invited book chapter entitled

“Advances in the use of animal models for intestinal cancers and protective effects of dietary components”. In addition, he is very busy writing research grant proposals as well as giving an invited lecture on his work to the Honors Colloquia of Quinsigamond Community College.

Dr. Eric Decker finished up his service on the NAS/IOM Foods in the Schools Committee and was invited to serve on the NAS/IOM Food Forum. In that capacity he participated in a Food Forum meeting on Nutritional Biomarkers. In addition, Eric is serving on the FDA Advisory Committee and is active on IFT Committees. Dr. Decker was also invited to interview on cooking with fats with Alton Brown (Keynote speaker at last years IFT Annual Meeting) on his “Good Eats Show” which appears on the Food Network. Dr. Decker was also very active providing technical assistance to a variety of companies many of who are members of our Research Alliance.

Dr. Yeonhwa Park presented a poster at the 2008 Experimental Biology Meeting entitled “Conjugated Monadecadienoic Acid (CAN) shares similar molecular mechanisms with Conjugated Linoleic Acid (CLA): a good fat? at the Korean – American Scientists and Engineers Association New England Symposium held at Harvard. Dr. Park and her students and Post Docs also presented 3 posters at this meeting entitled “Effects of Conjugated Fatty Acids on Lipid Metabolism” a second “Japanese (Petasites Japonicus) Leaf Powder Increases Serum Cholesterol Concentration and Hepatic Oxidative Stress in Rats” and a third

“Conjugated Linoleic Acid and Calcium Supplements Help Improve Bone Mass”.

In addition, Dr. Park presented a poster at the 2008 Experimental Biology Meeting entitled “Conjugated Nonadecadienoic Acid (CAN) shares similar molecular mechanisms with Conjugated Linoleic Acid (CLA).

Finally, I want to let you know that I have announced my retirement June 30, but I will be at the IFT Meeting. We have a National Search on for a new Department Head and know that we will be able to attract top candidates to this outstanding Department. I have been blessed to have been part of this Department for some 40 years and to serve as Department Head for 20 years working with the best Faculty, Staff, Students and Alumni/ae in the world at the best Food Science Department in the World. However, I plan to keep busy professionally. The College has asked me to return part time as Director of our Food Science Policy Alliance and I will continue to serve on the NAS/IOM Food and Nutrition Board, the Keystone Food and Nutrition Round Table, as Chair of the Board of ILSINA and on the Board of ILSI as well as working with IFT and many of your companies. I want to offer my heartfelt thanks to each and every one of you for the opportunity you have provided for me and for your incredible talent, support, enthusiasm and loyalty which has made this the top Department in the world.

My deepest thanks and very best personal regards,