A North Carolina State University led effort, funded with a $1 million grant from the U.S. Department of Agriculture, will bring students from as many as eight state universities to the North Carolina Research Campus in Kannapolis to study food science and nutrition. The grant will be used to expose graduate students to what is known as a transdisciplinary approach to problem-solving said Dr. Jack Odle, William Neal Reynolds professor of nutritional biochemistry at N.C. State University. Odle led the effort to apply for the grant and will direct the program.

Transdisciplinary education is a relatively new concept in academic circles that refers to the idea that many of today's scientific questions are so complex they cannot be adequately addressed by scientists or experts with expertise in only one area. Rather, scientists are likely to be more effective if their training stretches across disciplines.

The grant will allow students at N.C. State and the other seven universities to structure their training to address research questions that are transdisciplinary in nature. Odle said students accepted into the program will be known as Kannapolis Scholars. The grant will provide Kannapolis Scholars with roughly $38,000 over a 15-month period for tuition, housing and other expenses. A key element of the program is what Odle called a 10-week "rotation" each summer at the N.C. Research Campus in Kannapolis. Students will spend the 10 weeks working at a lab on the campus.

The grant is being provided through a relatively new USDA competitive grants program called the Agriculture and Food Research Initiative, or AFRI, which was created in 2008 to replace the former National Research Initiative (NRI).

Odle said students from all eight universities involved in the Research Campus will be eligible to apply for Kannapolis Scholars fellowships. Funding will go to students who are just beginning their graduate school careers, in the first or second year of their studies. Thirty faculty members from the eight universities have agreed to mentor students. Odle said students must design programs of study that involve mentors from at least two of the eight universities. In addition to mentors from two universities, each student will also have a mentor based at the Research Campus.

USDA will provide funding for four years, and Odle anticipates that during that time approximately 20 students, including at least two from each university, will take advantage of the program. The program will begin in the spring of 2010 with the selection of the first six Kannapolis Scholars. Seven more students will be selected in the second and third years of the program. In addition to the $1 million from USDA, Odle said the University of North Carolina General Administration has committed to provide $100,000 over the 4-year period to help defray living costs for students during their 10 weeks at Kannapolis each summer. The program will also feature a weekly seminar series for 10 weeks each summer and an end of summer research conference.
Greg Bolton, laboratory research specialist, took part in a Bluefin Tuna Workshop presented to fishermen and seafood processors on October 30, 2009 at Carteret Community College. The event included speakers from National Marine Fisheries Service, US Coast Guard, NC Sea Grant, and NC State University. Bolton presented data collected from his work on a Fishery Resource Grant (FRG) project with George Leone (FRG # 07-ST-01, Assessment and Validation of NC Bluefin Tuna Industry Practices) and explained what changes that would occur if the large pelagic fish is added to the CITES (Convention on International Trade in Endangered Species) list of species and could no longer be sold internationally.

Barry Nash, seafood technology and marketing specialist, delivered a presentation at the Seafood Science and Technology Society of the Americas (SST) conference in New Orleans, October 26-28, 2009, titled “Food Entrepreneurship: Facilitating Innovation Through Partnerships.” Nash profiled how the Seafood Laboratory collaborates with the NC Department of Agriculture and NC Sea Grant to help seafood businesses manage the development and successful marketing of value-added seafood. The SST conference attracted nearly 100 attendees from across North and Central America and the Caribbean.

Dr. David Green served as co-chair for the 3rd Trans-Atlantic Fisheries Technology Conference on September 13-15, 2009 in Copenhagen. Green also chaired the Executive Committee meeting for the Atlantic Fisheries Technology Conference (AFTC) and presented a poster of Dr. Kristin Bjorndottir-Butler’s paper “Colony Lift Hybridization Method for Quantification of Gram-Negative Histamine-Producing Bacteria in Fish.”

Participants learned about federal and state regulations in the tuna fishery and the safe handling practices necessary for this valuable commercial fish. The annual workshop was developed through cooperative research funded through Sea Grant's FRG program.
Jill Miller, public communication specialist, has been working alongside JoAnna Foegeding for the past several months on the redesign of the FBNS Extension Program web site, which will officially launch the first week of January 2010. The new site is an effort to consolidate and make available information about the department’s extension commodity programs, food testing and labeling procedures, current training opportunities, links to government and commercial resources for small and large business, and more. A new web address has also been named for the site: www.ncsu.edu/foodscience/extension/

Mariner’s Menu Blog features fresh seafood

A new blog based on Joyce Taylor’s popular book of the same name, offers consumers a new way to get seafood recipes, learn about local fisheries and traditions, and stay current on in-home handling practices that protect seafood safety and quality. The blog was developed as an information resource for health-conscious consumers who are including more seafood in their diets, and who want more background on North Carolina coastal products.

Project partners include the NCSU Seafood Laboratory, NC Sea Grant, The Core Sound Waterfowl Museum, and NC Division of Marine Fisheries. Regular contributors are Joyce Taylor, David Green, Barry Nash and Pam Morris.

Follow Mariner’s Menu online at www.marinersmenu.org.
Events from the Daubert Lab

Prashant Mudgal defended his PhD on November 20, titled Aggregation Mechanisms of Beta-lactoglobulin at low pH Conditions. Prashant was co-advised by Drs. Daubert and Foegeding.

Chris Daubert was an invited speaker at the August 2009 ACS meeting in Washington DC, presenting Cold-set thickening mechanism of Beta-lactoglobulin at low pH: Concentration and kinetic effects.

Chris Daubert is a newly appointed editorial board member to the Annual Reviews of Food Science and Technology, and in 2010 Chris will become editor-in-chief of the Journal of Texture Studies.

In 2009, Dr. Daubert was elected President of the NC State Sigma Xi chapter, a research society existing to honor excellence in scientific investigation and encourage a sense of companionship and cooperation among researchers in all fields of science and engineering.

In fall semester 2009, C. Daubert instructed the inaugural offering of his food rheology course via distance education. The course is a true distance education class developed for the industry and is geared towards teaching the fundamentals of rheology and texture measurements for food science applications.

In addition, Yifat Yaniv defended her PhD in spring 2009; Ms. Helen Melito started her Ph.D. program in Dr. Daubert’s group in the fall of 2009.

Events from the Foegeding Lab

Dr. Allen Foegeding was invited to give the following talks in the second half of 2009:

Linking mechanical and sensory aspects of texture: Advances and challenges. Presented at the international symposium on Rheology and Fracture to honor Dr. Ton van Vliet on his retirement. Wageningen, the Netherlands. October.

Using dairy ingredients to alter the texture of foods. 6th NIZO Dairy Conference. Dairy Ingredients: Innovations in Functionality. Papendal, the Netherlands. October


Events from the Klaenhammer Lab

Todd Klaenhammer co-organized the Arthur M. Sackler Colloquia of the National Academy of Sciences on “Microbes and Health”, November 1-3, 2009 at the Beckman Center in Irvine, CA. This colloquium focused on host-microbial symbioses, primarily in humans. The symposium was attended by nearly 300 participants representing both national and international scientific groups.
Annual Spook-ghetti Luncheon

Once again the Social and Recreation committee hosted the annual Spook-ghetti luncheon and included a few new TWISTS to this year's fun.

There was the New and Improved Pumpkin Carving Contest for which two prizes were awarded: Best Pumpkin as judged by 3 impartial department members and People's Choice as judged by audience applause at the luncheon.

Winners were:
Impartial Judging – The Klaenhammer Lab
People's Choice – The Peanut Lab

The annual Costume Contest was also in high gear with two awards bequeathed to: Best Costume as judged by 3 impartial department members and People's Choice as judged by audience applause at the luncheon. Everyone was encouraged to dress-up for the luncheon and those of who participated in the contest were part of the "Parade" through the F&V lab before the People’s Choice award was judged.

Winners included:
Impartial Judging – Juliebeth Briseno
People’s Choice – Seth Fornea
2009 FBNS Holiday Lunch

The Social and Recreation Committee again hosted the 2009 FBNS Holiday Lunch in grand style. The "Door Decorating Contest" was again in vogue this year with winning door going to Drake’s Lab. The lunch was potluck one again with everything from delicious, Miracle-made turkey to a huge table filled with a plethora of desserts.

This year’s entertainment was the three dueling Kazoo bands "Whey to Buzz" (Allen Foegeding, Paige Luck, Esra Cakir, Bongkosh Vardhanabhuti, Xin Yang, and Leann Barden), "Ground Nuts" (Sabrina Whitley-Ferrell, Amanda Stephens, Chellani Hathorn, Kristin Ali McDaniel, Madison Whitley, Edith Da Conceicao Neta, and Miniayah DeBruce), and "Motley Kazoos" (Chris Daubert, Beth King, Donn Ward, Brian Farkas, Sue Strong and April Morrison). "Whey to Buzz" came out on top after a spirited contest of many well-known kazooed Christmas carols.

Many thanks to our AWESOME Social & Recreation Committee. We could not have half as much fun making fun of ourselves without you!
Department Personnel Update

**Congratulations**

**December 2009 Graduation**

The Fall 2009 Food, Bioprocessing and Nutrition Sciences Graduation honors were conducted at St. Mary’s Pittman Auditorium on a cold, snowy Saturday, December 19th, 2009 at 1:30 pm. Dr. Brian Farkas, Associate Department Head, made the welcome remarks and introductions. A reception and refreshments immediately followed the festivities.

**Bachelor of Science Degrees Awarded**

*Food Science*
Coordinator: Dr. Brian E. Farkas
Xia “Cat” Meng
Sarah Allison Smathers

*Nutrition Science*
Coordinator s: Drs. Jonathan C. Allen & Sarah L. Ash
Amy Anderson
Molly Collins
Lauren Deans
Meghan Donovan
Terelyn Dudley
Hannah Heil
Matthew Horton
Christian Lamb
Ashley McPhail
Xia “Cat” Meng
Joowon Seo
Meghan Shaver
Sarah Allison Smathers
Gabriella Stern
Shelly Tkach
Alexandra Troxler

**Master of Food Science Degrees Awarded**

Gloria Botwe – Chair: Dr. Van-Den Truong

**Master of Science Degrees Awarded**

*Food Science*
Mohammed Islam - Chair: Dr. Sophia Kathariou
Mallory Kelly – Chair: Dr. E. Allen Foegeding
Jonathan Blake Layfield –
  Chair: Drs. Trevor Phister & John Sheppard
Iris Liaw - Chair: Dr. MaryAnne Drake
Jiajuan Xiong - Chair: Dr. Sophia Kathariou
Chia-Ying Yen –
  Chair: Drs. Josip Simunovic & Van-Den Truong
Matthew Yurgec –
  Chair: Drs. Chris Daubert & E. Allen Foegeding

**Doctor of Philosophy Degrees Awarded**

*Food Science*
Audrey Kreske - Chair: Dr. Frederick Breidt
Prabhat Kumar - Chair: Dr. K.P. Sandeep
Brooke Whitney - Chair: Dr. Lee-Ann Jaykus

*Functional Genomics*
Erica Pfeiler – Chair: Dr. Todd Klaenhammer
New Employees

Mary "Molly" Burke joined the Klaenhammer and Daubert labs in pursuit of her MS degree, investigating probiotic delivery mechanisms in dried dairy formulations. She has an undergraduate degree in Biochemistry from Saint Louis University. At NC State, Molly is a trainee in the competitive Biotechnology Training Program. In partial fulfillment of her obligation to that program, Molly has accepted a summer 2010 internship with the Clorox company.

Dr. Steven R. Gray, Research Associate / Post Doc (September 2009) Dr. Gray just completed his ph.D. at NCSU in August 2009 in Chemical Engineering. While at FBNS, he is working with Dr. Trevor Phister.

Ali McDaniel joined the FBNS department as an M.S. Student in the Fall of 2009. Dr. Jack Davis will serve as her committee chair.

Awards

Dr. Todd Klaenhammer Elected AAAS Fellow

Dr. Todd R. Klaenhammer was elected as a Fellow of the American Association for the Advancement of Science in November 2009. Each year, the AAAS Council elects members whose “efforts on the behalf of the advancement of science or its applications are scientifically or socially distinguished.” The honor of being elected an AAAS fellow began in 1874 and awardees are honored each year with a certificate and a rosette. Congratulations on yet another well deserved award, Todd!

Ms. Lisa Gordon Receives SFPA Special Recognition

In October, the Southeastern Food Processors Association held their annual convention in Charleston South Carolina. There, they recognized Lisa Gordon with a special award honoring her “Service and Professionalism Managing the Administrative Responsibilities of the SFPA.” They went on to further recognize her many years of hard work, dedication and dependability in planning their yearly conferences and helping organize their meetings with executive director, Dr. John Rushing. Great work, Lisa!

Phanin Leksrisompong wins Student Paper Competition

Phanin Leksrisompong was the winner of the best student paper competition in the Pathology / Processing and Products section meeting at January 2010’s International Poultry Scientific Forum (held in conjunction with the International Poultry Expo in Atlanta, GA).

The title of Nin's presentation was “The effect of heating rate on gelation properties of egg white and whey protein isolate gels.” Authors: P. N. Leksrisompong, T. C. Lanier, and E. A. Foegeding

Nin received a $250 prize for winning this competition and is now entitled to enter the Alltech competition for best published manuscript in Poultry Science when the work is published.
Service Awards

The 2009 Service awards were presented at the annual Spook-ghetti lunch in October. Those receiving University service awards include: Sharon Ramsey - 30 years, Lisa Gordon - 25 years, Beth King - 25 years, Karl Hedrick, III - 20 years, Sue Strong - 20 years, and Paige Luck - 10 years.