

# THE UNIVERSITY OF TENNESSEE

Volume 19, Issue 1

Summer, 2003

## Food Science & Technology Newsletter

### Department Head's Message

By Dr. Clark Brekke

Whew!! It has been an eventful and another successful year for our students and faculty. The Food Safety Center of Excellence, co-directed by **Dr. Ann Draughon**, continues to build its programs and take advantage of funding opportunities. Almost all faculty are supported by the Center to some extent in their research endeavors. Funding continues to be obtained through faculty grant writing efforts, such as the most recent USDA/NRI grant obtained by **Dr. Jochen Weiss** for \$337,000 to research antimicrobial delivery systems to improve food safety.

The Department continues to have the finest students around. They continue to win scholarships, awards and competitions on a local and national basis, particularly through professional societies such as the Institute of Food Technologists and the International Association of Food Protection. These student accomplishments are detailed in the following pages.

During the past year, budget issues have been in the forefront of the State's, University's and Department's concerns. For the July 2003 through June 2004 fiscal year, Tennessee's Governor has mandated that state agencies reduce their budgets by 9%. That mandate applies to all state colleges and universities. For the UTIA Experiment Station and for Extension, budget cuts cannot be offset by tuition raises to help soften the blow. Therefore, our Department's Experiment Station and Extension budgets will take significant hits. For our research program through the Experiment Station, Department operations and travel will be reduced 37%. Two open graduate research assistant positions will be closed, and layoffs in staff will occur. Depending on the State's economy in this coming fiscal year, additional reductions in support may be forthcoming. As alumni, your support of, including contribution to, our research,

teaching and Extension programs is needed now more than ever. Several special, outside-funded accounts are used to support our programs. Please contact the Department Head for information about these accounts. Your past contributions have provided scholarships, assistantships, travel and equipment purchases for the Department. Please consider continuing your support!

This is my last Department Head's Message for the Newsletter. May 1, I stepped down from my position to accept teaching responsibilities in the Department and the opportunity to serve in the College of Agricultural Sciences and Natural Resources working with Associate Dean Mary Albrecht. Two of my areas of responsibility are coordinating the College's newly developed Honors Program and working with the College's International Programs. Both of these areas have been identified by UT President Dr. John W. Shumaker as priority areas for UT. **Dr. Charles Goan**, Professor in the Department of Animal Science, will be Interim Head until an internal UT search identifies a new head. Plans are to have the new department head in place by this fall semester. I have enjoyed serving as head and corresponding with you twice a year. I will be gone from the head's office but not from the FST and College scene. Keep in touch!!

### Better Process Control School

By Dr. Bill Morris

The University of Tennessee will be offering a Better Process Control School for low acid and acidified canned foods September 30 thru October 3, in Knoxville. Instructors for the course are **Drs. P. Michael Davidson, John Mount and Bill Morris**. This course is taught in conjunction with the Food and Drug Administration and the Food Processors Institute.

## Microbiologist Honored by Research Agency By Dr. Mike Davidson

**Vijay K. Juneja**, a supervisory microbiologist with the Agricultural Research Service (ARS), has been named the “North Atlantic Area Senior Research Scientist of 2002” for the agency. ARS is the U.S. Department of Agriculture's chief scientific research agency.

**Juneja** is internationally recognized in the field of food safety for his research in defining the required heat treatment and safe cooling rates for cooked meats to inactivate food-borne pathogens. He helped the meat industry establish standards to validate a safe process for cooking hamburger with a device he co-designed to monitor the temperature of hamburgers during cooking. They showed that *Escherichia coli* O157:H7 can be eliminated if the temperature of the coldest spot in the hamburger is monitored and the burger is cooked adequately.

He led a team that established the cellular basis of heat resistance of emerging pathogens. The team discovered that food preservation factors used to guard against pathogens may in fact stress the pathogens and render them more resistant to subsequent heat treatments. The food industry has responded to his research team's findings by identifying potential new approaches for the safe production of foods processed with milder preservation techniques.

“**Dr. Juneja** has maintained an innovative and highly productive research program,” said Edward B. Knipling, ARS acting administrator. “His research has had significant impact in protecting consumers from the risk of food-borne illness.” **Juneja** was recently presented with a plaque at the agency's Henry A. Wallace Beltsville (MD) Agricultural Research Center.

**Juneja** has worked for ARS since 1991. Among his many awards, he was named ARS' “Outstanding Early Career Research Scientist of the Year” in 1998.

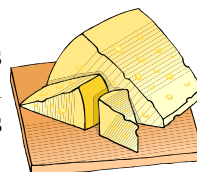
He is a member of the Institute of Food Technologists and the American Association for the Advancement of Sciences. He is an associate editor of the Journal of Food Sciences and has served on the Journal of Food Protection's Board of Editors since 1994. **Juneja** has authored 167 publications and edited four books.

A native of India, **Juneja** earned a degree in veterinary medicine from the Govind Ballabh Pant University of Agriculture and Technology in Pantnagar, India. He received a master of science in animal science

and his Ph.D. in food technology and science from the University of Tennessee–Knoxville. He and his wife Poonam live in North Wales, PA, with their daughter Komal, 14, and son Nikhil, 9. *US Dept. of Agriculture*.

## Food Science Club By David Rasmussen

The Food Science Club surpassed last year's cheese sales which resulted in another successful year! We are excited about what is being planned for next year's sale.



We're looking forward to expanding our partnership with the University Bookstore, as well as working toward making cheese sales accessible via the internet. If you are interested in joining our mailing list please contact me by email at [drasmuss@utk.edu](mailto:drasmuss@utk.edu) or by dialing 865-567-2060. Be sure to include your phone number and email address.

The Food Science Club trained well for the annual IFT regional college bowl competition. The competition is based on students' knowledge of various aspects of Food Science (chemistry, microbiology, processing/engineering, sensory, etc.). The Club competed against 5 other schools in our region. First place in our region will compete against the first place holder from other regions at the Annual IFT meeting. Our team received third place in this year's competition, gaining a high level of respect from the other teams. We are looking forward to hosting next year's Southeast Regional College Bowl competition. We're confident we will contend in next year's national competition.

## In Memory

**Dr. Melvin (Mel) R. Johnston**, who served as head of the Department of Food Technology from 1959 until 1973, died September 4, 2002. Following his tenure in the department, **Mel** served as chief of the Plant and Protein Branch, Division of Food Technology for the FDA. **Mel** was an active member of IFT and was elected a Fellow in 1980. He was a founding member of the Volunteer Section and served as its secretary from 1971-1973.

## Better Food for the US Army: New Collaborative Era of Research

By Dr. Jochen Weiss

Times are changing, not only in politics but in science as well. The era of the absent-minded professor sitting alone in his office, a room that is cramped with piles of books and scientific papers, and single-handedly working on the next Nobel Prize, are probably over. These days, team work and active collaboration between highly specialized scientists working in different areas of expertise is the key to success. The buzz word is “multi”, be it multidisciplinary, multiinstitutional or multifunctional while “uni” or “solo” is out. And with good reason!

State and federal resources are being reduced, not only at UT, but at almost all US universities. The consequence is clear. Resources must be pooled to save costs and to work more efficiently with fewer personnel. A proof that this strategy actually works is the recent participation of FST faculty in the CORANET II program.

The Department of Food Science and Technology has been part of the Combat Ration Network (CORANET II), an organization financed by the Defense Logistics Agency of the US Army, for the past 1 1/2 years. The goal of the CORANET II group, which consists of 7 member universities, 5 industrial ration producers and government representatives, is to improve ration manufacturing practices and ultimately develop better rations for the US army.

As part of a collaborative effort with the University of Georgia, a team of FST scientists (**Drs. J. Mount, M. Penfield, J. Weiss** (lead P.I.) and **S. Zivanovic**) have recently been awarded an 18-month contract to specifically work on improving retorted egg breakfast items. The goal is to develop better formulations that are suitable to withstand the abusive processing conditions required to achieve a 3-year shelf life. A second contract in collaboration with Drs. Kevin Kit and Marion Hanson of the Department of Material Science and Engineering at UT will focus on developing a new in-line seal inspection technology based on laser-induced ultrasound to detect package defects. **Drs. P. M. Davidson and J. Weiss** will assist in characterization of seal and package integrity by conducting physicochemical and microbial challenge tests.

## Great Strides Walk

By Brandy Knox

This semester the Food Science Club participated in the Great Strides Walk of Knoxville and collected donations to benefit The Cystic Fibrosis Foundation. Club members, faculty, and staff were encouraged to participate as well as recruit sponsors for such a worthy cause.

Prior to the walk, club members raised money and donators put their company or name on a paper heart or rose which was displayed in the lobby of the Food Safety and Processing Building.

Each dollar collected from students (and alumni) was counted as “1 point” for their professor (current or retired) of choice and that professor was recognized.



### 2002 Fall Graduates

#### B.S.

Lane Dennis  
Carl Doane  
Jacob Stevens  
Tina Sams

#### M.S.

Matthew Evans  
Joo Sung Kim  
Charlene Belles  
Demet Guzey

### 2003 Spring Graduates

#### B.S.

Alisa Doan  
Ellen Hill  
LaQuita Michael  
Catherine Moore

#### M.S.

Brandy Knox  
Sarah Malone  
Vivian Ann Rash



Congratulations to **Omaima**

**Ahmed** and husband Mohammad. On Dec. 6, 2002, after her morning classes, **Omaima** gave birth to two healthy baby girls!! Safa weighed in at 6 lbs. 3 oz. and Hannah at 4 lbs. 5 oz. The twins were welcomed by a sister, three year old Nada.

## Scholarships - Awards - Recognition

### Scholarships and Awards Banquet International Dinner

#### Outstanding Faculty and Staff

**Dr. Lana Zivanovic**—Outstanding Faculty, Under 5 years; Outstanding Faculty Advisor

**Dr. F. Ann Draughon**—Outstanding Faculty, Over 5 years

**Vikki A. Webb**—Special Appreciation

#### Quality of Faculty

**Dr. F. Ann Draughon**—Director and Chair, NAFS Center for Microbial Physiology and Ecology

**Dr. David A. Golden**—Featured Faculty of the Month (July), University of Tennessee, Office of the Provost

**Dr. Jochen Weiss**—Gamma Sigma Delta Honor Society Initiation.



From left to right:  
Emily Curtis, Erika Bible and Nancy DeTrana

**Emily Curtis**, Award Committee Chair.

**Erika Bible**, Armistead Award winner: The student selected to receive the cash award and plaque is a full-time student in the College, graduate of a Tennessee high school, and has earned the highest grade point average in courses through the fifth semester.

**Nancy DeTrana**, Outstanding Graduate Teaching Assistant: Awarded to a graduate student who demonstrates excellence in the classroom and working with undergraduate students in other ways that enhance the undergraduate educational experience. Evidence of professional development as an instructor is also considered.

#### Awards and Recipients

CASNR Outstanding Students for 2003:  
**English Cranfield**, Freshman; **Emily Curtis**, Sophomore; **Erika Bible**, Junior.

Department of Food Science and Technology Outstanding Student for 2003:  
**Jennifer Ham**, Freshman; **Emily Curtis**, Sophomore; **Erika Bible**, Junior; **Ellen Hill**, Senior.

Extraordinary Professional Promise Award for Outstanding Graduate Research for 2003: **Jeff Boland**.

Exhibition of Undergraduate Research and Creative Achievement participants:  
**Erika Bible**, **Mechelle Elosiebo** (First Place), **Faith Johnson**, and **Catherine Moore**.

#### Scholarships and Recipients

**Mechelle Elosiebo**—African American Achievers; Tennessee Higher Education Commission  
**Emily Curtis** and **Carol White**—Alumni Valedictorian  
**Alisa Doan**—Frederick T. Bonham; Genevieve Christian Memorial

**Alisa Doan** and **Carrie Harris**—Central States Meat Association; Mid-States Meat Association  
**Jessica Clemons**—Food Science & Technology; Fay Miller Bush and Ruth E. Miller Scholarship in Agriculture. Southeastern Food Processors Student Scholarship.

**Mechelle Elosiebo** and **Kerri Grant**—J. T. Miles Food Technology and Science  
**Jane Carcello** and **Jessica Clemons**—Southeastern Food Processors Association

#### Scholastic Honors

**Heather Reasons**, and **Emily Curtis**

#### College Ambassadors

**Erika Bible**, **Emily Curtis**, **Alisa Doan**, and **Carol White**

#### Student of the Month

**Carrie Harris**, October

## FST Dairy Product Evaluation Team Brings Home Honors

By Marjorie P. Penfield



The Food Science and Technology Dairy Products Evaluation Team completed a successful season! The undergraduate team composed of **Alisa Doan**, **Ellen Hill**, and

**LaQuita Michael**, all seniors in Food Science and Technology, participated in two contests this semester. The first contest was held at Kraft Foods Research Center in Glenview, IL on October 12. **Ellen Hill** took first place in ice cream and **LaQuita Michael** took third place in yogurt. The team placed third in ice cream and yogurt, fourth in cottage cheese and fifth in all-products. Other individual top finishes included **Ellen Hill**, eighth in all-products; **LaQuita Michael**, third in yogurt, and **Alisa Doan**, sixth in cottage cheese. **Shari Baxter**, a graduate student in the department also competed in the contest.

The National Collegiate Dairy Product Evaluation Contest was held in Phoenix, AZ on October 26 at Shamrock Foods. Eighteen teams from the US, Canada, Central America and Africa participated in the contest. UT's team did very well in the contest. **LaQuita Michael** brought home the trophy and a \$100 prize for being first in cottage cheese. Our team brought home the third place trophy for cottage cheese. The team also placed fifth in ALL-PRODUCTS. All teams who place in the top ten are recognized as "Outstanding" at the awards breakfast and on the contest web site (<http://www.ams.usda.gov/dairy/cdpec>). The team finished in the top ten for five of the six products evaluated (ice cream-4, cheddar cheese-6, cottage cheese-3, butter-5, and yogurt-4). Individual top ten finishers included fifth in yogurt by **Ellen Hill**, first in cottage cheese, fourth in butter, and ninth in ice cream by **LaQuita Michael**, and seventh in butter and tenth in ice cream and cottage cheese by **Alisa Doan**. Congratulations are in order for completing a very successful season.

The Collegiate Dairy Products Evaluation Contest is sponsored by three groups: the International Association Food Industry Suppliers (IAFIS), the United States Department of Agriculture, Agricultural Marketing Service, Dairy Programs and the American Dairy Science Association. Funding for travel by the

UT team is provided by IAFIS and the Tennessee Dairy Products Association. Virginia Dare provides a plaque and monetary award for the team's outstanding member. This year's award went to **Ellen Hill**, who ranked highest among the team members.



Dairy Products team, Ellen Hill, Alisa Doan, and LaQuita Michael receiving third place for cottage cheese.

## Industry Field Trip

By Marjorie P. Penfield

At 5:30 p.m. on Tuesday, April 22, 29 students, faculty, and staff departed on a chartered bus for Winchester, KY. On Wednesday the group toured Winchester Farms Dairy, A Kroger Company. Tours of Wild Flavors, Inc. in Erlanger, KY and Johnson-Diversy in Cincinnati, OH completed Wednesday's itinerary.

Thursday morning was spent at Pierre Foods. That afternoon the group had the opportunity to attend Supplier's Expo 2003 which was sponsored by the Ohio Valley Section of IFT. Dr. Michele Perchonok from NASA was the keynote speaker. Her presentation focused on food science as it is being applied to providing food for the future manned missions to Mars. After the presentation and visiting a variety of exhibitors at the EXPO, a weary group boarded the bus for a long trip home.

While on the tour faculty had the opportunity to visit with **Tim Hoilman** (BS 1984) with Heller Seasonings and Ingredients; **Mondonna Cate** (BS 1998, MS 2000) at Wild Flavors, Inc. and **Yusuf Bhatia** (MS 1980) with Mane, Inc.

## M.S. Students Travel to Austria to Learn How Europe Utilizes Renewable Resources

By Aaron Woody and April Parker

We attended a Socrates Intensive Course entitled *Agriculture: Source of Raw Material for Industry*. The course was held in Vienna, Austria at Universität für Bodenkultur (BOKU) February 9-22, 2003. Professor Roland Verhé from Ghent (Belgium) and the European Union (EU) organized the short course with students from 10 different European countries and the United States. The course concentrated on the uses of renewable resources in the world. The trip was sponsored by the European Union and the airfare was provided from Sensory Lab funds.

The course consisted of 5 ½ days of lecture covering biodiesel production and uses, wood biotechnology, microbial conversion of renewable resources into chemicals, rice hull uses, bio-film production, lipo-oleochemistry, green chemistry, and building blocks and polymers from biomass. Guest instructors from Belgium, Finland, Great Britain, France, and the United States provided the diverse information we received.

We traveled through Austria visiting the northern, southern, and eastern parts of the country. The course had 4 ½ days devoted to excursions to other universities and manufacturing facilities. One of the excursions was to the Institute of Chemistry at the University of Graz to learn about biodiesel production. We also visited the town of Mureck to see the most famous biodiesel production facility in Austria. The next excursion was to Lenzing, the world leader in cellulose fiber technology. The third university we visited was IFA-Tullen, which focuses on agriculture and biotechnology. After all this, we only had one study day to cram for the 56 question multiple-choice examination. After passing the exam, we attended a graduation where we received a certificate of completion.

We also had cultural trips scattered throughout the two weeks. One trip was to Melk to see the monastery and then on to Dürnstein for wine tasting. We also went on a walking tour of Vienna to see some of the more famous and important sites. The University of Graz also treated us to dinner and wine tasting that was extremely fun. After class we saw a ballet at the opera house, checked out the imperial treasury, and had the opportunity for several other activities. Some of the group had to check out the club scene in Vienna and it

was awesome. We learned many things about each person's country and in turn we shared as much as we could about the US. One thing that was emphasized was the difference between Western and Eastern Europe not only in cultural differences but in financial differences as well.

We had a great time learning about renewable resources in the world and learned that Europe is far ahead of the rest of the world when it comes to using renewable resources. We were the first students from the United States to participate in the Socrates program and we definitely recommend that students strongly consider going to these classes in the future. Yes, students from the US will be invited back regardless of what Aaron did to ruin relations with the EU.

## Faculty & Staff Stuff

In March, **Dr. P. Michael Davidson** was invited to present a seminar on naturally occurring antimicrobials to the University of Illinois Department of Food Science and Human Nutrition. In addition, he visited with several of the Illinois faculty and toured their facilities.

**Davidson** was also invited to speak on food antimicrobials at the Food Safety Summit and Expo 2003 in Washington, DC in mid-March. He spoke in a session entitled "Antimicrobial Ingredients: Creating Food Safety from Inside Your Product" sponsored by the National Food Processors Association.

Last Fall, **Davidson** was invited by the Institute of Medicine of the National Academy of Sciences to serve as a reviewer for their document *Escherichia coli O157:H7 in Ground Beef - Review of a Draft Risk Assessment*.

In November, (*Food Technology* volume 56, no. 11, pages 69-78), **Davidson** and **Mark Harrison** (PhD 1981) of the University of Georgia published an IFT Scientific Status Summary entitled, "Resistance and Adaptation to Food Antimicrobials, Sanitizers and Other Process Controls."

\* \* \*

**Dr. Lana Zivanovic** visited the Department of Food Science at the Penn State University on March 6, 2003. She gave an invited presentation "Functional carbohydrates from fungal sources" and discussed possibilities for collaboration with the Plant and Mushroom Products Group.

## Departmental Presentations IFT— Chicago By Marjorie Penfield

### *Sunday morning, July 13*

14B-10 Production and characterization of emulsifier-based nanoparticles to encapsulate phytophenol antimicrobials

**S. GAYSINKSY, P. M. Davidson, J. Weiss**

14F-32 Protein-additives to modify texture of retorted egg products **V. MORENO, J. R. Mount, S. Zivanovic,**

**J. Weiss**

### *Sunday afternoon, July 13*

29B-23 Influence of molecular weight and concentration of chitosan on physicochemical stability of O/W emulsions

**S. CHI, S. Zivanovic, P. M. Davidson, C. Basurto,**

**J. Weiss**

29F-9 Antimicrobial effect of Thai spices against *Listeria monocytogenes* and *Salmonella* Typhimurium DT104

**C. THONGSON, P. M. Davidson, W. Mahakarnchanakul,**

**P. Vibulsresth**

29F-12 Antimicrobial effectiveness of sodium hexametaphosphate with lysozyme against *Escherichia coli* O157:H7 **J. BOLAND, P. M. Davidson, J. Weiss**

29F-14 Antimicrobial efficiency of eugenol and carvacrol encapsulated in emulsifier-based nanoparticles

**S. GAYSINKSY, P. M. Davidson, J. Weiss**

29F-15 Antimicrobial properties of chitosan films enriched with essential oils **S. CHI, S. Zivanovic, J. Weiss,**

**F. A. Draughon**

29F-26 Stability and antimicrobial activity of liposomal nanocapsules containing nisin and lysozyme **L. M. WERE,**

**P. M. Davidson, B. Bruce, J. Weiss**

29G-14 Molecular weight and concentration influences antimicrobial activity of chitosan in oil-in-water emulsions

**C. Basurto, S. Zivanovic, P. M. Davidson, S. Chi,**

**J. Weiss**

### *Monday morning, July 14*

45D-14 Effect of counter ion on the physical properties of solution-cast chitosan films **R. SESHADRI, S. Zivanovic,**

**J. Weiss**

### *Monday afternoon, July 14*

F2 FORUM: IFT grant success stories, Panel members--

**A. Uebersax, A. Prakash, D. A. Golden**

60C-15 Post-processing pasteurization of packaged frankfurters for control of *Listeria monocytogenes*

**C. M. BELLES, D. A. Golden**

### *Tuesday morning, July 15*

63-1 The use of botanicals as bioactive protectants for foods **F. A. DRAUGHON**

76C-2 Effect of ozone treatment on quality of orange juice

**P. D. ANGELINO, D. A. Golden, J. R. Mount**

### *Tuesday afternoon, July 15*

92B-13 Impact of solvent choice on microwave-assisted extraction of soybean oil **H. LI, L. Pordesimo, J. Weiss**

92C-25 Design of a novel lab-scale mano-thermo-sonication reactor to process foods **D. LANG, J. Weiss**

92D-14 Probing and three-point bend methods for measuring cookie texture **A. WOODY, M. P. Penfield**

### *Wednesday morning, July 16*

104C-4 Effect of gaseous ozone on antioxidant content and color of sliced tomatoes **S. C. MALONE, S. Zivanovic,**

**C. E. Sams, J. R. Mount**

104C-7 Effect of the deodorization of salt-fermented anchovy sauce on the quality of kimchi **H. J. CHUNG,**

**P. M. Davidson, S. H. Choi, M. J. Yoo**

104D-18 Hedonic evaluation of ice cream labeled with vanilla flavoring type **A. R. PARKER, M. P. Penfield**

For more information: <http://www.am-fe.ift.org/t3p1.php>

## Meat Judging Team

The 2003 University of Tennessee Meat Judging Team has competed in two contests during the spring semester: Houston Livestock Show and Rodeo and the Southeastern Intercollegiate Meat Judging Contest. Team members include: Jason Bailey (Knoxville), Scott Burton (Bluff City), Devin Gilliam (Franklin), **Carrie Harris** (Speedwell), Lorie Hickey (Sparta), Nathan Perry (College Grove) and Jen Shaver (Blountville).

UT placed 13<sup>th</sup> out of 15 teams at the Houston Livestock Show and Rodeo Contest. Nathan Perry placed 3<sup>rd</sup> in lamb judging. The team practiced at Auburn University, Texas A&M University and Hyde Packing Co. in route to the contest.

The Southeastern Intercollegiate Meat Judging Contest continues to be innovative when it comes to hosting a meat judging contest. The Southeastern has traditionally tested new classes and procedures prior to the fall judging season; 2003 was no different. Due to product availability, the beef grading and specifications classes were held at New Horizons in Cincinnati and the remainder of the contest at the University of Kentucky. After the contest, students were guests of Keeneland Race Course for an afternoon of thoroughbred horseracing. UK Block and Bridle Club hosted an awards BBQ at the new UK sheep farm.



The University of Tennessee  
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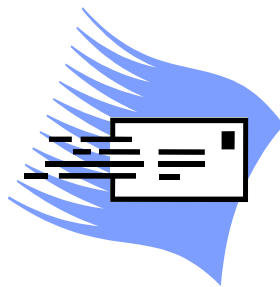


## Alumni News

### Attention Alumni

Keep us informed!! Everyone loves to hear what has been going on in the lives of our alumni. As always, we appreciate any comments or suggestions you may have.

You may send information by:  
 E-mail: [vikki@utk.edu](mailto:vikki@utk.edu)  
 Phone: 865-974-8400  
 FAX: 865-974-2750  
 or Mail:  
 The University of Tennessee  
 Department of  
 Food Science & Technology  
 Attn: Vikki Webb,  
 Newsletter Editor



**Amy Lucas Burns** (B.S. 1995, M.S. 1998) and her husband, Joe, welcomed Daniel Hillis Burns (8 lbs. 6 oz.) into the world September 4, 2002. Amy and Joe live in Louisville, KY.

**Janie Poplin Housewright** (B.S. 1991) relocated to Doraville, GA and is working as Corporate Manager with American Land & Mortgage Ben Campen Company and Smiley's Corporation.

**Gerald May** (B.S. 2000) and Amanda Parott were married February 22, 2003. Gerald works as Quality Production Coordinator at Melaleuca, Inc. in Knoxville and Amanda is a Juvenile Probation Officer with Blount County Sheriffs Department in Maryville.

**Phillip K. Lee** (Ph.D. 1985) recently moved his wife Judi and their two sons Alex and Jake from Indiana to New York state. Phillip recently accepted the Principal Scientist position at Balchem Corporation.

*Newsletter Committee:*

*Dr. Bill Morris, chair; Ms. Vikki Webb, editor; Dr. Ann Draughon, Dr. Marjorie Penfield, Dr. Lana Zivanovic, and Mr. Willie Taylor.*

*NOTE: Names in **Bold** are current FST employees, retirees, students or alumni.*

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