WHAT IS A FOOD SYSTEM?

People around campus hear “Auburn University Food Systems Initiative” and think “food safety.” One of AUFSI’s goals is to protect public health by promoting interdisciplinary research on pathogens, thus contributing to food safety best practices. Our mission, however, encompasses all aspects of a complex, integrated food system, from producing food through processing food to consuming food. Focus areas include science, technology, outreach, entrepreneurship and consumer needs as well as consumer desires. AUFSI addresses concerns, including testing, validation and training, at all levels from production and processing through transportation, marketing and disposing of waste. Training and outreach—communicating what university researchers have learned to those who need to know the information—are part of AUFSI’s plan. AUFSI also seeks to lead collaborations among academia, industry and government agencies and strives to facilitate the translation of collaborative innovations and discoveries through academic and Extension/outreach programs; technology transfer; public/community meetings; and research, federal, state and industry collaborations.
That’s the suggestion that led to the creation of the Auburn University Food Systems Initiative. Auburn University researchers are knowledgeable about every aspect of the complex, integrated “food system” that employs 18 percent of the U.S. workforce and feeds more than 300 million people. What would happen if individual researchers were supported in their efforts to do interdisciplinary research?

The result was AUFSI, officially created in February 2011 after a task force studied the subject for nearly two years. We established working groups that brought together faculty members from a variety of disciplines, then listened to what they had to say.

We started providing assistance in writing large grants that require interdisciplinary efforts, and almost immediately received a $6.5-million, five-year grant from the National Institutes of Health to help the Food & Drug Administration create training for food inspectors at all levels nationwide.

And that’s just the beginning. AUFSI has been involved in writing numerous other multidisciplinary grants and is in the process of creating an online Food Entrepreneur Center and Food Entrepreneur Conference. Read on for more details about our activities this year, and our goals for next year.

SINCERELY,

PATRICIA CURTIS, PhD
Director, Auburn University Food Systems Initiative
AUFSI GOALS & OBJECTIVES

- Ensure the protection of public health by conducting research on pathogens, contributing to food safety best practices and advancing food systems technology

- Facilitate and make tangible contributions to national, regional and state food safety efforts through interdisciplinary research, outreach and educational collaborations and external partnerships with academia, industry, government and consumers

- Maintain an infrastructure to foster interdisciplinary partnerships

OBJECTIVES:

1. Establish a core team with representatives from the founding member groups to serve as the AUFSI Core Faculty.

2. Establish an interdisciplinary, cross-departmental venture for all departments and organizations throughout the Auburn University network.

3. Establish content and a cadre of content experts in core science and technology focus areas.

4. Build relationships with local, state and federal government representatives with impact upon the food system.

5. Identify and obtain seed funding to establish dedicated staff and related required resources.

6. Facilitate and pursue collaborative funding opportunities.

7. Provide testing and validation of food-safety and quality-related technologies.

8. Provide specialized training for those responsible for ensuring the implementation of food safety regulations, mandates and best practices.

9. Create and improve public awareness about food-systems related health, economic and implementation issues.

10. Participate in outreach to the local, state, national and international food safety communities.

11. Develop advanced tools, practices, and interventions to reduce foodborne hazards in every part of the food chain.

12. Develop quality education for students in food-safety-related disciplines.

13. Translate collaborative innovations and discoveries.
One of our first tasks was to invite faculty to partnership with the Auburn University Food Systems Initiative. **Charter Core Faculty** are part of **Working Groups** consisting of researchers from different disciplines who share common interests.

**COVA ARIAS**

*Cova Arias*, a microbiologist, is an associate professor in the Department of Fisheries and Aquaculture who researches oyster safety among other topics.

**CHRISTY BRATCHER**

*Christy Bratcher*, an assistant professor of meat science in the Department of Animal Sciences, investigates food safety and niche markets for beef and goat meat.

**BRIGITTA BRUNNER**

*Brigitta Brunner*, an assistant professor in the Communications and Journalism Department, heads the public relations program. She possesses expertise in crisis management.

**ZHONGYANG CHENG**

*Zhongyang Cheng*, a professor in the College of Engineering, is assistant director of the Center for Detection and Food Safety in the College of Engineering.

**SUE DURAN**

*Sue Duran*, pharmacy director for the College of Veterinary Medicine, researches new products for treating diseases in food animals and works with veterinarians to study proper dosages and withdrawal times to ensure meat and milk safety.

**AL GIFFIN**

*Al Giffin* is director of the National Center for Asphalt Technology, the only facility in the country where factors involved in the transportation of food can be studied without taking to the public highways.
TUNG-SHI HUANG
Tung-Shi Huang, an associate professor in the Department of Poultry Science, focuses on food safety and the development of biosensors to detect foodborne pathogens.

BOB NORTON
Bob Norton, a professor in the Department of Poultry Science, is an expert on data mining and database management.

WILLIAM RAVIS
Bill Ravis is a professor in the School of Pharmacy. His research focuses on the pharmacokinetics of drugs.

BONNIE SANDERSON
Bonnie Sanderson, an associate professor in the School of Nursing, is interested on the effects of obesity on health.

CHETAN SANKAR
Chetan Sankar, a professor of management in the College of Business, is director of the Geospatial Research and Applications Center.

MANPREET SINGH
Manpreet Singh, a microbiologist and assistant professor in the Department of Poultry Science, is an expert on food safety and food processing regulations.

JEAN WEESE
Jean Weese, a professor and Extension specialist for the Department of Poultry Science, researches food safety issues in the food processing and food service industries.

JIM WITTE
Jim Witte, an associate professor in the College of Education, is interested in the development of training programs.

MICHELLE WOROSZ
Michelle Worosz, an assistant professor in the Department of Agricultural Economics and Rural Sociology, researches economic viability in rural settings. She focuses on barriers and constraints to increasing production and consumption of local and regional products.
Another one of our first tasks was to hire staff to carry out the work of AUFSI. Meet our team.

**DR. PATRICIA CURTIS**  
*AUFSI Director*  
(334) 844-7456 • curtipa@auburn.edu  

*Dr. Patricia Curtis* joined the Auburn faculty in 2002 as a professor and director of the Poultry Products Safety and Quality Peaks of Excellence Program. In 2008 she was named interim director of the National Egg Processing Center, a partnership between eight institutions and industry. A native Texan, Curtis received a bachelor’s degree in home economics education from Texas Women’s University and master’s and doctoral degrees in food science and technology from Texas A&M University. She spent several years at the University of Wisconsin-River Falls and at North Carolina State University, where she was an Extension specialist for poultry processing. Her particular interests include food law and distance education in science. Among her many awards is the American Distance Education Council’s Excellence in Distance Education Award (2000). She was named AUFSI director in February 2011.

**MARCIA KLOEPPER**  
*Technology Specialist*  
(334) 844-4115 • kloepmo@auburn.edu  

*Marcia Owens Kloepper* is coordinator for AUFSI technology projects and activities that use technology to support the mission of AUFSI. She has experience in the banking industry as a senior systems consultant and application programmer, utilizing Structured Analysis and its associated design techniques. She holds a degree in mathematics from University of Northern Colorado.

**JACQUELINE KOCHAK**  
*Communications Specialist*  
(334) 844-7465 • kochaja@auburn.edu  

*Jacque Kochak* handles grant writing and communications projects for AUFSI, including researching and writing brochures, the annual report and press releases. An award-winning writer and editor, she holds a journalism degree from the University of Kansas.
**DR. REGINA HALPIN**

**Assessment Specialist**

Dr. Regina Halpin is responsible for developing and conducting the program evaluation plan and project assessments for AUFSI. For the past 11 years, she has served as an independent consultant conducting program evaluations and assessments at Auburn University. Previously, she was an associate professor at Mississippi State, where she taught graduate courses in research design and evaluation and conducted research on the effective use of technology in K-12 instruction. Dr. Halpin holds a bachelor’s degree in applied mathematics from Auburn University and master’s and doctoral degrees in secondary mathematics education, all from Auburn University.

**REGINA CRAPPS**

**Academic Program Administrator**

Regina Crapps has a background in human resources, financial analysis and class and workshop facilitation and holds a degree in human resources from Auburn University-Montgomery. She is in charge of handling registration and payment for classes and pulling together all the details of delivering course materials, providing information for students and calculating CEUs.

**LESLIE PARSONS**

**Research Liaison**

Leslie Parsons is the Research Program Development Office liaison to AUFSI for activity related to business operations, public relations, marketing and communications. She holds a bachelor’s degree in economics and is the former director of development for the College of Liberal Arts and the Jule Collins Smith Museum of Fine Art.

**REBECCA LONG**

**Project Management**

Rebecca Long is the program manager for the Research Program Development Office and is responsible for project management activities for AUFSI. She holds a bachelor’s degree from the College of Architecture, Design and Construction at Auburn University and has held numerous industry positions worldwide in design, construction management and project management.
When the U.S. Congress passed the Food Safety and Modernization Act in 2011, requirements for sweeping improvements to the security and safety of our nation’s food supply were set in motion. The Food and Drug Administration, set to respond, sought partners to provide standardized, effective training for food safety inspectors at all levels.

Through a competitive granting process through the National Institutes for Health, AUFSI received a $6.5 million, five-year grant to create training programs through a Virtual Food Systems Training Consortium (VFSTC). Besides Auburn University, other consortium members are Purdue University, North Carolina State University and Alabama A&M University.

Through its Working Groups and utilizing the skills of core faculty, VFSTC has already started creating a training course covering basic microbiology. This course will include a module on *Listeria*, the bacteria implicated in a deadly outbreak of foodborne illness traced back to cantaloupes. The course will also include a module on *Vibrio vulnificus*, a deadly bacterium that infects oysters raised in the warm waters of the Gulf. Both will also be available as stand-alone learning modules.

Also in production is a course on Oral Communications, aimed at inspectors who have to communicate critical information to plant managers and officials who have to talk about outbreaks of foodborne illness. In addition, a stand-alone Specialty Eggs module will educate both consumers and inspectors about the new kinds of eggs on the market and serve as an introduction to a course on egg safety.

Other FDA courses are in the works, and in the Fall VFSTC will accept proposals from faculty for additional courses. VFSTC also will serve as an umbrella to create other training programs utilizing our state-of-the-art technology (see next page for more details).

VFSTC works closely with the FDA to create courses, meeting via teleconference every two weeks. Working Groups meet to develop “learning outcomes” that are approved by the FDA, then develop peer-reviewed content. AUFSI assists the process by providing assistance with technology, writing and assessment to provide a professional product.

A VFSTC Advisory Board including state health officials has been established. The first courses are expected to be available this Summer.
The power of VIRTUAL WORLDS

http://slurl.com/secondlife/Eagle%20Island/232/18/28

AUFSI IS USING—AND CREATING—CUTTING-EDGE TECHNOLOGY TO FURTHER ITS MISSION.

There's a whole lot of learning happening on AUFSI's Eagle Island, but Eagle Island isn't a traditional brick-and-mortar campus. Eagle Island is a site in the virtual world called Second Life, providing interaction in real time as well as around-the-clock, global access. Students, professors and others visiting Eagle Island create digital avatars to interact and visit virtual facilities based on real, working facilities. The Eagle Sculpture on the southwest corner of the island is a clear landmark for the Welcome Area, because we remember what it was like being a newbie. Whether your avatar is one day old or one year old, you'll feel comfortable.

Using this kind of technology for teaching already has resulted in the collaboration of two campuses 800 miles apart. Since Fall 2009, Redlands Community College in El Reno, Okla., and Auburn's Department of Poultry Science have been hosting a two-hour classroom lab each semester, with the Microlab based on an active research lab at Auburn. Using the tools and the three-dimensional building capabilities available in this virtual world, Redlands students interact with AU poultry science faculty on a virtual poultry farm. Using their avatars and desktop microphones, students are able to ask far-away poultry experts their questions as well as tour a poultry processing plant. Students curious about what E. Coli or Salmonella bacteria look like can go to “Eduboard,” where they can view these pathogens through a virtual microscope. Eagle Island even provides a free lab coat, virtually, to keep and wear whenever you choose.

In the virtual poultry processing facility, students see the complexity of processes needed for the poultry industry to deliver safe poultry to the retail store. Signs around the area describe each step. A poultry processing video, created by Dr. Scott Russell at the University of Georgia, is playing in the Red Roof Dawghouse.
Have you ever wondered about what happens on the inside of a hen, enabling her to lay an egg? You’ll find out in the Virtual Chicken Amphitheatre, where the video “Virtual Chicken: Phase 1, The Female Reproductive Tract of a Hen” is playing. Eagle Island’s Virtual Chicken Museum, with larger-than-life three-dimensional models of the oviduct and various stages in the development of the egg, complements the movie. Copies of this 3-D animation also have been dispatched from Auburn to more than 950 locations in Europe, Africa, Asia, Australia and North and South America as well as to all 50 states in the U.S.

At the Egg Processing Facility, modeled on an actual egg-breaking business in the Eastern U.S., students see incoming flats of eggs and their transfer and movement into the washing, candling and quality-check room. You probably know how to break one egg at a time, but have you ever thought about how hundreds of eggs are mechanically broken? In the Research Unit, buildings have been modeled after an actual poultry house—the kind you might have seen while driving down a road but couldn’t view clearly because it was surrounded by dense forest or a high berms for biosafety reasons.

No virtual world is complete without a way to link to web resources outside, so platforms with signboards share URLs that can be accessed from a browser window, supporting the purpose of Eagle Island. The LOI (Landmarks of Interest) Hall, for example, showcases other Second Life sites complementing Eagle Island. Our Beach is a place to get away for some informal, yet academic, discussions.

As development of training for the Food & Drug Administration progresses, the site may also be home to a virtual feed mill as well as other processing plants and additional farm facilities. There’s no limit to what we can create in this innovative virtual world.

WHAT IS ICUT?

Auburn University, through AUFSI, is part of the New Media Consortium (NMC) (http://www.nmc.org/), which promotes excellence and leadership among higher education institutions in the application of technology to teaching, learning, research and creative expression. This international community of experts in educational technology—from practitioners who work with new technologies on campuses to the visionaries shaping the future of learning—is helping drive innovation across campuses around the world.

AUFSI director Pat Curtis and technology specialist Marcia Kloepper brought NMC to campus, with the Auburn organization naming itself “Innovative and Creative Uses of Technology” (ICUT) at the first meeting in late 2011. Group members represent various colleges and schools on campus. The current focus is learning to use the iPad, talking to other educators about optimal use of the iPad, and finding solutions to problems. This includes identifying specific apps to solve problems.
FDA and entrepreneur training are just part of the **training** available through AUFSI.

**AUFSI core faculty also offer:**

- The USDA’s **Good Agricultural Practices** (GAP) class, designed for growers and other fresh produce handlers. The classes focus on the costs and impact of diseases and outbreaks caused by foodborne pathogens, as well as strategies for controlling potential microbial food safety hazards before planting and throughout all phases of production, from planting through harvest and postharvest. The classes also cover proper handling of produce.

- **Hazard and Critical Control Point** (HACCP) training, a systematic preventative approach to food safety that is mandated by the FDA and the USDA. HACCP is used in the food industry to identify potential food safety hazards, so that key actions can be taken to reduce or eliminate the risk of the hazards being realized. The system is used at all stages of food production and preparation processes, including packaging, distribution, etc. AUFSI core faculty offer meat and poultry HACCP classes through the International HACCP Alliance as well as seafood HACCP classes through the Seafood HACCP Alliance.

- The **National Egg Products School**, an annual four-day, hands-on introduction to egg processing. The program starts with the formation of the egg and takes the student through packaging of the final egg product. The intended audience is personnel for the egg processing industry, foodservice, etc.

- The National Restaurant Association’s **ServSafe** course, which teaches foodservice managers and food handlers about food safety. Many restaurants require this credential for management.

- The **Better Process Control School**, which fulfills FDA and USDA Good Manufacturing Practice requirements to certify supervisors involved in the manufacture of low acid and acidified foods. Such companies must operate with a certified supervisor on the premises.

---

**WHAT IS THE IACET TASK FORCE?**

To provide FDA training, AUFSI is required to become an “authorized provider” through the **International Association for Continuing Education and Training** (IACET). IACET’s mission is to promote and enhance quality in continuing education and training (CE/T) through research, education and the development and continuous improvement of criteria, principles and standards. Members of AUFSI’s own IACET Task Force are currently working through the rigorous year-long IACET Authorized Provider accreditation process, which involves a self-study and site visit. When the process is complete early next calendar year, AUFSI will be able to provide Continuing Education units for a variety of training programs.
In a state that lacks a variety of large industries to provide well-paying jobs, entrepreneurship is a viable alternative. AUFSI’s latest project is a Center for Food Entrepreneurs to help individuals who have developed a food product or products and are interested in developing related business opportunities. Many small farmers and hopeful entrepreneurs know how to raise cattle or cook, prepare, brew, pickle or roast with the best of them, yet have no idea how to write a feasible business plan. Nor do they know how to find financing, get their product tested, negotiate a maze of regulations or bring a product to market.

The Food Entrepreneur Center will bring together existing university activities that lack coordination or linkage. For example, specialists from the Alabama Cooperative Extension Service (ACES) offer help in tasks ranging from shelf life and microbial testing to providing contacts for co-packing. Up in peach country, a partnership between ACES, the Alabama Agricultural Experiment Stations and the local school district have established the Chilton Food Innovation Center. The FDA-approved processing facility works with jams, jellies and any acidified food product, including pickles, sauces and dressings. And the Small Business Development Center in the College of Business already helps fledgling entrepreneurs develop professional business plans. SBDC provides a business plan workbook, cash flow projection worksheets, loan checklists and many other resources.

AUFSI is creating a comprehensive website explaining all facets of taking a food business from idea to reality, with a central phone number for people to call if they need to be referred to an expert. A Food Entrepreneur Conference will take place this fall at a central location in Alabama.
AUFSI is also establishing a track record at assisting faculty write interdisciplinary grants.

**FUNDED**

- “A Virtual Food Systems Training Consortium,” National Institutes for Health and Food and Drug Administration ($6.5 million)
- “Improving Product Tracing Along the Food Supply System,” a collaboration with the Institute of Food Technologists and Deloitte, Food & Drug Administration ($40,000)

**IN PROGRESS (February 2012)**

- “Identifying Gaps Between Knowledge And Practice In Production And Distribution Of Local And Regional Foods For A More Secure Food Supply Chain,” Agriculture Food Research Initiative (USDA) ($4,776,839)
- “Studies of Potential Impact of Oil and Dispersants on the Absorption of Drugs and Environmental Chemicals,” Gulf of Mexico Research Institute ($2,300,000)

**SUBMITTED (Not Funded)**

- “The Virtual Digestive Tract,” USDA Higher Education Challenge Grant ($187,461)
- “Gulf State Electronic Seafood Traceability System,” Gulf States Marine Fisheries Commission ($1,320,040) - placed second
- “Gulf Coast Public Health Initiative,” Gulf of Mexico Research Initiative ($17,345,725)
- “Food Safety Gaps During Food Transportation,” National Integrated Food Safety Initiative (USDA) ($599,865)
- “Shifting Transportation Infrastructure Improvements Into High Gear,” University Transportation Center, U.S. Department of Transportation ($3.5 million)

- “Mitigating Risks of Salmonella Enteritides and Salmonella sp. in Shell Eggs and Egg Products,” a collaboration with the University of Nebraska, Agriculture Food Research Initiative (USDA) ($500,000)
- “Mitigation of Salmonella and Campylobacter in Shell Eggs using Combinations of Heat, Electric Fields and Ozone: Influence of Pre- and Post-Harvest,” a collaboration with Ohio State University, Agriculture Food Research Initiative (USDA) ($373,835)
- “Developing Measures for Preventive Control Continuum to Reduce Salmonella and Campylobacter in Poultry,” a collaboration with the University of Georgia-Athens, Agriculture Food Research Initiative (USDA) ($200,000)
The new Center for Advanced Science, Innovation and Commerce (CASIC), under construction in the university’s research park, includes a Food Safety Cluster:

- A Level 2 processing facility allowing Auburn scientists to research pathogen interventions and work to develop new prevention technologies. The lab will be built according to USDA and FDA processing facility specifications, and FDA- and USDA-approved testing methodologies will be used, in addition to new and innovative rapid detection methodologies. The lab will be utilized by meat, poultry and food scientists with expertise in red meat, poultry, eggs, fruits, vegetables, food safety and microbiology.

- A second lab will be used for testing and detecting foodborne pathogens and analyzing food products. The lab will perform standard culturing and analyses of foodborne pathogens, using the same subtyping procedures used by the Centers for Disease Control to track index strains. Biosensors developed by researchers with the AU Detection & Food Safety Center will be used to detect pathogens, allergens and other contaminants.

- A third lab meets both the engineering and microbial requirements needed to support Auburn’s research into food traceability—the ability to trace the history, application or location of a food product.

**OYSTER TESTING**

In addition, AUFSI assisted Core Faculty researcher Cova Arias in establishing an FDA-approved oyster-testing lab to verify and validate postharvest processing methods used by oyster processors to eliminate the human pathogen *Vibrio vulnificus*. Although there are four FDA-approved methods (high pressure, pasteurization, freezing and irradiation) the lab is currently focusing on running verification and validation tests for quick freezing protocols. When a processor starts using one of the methods, validation is required by an FDA-evaluated lab. After the process has been validated, processors send monthly samples for testing in order to maintain their status.
Can your Smart Phone tell you if your food is safe?

Imagine pointing your smart phone at a head of lettuce in the grocery store and having the phone tell you what farm the lettuce came from and that the produce arrived in the grocery store three days ago. What if your phone could even tell you what temperatures the lettuce was exposed to in transit? Would you pay extra for that lettuce? That’s the question AUFSI advisory board member Bill Hardgrave, dean of the Auburn University College of Business, asks in the April/May issue Food Quality, a national magazine focused on quality, assurance, safety and security in the food industry. The technology, called Radio Frequency Identification (RFID) already exists, Hardgrave says. The new Food Safety Modernization Act signed into law by President Obama in 2011 mandates improved traceability, and the College of Business is cooperating with the Institute of Food Technologists and others to investigate the feasibility of using RFID.

Promoting oyster safety to protect struggling industry

In another upcoming issue of Food Quality, AUFSI core faculty member Cova Arias talks about her research on oyster safety. An associate professor in fisheries and allied aquaculture, Arias reasoned there must be a way to make eating raw oysters safer without decimating the struggling mom-and-pop oyster industry in the Gulf. Gulf oysters are delicious, but a nasty pathogen called V. vulnificus poses a safety risk when Gulf oysters are harvested in the warm summer months. Her curiosity led to the creation of a depuration system that holds the potential to provide an effective, relatively inexpensive way to ensure Gulf oysters are safe to eat. The method has been provisionally patented, and the next step is to test commercial feasibility and ultimately seek FDA approval.

Food & Drug Administration funds food safety center

The news that AUFSI received a $6.5 million, five-year grant to create a Virtual Food Systems Training Consortium generated articles all over the state (Opelika-Auburn News, Birmingham Business Journal, Montgomery Advertiser and others), in national publications such as Food Safety, Food Quality and Food Product Design magazines and on television stations as far away as Hawaii.

To see more articles, go to www.aufsi.auburn.edu/news/
There is still plenty for AUFSI staff and Core Faculty to do to meet the goals and objectives outlined on Pg. 4. AUFSI staff and Core Faculty will continue working on Objectives 1-10, while we start work on the additional objectives.

As part of developing advanced tools, practices, and interventions to reduce foodborne hazards in every part of the food chain, AUFSI will create a Food Systems Certificate Program.

As part of developing quality education for students in food-safety-related disciplines, AUFSI hopes to create a Masters of Food Systems program and explore the potential for an online master’s program. Staff also will be creating a training brochure listing FDA training courses, HACCP courses, GAP courses and all courses developed in the future.

As part of the goal of “translating collaborative innovations and discoveries,” AUFSI is working to establish a strong relationship with the Auburn University Technology Transfer Office to address key issues surrounding the success of research translation. AUFSI will also be involved in the development of investment-worthy technologies and in creating technology development incentives for faculty, as well as marketing opportunities for external licensing and investment.

Two new efforts to build awareness of AUFSI and the “food system” in general are currently in the works. A quarterly newsletter will be launched soon, followed by a podcast explaining the links in a food system and why the public should care.
One of the objectives of AUFSI is to create durable partnerships with government agencies, industry and others.

So far, our expanding list of partners includes the Food & Drug Administration, the Alabama Department of Public Health, North Carolina State University, Purdue University, the University of Alabama-Birmingham, the University of Alabama-Tuscaloosa, Tuskegee University, the University of Georgia, the University of Connecticut, the Institute of Food Technologists, the USDA Food Safety and Inspection Service and the Association of Food and Drug Officials of the Southern States.

As we grow, we expect that list to expand even more. As part of our FDA training program, we are reaching out to other state Departments of Public Health and Agriculture to determine their training needs and provide that feedback to FDA officials.

We are also continuing to write grants that will result in more partnerships as they come to fruition, as well as strengthening ties with business and industry, corporate foundations and trade organizations.
AUFSI ADVISORY BOARD

William Batchelor
Dean, College of Agriculture
Director, AAES

Vini Nathan
Dean, College of Architecture,
Design & Construction

Bill C. Hardgrave
Dean, College of Business

Anna Gramberg
Dean, College of Liberal Arts

Gregg E. Newschwander
Dean, School of Nursing

Calvin Johnson
Acting Dean, College of
Veterinary Medicine

George T Flowers
Dean, Graduate School

Charles E. Savrda
Acting Dean, College of
Sciences & Mathematics

Carl Pinkert
Associate Vice President for Research
Food Systems Initiative

Pat A. Curtis, PhD, Director
570 Devall Dr., Suite 104 • Auburn, AL 36832

Phone: (334) 844-6247
Fax: (334) 844-6146
aufsi@auburn.edu

www.aufsi.auburn.edu
www.auburn.edu

Auburn University is an equal opportunity educational institution/employer.

Aug. 29, 2012