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Partners in Poultry Science, April 2004

Dale Bumpers College of Agricultural, Food, and Life Sciences (University of Arkansas, Fayetteville). Center of Excellence for Poultry Science

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partners *in* POULTRY SCIENCE

Newsletter of the Center of Excellence for Poultry Science • University of Arkansas • Division of Agriculture

From the *director*



Dr. Walter Bottje,
Center of Excellence
for Poultry Science
Director

It's been a terrific start to 2004 at the Center of Excellence. In Atlanta at the International Poultry Exposition, we had several students successfully interview with companies in the poultry industry. I would like to extend a special thanks to the companies who participate during the Expo. I appreciate how you've taken time out of your busy week to

make yourself available and accessible to poultry science students. I hope you continue to make this commitment and contribution in the future because it truly benefits us all.

Two graduate students from our department, Anne Fanatico and Carol Ojano-Dirain, were both winners in their respective areas during the Southern Poultry Science Society's annual student presentation competition. Lisa Bielke, a category winner from last year was presented with the Alltech Student Manuscript Award. Congratulations to these students on their success. I'm very proud of you.

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UNIVERSITY OF ARKANSAS

U of A UNIVERSITY OF ARKANSAS
DIVISION OF AGRICULTURE

Faculty awarded \$250,000 to develop new curriculum

FAYETTEVILLE, ARK. - Two University of Arkansas poultry science faculty members have received a USDA Higher Education Challenge Grant for \$250,000 to develop new poultry curriculum for students.

Project director Casey Owens, assistant professor of poultry products and fellow faculty member Jason Emmert, associate professor of nutrition, are collaborating on the project with Christine Alvarado, assistant professor at Texas Tech University; Shelly McKee, assistant professor at Auburn University; and Sacit "Sarge" Bilgili, also a professor at Auburn.

"Poultry product quality, safety and technology are leading areas of interest in the poultry industry. Ensuring the quality and safety of their products is a top priority for poultry processors. The goal of our project is to create a modular, multi-media poultry products, processing and food safety curriculum that addresses these concerns and truly prepares students for a career in the poultry industry," said Owens.

When finished, the multi-disciplinary team will have produced several CD/DVD modules that can be used by faculty members to teach poultry products and food safety courses, with each faculty member providing expertise in their respective areas. Web-based and printed materials will also be developed primarily to support laboratory and undergraduate research activities.

"While there is some up-front expense to producing electronic teaching materials, updating and maintaining the information once it's established is minimal," said Emmert.

Another added benefit to using electronic means to deliver content to students is the ability to make it "interactive" and hopefully easier to retain.

"Students coming into higher education are very computer savvy. We need to deliver knowledge in a medium that is familiar to them. Right now there is no better medium than electronic, it's both visually and audibly stimulating," said Owens.



COLLABORATING - From left Christine Alvarado, Jason Emmert, Shelly McKee and Casey Owens meet to discuss curriculum content for their USDA Higher Education Challenge Grant project.

CURRICULUM - *Continued on page 2*

Students receive scholarships
Grad students win in Atlanta
National Egg Quality School
Edible film for poultry



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Center hosts visiting professors
Atlanta Expo a success
Grants and notables

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Another “new beginning” just occurred on the breeder farm near Savoy, Feb. 17th -- the very first flock was placed. Thank you again to all who made this venture possible including Cobb-Vantress and Tyson Foods and the vendors who donated time, labor and equipment. We’re excited about our future on the breeder farm and we’re thankful for the contributions that made this project a reality.

Drs. Casey Owens and Jason Emmert, along with several faculty members at Auburn and Texas Tech, were awarded a \$250,000 USDA Higher Education Challenge Grant to develop new multimedia curriculum. This multi-disciplinary project should prove to be a tremendous asset to the future of poultry science instruction.

I’m looking toward an exciting (and busy) spring and summer at the Center. I hope that somehow you will find a way to be involved.

Partners is a newsletter for faculty, staff, students, alumni and friends of the Center of Excellence for Poultry Science, University of Arkansas Division of Agriculture and Dale Bumpers College of Agricultural, Food and Life Sciences, UA-Fayetteville.

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INTERVIEWING - Poultry Science students seek last-minute advice from faculty members Jason Emmert, second from right and Susan Watkins, far right, before they attend the interview sessions at the Expo in Atlanta. We had numerous poultry science students interview with poultry and allied industry personnel while attending the International Poultry Expo in Atlanta.

CURRICULUM - *Continued from page 1*

Emmert has already realized the potential of electronic media and has implemented two completely web-based courses to students on- and off-campus at the U of A.

“I have not made my students purchase a textbook in my courses for the past few years for one main reason — most of the materials available were written years ago. The poultry industry has advanced technologically by vast amounts in the past few years. I would be doing my students a disservice by giving them outdated materials to study,” said Emmert.

Students in Emmert’s broiler and turkey production and breeder layer management classes have been simply signing on to the web to review course materials, link to useful sites and answer problem sets. What they would normally read in a textbook is completely available via the Internet, with pop-up browser windows to clarify hard to understand concepts. For instance, the graphic animations used on Emmert’s site actually enhance the students’ understanding of complex processes, such as heat loss in birds, which have been difficult to describe in a textbook or put on a chalkboard. This same approach will be used in the new curriculum being developed.

“Not only will we be offering the latest technology to our students and increasing their understanding, but we have assembled an incredible team of poultry scientists who are experts in their respective fields. By not limiting ourselves to one institution, we have expanded the field of expertise and will be making that knowledge available to all students. It’s a very collegial atmosphere and we’re excited about the outcome and how it will affect the future of poultry instruction in our nation,” said Owens.

The project is set to be complete in November of 2006.

Other collaborators include H.L. Goodwin, associate professor and extension economist at the U of A; Mindy Brashears, assistant professor in animal science at Texas Tech; and Ann Shortridge, instructional designer at the U of A. There will also be much consultation done with individuals in key areas in the poultry industry. ■

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Grad students take top honors at national meeting

ATLANTA ---Three graduate students from the Department of Poultry Science at the University of Arkansas competed and won at the Southern Poultry Science Society Annual Meeting held in Atlanta Jan. 26-27.

Anne Fanatico, a Ph.D. student from Fayetteville, won the Most Outstanding Graduate Research Paper and Presentation for the Processing/Products section. Her paper, "Comparison of broiler meat quality among alternative slow-growing breeds and a commercial breed grown with or without outdoor access," was co-authored with faculty members Casey Owens, Jason Emmert and J.F. Meullenet; research associate Padma Pillai; and former Ph.D. student Cain Cavitt now working for Tyson Foods, Inc.

Carol Ojano-Dirain, a Ph.D. student from Pamplona in Cagayan, Philippines, also took an award for Most Outstanding Graduate Research Paper and Presentation in the Physiology section. Her paper, "Assessment of respiratory chain complex activities and protein banding pattern in duodenal mitochondria in broiler breeder males with low and high feed efficiency," was co-authored by her major professor Walter Bottje, research assistant professors Muhammad Iqbal and Neil Pumford, master's student Kentu Lassiter, undergraduate student Nicholas Tinsley and two Cobb-Vantress, Inc., employees Mark Cooper and Terry Wing.

Although she was unable to attend, Lisa Bielke, a Ph.D. student of Billy Hargis' from Tomball, Texas, received the Alltech Student Manuscript Award for her paper, "Approach for selection of individual enteric bacteria for competitive exclusion in poults." This paper was presented last year making her eligible to win this prestigious award during this year's meeting. Only one Alltech award is given out each year and the candidate must have won previously in their respective section in order to be considered.

"We are extremely proud of these graduate students and the awards they have received. It's always exciting to see our students excel -- especially in such a national arena," said Walter Bottje, department head for poultry science. ■



TOP HONORS - From left, Jason Emmert, Anne Fanatico, Carol Ojano-Dirain, Muhammad Iqbal and Walter Bottje celebrate Anne and Carol's awards during the Southern Poultry Science Society's Annual Meeting in Atlanta.

Internationally acclaimed geneticist visits Center



SPECIAL VISIT - From left, Dr. Bob Wideman of the UA welcomes Dr. Avigdor Cahaner.

Dr. Avigdor Cahaner, a Professor of Genetics at The Hebrew University of Jerusalem, Faculty of Agriculture, Rehovot, Israel, recently visited the Center of Excellence for Poultry Science under the organization of Dr. Bob Wideman. Cahaner specializes in poultry genetics, and is internationally recognized for his work on the genetics of resistance to heat stress.

Cahaner's selection strategies for heat stress resistance led to the development of "naked-neck" and a "naked" lines of chickens, which exhibit superior tolerance (livability) and growth performance in hot environments. His research success in this area recently (2003) was featured by a national magazine and CNN. Dr. Cahaner had previously teamed up with Drs. Bob Wideman and Nick Anthony to conduct research on ascites in broilers.

Their project was funded by a \$500,000 grant from BARD (Binational Agricultural Research and Development), and led to the discovery of the procedure we've patented to genetically select ascites-resistant broilers. ■

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“Chicken of Tomorrow” comes home to roost

QUEEN OF THE CONTEST - The “chicken-of-tomorrow” houses shown with inset of Miss Joan Walters of Rogers, Arkansas, Queen of the Chicken-of-Tomorrow Contest. Held in 1951 at the University of Arkansas campus, this was the beginning of the modern-day commercial meat bird.



FAYETTEVILLE --- One of the most celebrated events in 1951 at the University of Arkansas featured 45 contestants from 25 states vying for the coveted first place award in the national Chicken of Tomorrow contest. The spoils included a potential inside track on supplying broiler chicks to a fast-growing poultry industry.

Some 30,000 people attended festivities that included a rodeo, street dance, barbecue, queen’s coronation and a three-mile parade. The awards ceremony in Razorback Stadium drew 8,000 to see United States Vice President Alben Barkley present the first-place trophy and \$5,000 to Charles Vantress of Live Oak, Calif., for his Cornish-New Hampshire crossbred entry.

Each contestant — the winner of a state contest — had shipped 720 eggs to an Arkansas Agricultural Experiment Station hatchery, for a total of 32,400 eggs. Chicks were hatched and each flock was evaluated after a 12-week growout.

The A&P grocery chain, poultry companies and other contest sponsors provided facilities used by the U of A,

which continued a testing service for years afterward and established a lasting partnership with the poultry industry.

The U of A Division of Agriculture’s Center of Excellence for Poultry Science is now one of the world’s leading centers for education, research and extension in poultry and other avian species with major support from the poultry industry.

The winning entry in the 1951 Chicken of Tomorrow contest came from Vantress Pedigree Farms, which became a leading broiler breeder company, famous for its Vantress male line. Another leader that emerged from the pack was the Cobb Breeding Company, which moved from Massachusetts to Siloam Springs, Ark., in the 1960s. The two companies merged in 1978 as Cobb-Vantress, Inc., a subsidiary of Tyson Foods, with headquarters in Siloam Springs.

Chicken of Tomorrow contests from 1946 to 1951 helped spawn many broiler breeding companies. Over the last decade, breeders have consolidated into four major companies in the world. Cobb-Vantress is the largest, supplying broiler breeders to customers in 60 countries, says Steve Iseler, Cobb-Vantress director of marketing and planning.

Tyson Foods, Cobb-Vantress and allied companies made a major contribution to the broiler breeder research program of the University of Arkansas in 2003 with the construction and equipping of a unique commercial-scale breeder research farm at a cost of about \$1 million. The new Broiler Breeder Research Facility is at the Division of Agriculture’s animal research center near Savoy, west of Fayetteville.

“This facility will generate data on breeder management that will benefit the industry worldwide,” Cobb-Vantress President and CEO James Bell said at a dedication program in September.

Iseler said Cobb-Vantress supports research programs at universities and other institutions worldwide. “We are constantly working to improve the genetics and management of our products to meet the needs of customers throughout the world,” Iseler said.

Poultry Science Professor Craig Coon and Extension Specialist Keith Bramwell are conducting the first project in the Broiler Breeder Research Facility. The first flock of 4,080 breeder pullets were delivered in February. The birds were placed in 53 separate pens, with 85 pullets and nine roosters per pen. Sophisticated equipment allows separate controls and recording of data in each pen. Eggs from the breeder hens in the project will be sold to commercial hatcheries to help support operation of the facility.

“Our first study will look at feeding programs,” Coon says. “The breeder hens produce the chicks that go to broiler production farms. The bottom line for breeders is the cost per chick. The major cost factors are feed and the number of hatchable eggs per hen.”

Bramwell focuses on feeding programs for the roosters, which are fed separately from the hens.

The information developed by Coon and Bramwell, and in future research, will be published to advance the science of managing breeding stock for chickens and other species. Consumers will ultimately benefit from increased efficiency in the production of economical, nutritious and high quality poultry products. ■



CHECKING THINGS OUT - Dr. Bramwell looks over the first flock of birds placed on the new U of A broiler breeder farm.

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Poultry launches interactive CD aimed at recruitment

FAYETTEVILLE — The Department of Poultry Science in the Bumpers College of Agricultural, Food and Life Sciences at the University of Arkansas is pleased to announce the launch of an interactive CD targeted at recruiting high school and transfer students to its program.

“I still remember when ‘surfing’ meant I had to get wet and ‘chatting with someone’ required me to either dial a telephone number or at least be in the same room as another person. I’ve watched and listened to my own teenagers and it’s obvious that we in higher education are marketing to a very different generation. It was just time for us to take a closer look and evaluate how we were communicating with this computer-savvy generation,” said Karen Eskew, communication specialist for the department.

After researching a wide variety of recruitment tools and enlisting the input of the undergraduate recruiter Gary Davis, “our department head Walter Bottje realized that it had become necessary to make an investment in technology in order to capture students’ attention and ultimately convey our message to them. We discussed different methods and that’s how the idea for the interactive CD was born,” said Eskew.

One important aspect of the poultry science CD, which is available for PC users to load on their computer, is the ability to “surf” through the departmental information without hindrance from slow dial-up Internet providers.

“Much of our target market lives in rural areas where high-speed Internet access is just not available. We’ve set up our CD to behave like a web site --something these students are familiar with-- without the frustration of a slow or intermittent connection,” said Eskew. “Students just load the CD onto their computer desktop and then browse through the information at their leisure. If they’d like, they can even watch our undergraduate recruitment video on their own monitor without need for a DVD or VHS player. It’s truly amazing what can be done these days. We’ve even included a 3D model of our 110,000-square-foot building to emphasize the tremendous scope of our department and give students in other parts of the country a ‘feel’ for how large the poultry industry in Arkansas really is.”

Eskew is quick to point out that she had to enlist the expertise of a New Media Designer in order to complete the project.

“I earned my degree over 15 years ago, we barely had computers in my communication and journalism classes. While I have taken several courses on web design and development and am comfortable maintaining our departmental web site and doing graphic design, I certainly was not capable of completing such a technology-heavy project on my own. Instead, I contracted with a digital media major who had just graduated from college,” said Eskew.

Her design expert on the project was Aaron Bartlett, a recent college graduate well versed in a variety of multimedia software applications, who is now employed full-time by the U of A.

“Aaron is going to be developing a very similar, although much larger, project for Bumpers College over the next several months. It’s exciting to see how forward-thinking our department and college are when it comes to communicating with students,” said Eskew.

Other benefits to having departmental information contained on a CD is the ease in making changes when they are needed. “If a new faculty member is hired we can make changes instantaneously and have their information included on the very next CD we send out. And the cost per unit for production and mailing is a fraction of the expense in dubbing and mailing a VHS tape or printing a four-color view book. It really makes sense to have the latest information available for the least amount of money,” said Eskew.

Funds to offset the cost of the poultry CD came from a generous donation by the Harold E. Ford Foundation to the department last fall. Annual funds given by this foundation are specifically earmarked for recruitment and retention.

The interactive poultry CD’s can be obtained by e-mailing Eskew at keskew@uark.edu or by calling (479) 575-3192. If you would like further information about the Department of Poultry Science at the University of Arkansas, please contact Gary Davis by e-mailing gddavis@uark.edu or calling (479) 575-7526. ■

Waldroup hosts visiting professor



A VISIT FROM THE EAST- From left, Dr. Park Waldroup poses with Dr. Keying Zhang, visiting professor of animal nutrition from the Institute of Animal Nutrition Sichuan Agricultural University in P.R. China. Zhang will be here for approximately twelve months conducting research in conjunction with Dr. Waldroup’s lab.

USDA PPRSU Welcomes New Addition:

Dr. Morgan Farnell joined Dr. Annie Donoghue’s lab as a postdoctoral fellow to work on poultry enteric health research. Dr. Farnell joins us from the Institute for Animal Health in Compton, UK, where he was a postdoctoral fellow in Dr. Peter Kaisers’ laboratory. Morgan received his B.S. degree from Southern Arkansas University and his Masters and Ph.D. degrees from Texas A&M University.

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NOTICE OF EVENT:

**National Egg Quality School
May 17-20, 2004**

Downtown Atlanta Hilton, Georgia

The National Egg Quality School is a three and a half-day course that provides a comprehensive overview of the table egg industry and all the facets of production and processing which impact the quality and integrity of the final product, eggs. This short course begins by familiarizing the participants with the industry as well as how eggs are produced, from the hen to packaging and distribution. It develops an understanding of the factors; from the nutrition of the hen to the cleaning of eggs; that impact the quality of the product. Students receive detailed instruction and hands on experience on how to grade the interior and exterior qualities and then combine these into an overall grade. Participants learn about the principles of HACCP, Hazard Analysis Critical Control Point, and its role in providing a safe wholesome product. Students also learn about the theory and application of quality assurance programs. To assure participants receive the most from their training, they are teamed with a section leader who monitors student learning and provides assistance with the learning process. At the completion of the school, students take a comprehensive written examination and they are tested over their egg grading skills. Students, which successfully pass the exam, receive a certificate.

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Poultry students receive scholarships for spring

Student:	Adams, Luke	Scholarship:	Randal Tyson Memorial
	Alston, Mark		Randal Tyson Memorial
	Atha, Jenna		Randal Tyson Memorial; Shreve
	Avery, Nichole		Randal Tyson Memorial
	Bateman, Kristin		Allied Industry; Randal Tyson Memorial
	Bowen, Olivia		Allied Industry; Randal Tyson Memorial
	Bowman, Margaret		Feed Manufacturer's and Randal Tyson Memorial
	Brewer, Valerie		Randal Tyson Memorial
	Cornelison, Jana		Allied Industry; Randal Tyson Memorial
	Cox, Ashley		Allied Industry; Randal Tyson Memorial
	Ganson, Fauna		Whitmore; Randal Tyson Memorial
	Ghori, Shereen		Feed Manufacturer's and Randal Tyson Memorial
	Griesse, Rachel		Allied Industry; Randal Tyson Memorial
	Hall, Bethany		Darryle & Peggy Greene; Randal Tyson Memorial
	Harding, Russell		Allied Industry
	Henderson, Savannah		Talmadge Nelson; Randal Tyson Memorial
	Hill, Beth		Randal Tyson Memorial
	Hollowell, Zach		Randal Tyson Memorial
	Horton, Drew		Randal Tyson Memorial
	Hubbard, Adriane		Feed Manufacturer's and Randal Tyson Memorial
	Jackson, Britney		Grover Harris; Randal Tyson Memorial
	Jordan, Scott		Allied Industry
	Keeter, April		Randal Tyson Memorial
	Lasater, Austin		Randal Tyson Memorial
	Layman, LeAnn		Randal Tyson Memorial
	McKinnon, Matt		Allied Industry
	Morgan, Mark		Randal Tyson Memorial
	Parker, William (Drew)		Allied Industry; R. Tyson Memorial
	Rowland, Amanda		Randal Tyson Memorial
	Rowland, Emily		Allied Industry; R. Tyson Memorial
	Shasteen, Tara		Allied Industry; R. Tyson Memorial
	Sossamon, Sarah		Allied Industry; R. Tyson Memorial
	Swaffar, Ashley		Randal Tyson Memorial
	Swonger, Sidney		Richard Forsythe; Randal Tyson Memorial
	Tilley, Neda		Randal Tyson Memorial
	Townsend, Julie		Feed Manufacturer's and R. Tyson Memorial
	Van Brunt, Jarrod		Ed Stephenson; Randal Tyson Memorial
	Waddell, Mindy		Allied Industry; Randal Tyson Memorial
	Webber, Daniel		Randal Tyson Memorial
	Whitlow, Joshua		Randal Tyson Memorial
	Williams, Austin		Feed Manufacturer's and Randal Tyson Memorial
	Wright, Eric		Randal Tyson Memorial

Hubbard ISA donates a scholarship

GENEROUS DONATION - Pictured from left Dr. Jason Emmert, scholarship coordinator for poultry science department, looks on as Hubbard ISA representative Gary Warren presents a scholarship check to department head Walter Bottje during the Expo in Atlanta. Hubbard ISA has been a continuous and generous supporter of the UA poultry science scholarship fund.



partners

Edible film protects poultry from Campylobacter

FAYETTEVILLE, Ark. --- To knock down the advance of the pathogen Campylobacter jejuni on raw chicken, Food Safety Consortium scientists Marlene Janes at the Louisiana State University Agricultural Center and Michael Johnson at the University of Arkansas have found that a coating of an invisible edible film on the chicken's surface significantly reduces the level of contamination.

The edible film is most effective when it consists of a combination of three antimicrobial agents: two proteins --- zein and nisin --- and the compound EDTA, which does the lion's share of the work in killing the pathogens. EDTA (ethylene diaamine tetraacetate) is a chelating agent, which means it binds to many different metal ions and prevents them from reacting with any other chemical that might be present. It is often used to clean people's arteries of toxic metals in the bloodstream.

"Zein by itself, EDTA by itself and nisin by itself has some benefit," explained Johnson, a food science professor at the UA Division of Agriculture. "But when the three compounds are combined you have your most effective treatment at refrigerator temperatures. It's like putting multiple blockers out there in football to keep the bacteria from ever getting out."

Janes' and Johnson's experiments showed that the EDTA treatment delivered the most killing power to the cocktail. Zein on its own doesn't have much killing power, but adding zein to the mix provided the way to deliver the killing agent.

"It's a food coating to give prolonged contact with the food surface," Johnson said. "We're using edible films to wrap chicken and provide a way for the delivery of antimicrobial treatments."

Raw poultry is susceptible to bacterial contamination during raw processing and this contamination can persist when such products are refrigerated at temperatures just above freezing, about 2 to 4 degrees C. Campylobacter jejuni, the leading cause of bacterial diarrhea, is a leading source of contamination in these circumstances.

Janes, who is now an assistant professor at LSU's Ag Center food science department, said individual companies that want to use the cocktail's ingredients already approved for use in other food products can receive approval to extend it to raw poultry by filing a petition with the U.S. Department of Agriculture Food Safety and Inspection Service.

"Companies are looking at this as a control measure," Janes said. "They see that it's something they can easily do."

Much of the poultry market today consists of value-added chicken that only needs to be heated in the oven. Adequate cooking will kill pathogens. Raw poultry, however, is still a popular item in kitchens. If it comes out of the refrigerator with Campylobacter jejuni on the surface, heat will kill the pathogens in the oven, but there remains the danger of cross-contamination while the uncooked product is on the counter being prepared for the oven.

"We have to beware of people being careless in the kitchen with the raw chicken," Johnson said. "They may fully cook the chicken, but did they disinfect their hands after handling the raw chicken and before making the salad or handling the rolls?" If the consumer didn't take the precautions, raw poultry that has been treated with the invisible film and EDTA would be a safer bet to help avoid foodborne illness from this pathogen.

Previous research by Janes and Johnson has found ways to use similar antimicrobial wrappers of zein and nisin to protect ready-to-eat cooked poultry from Listeria monocytogenes, a deadly pathogen for which federal regulators have declared zero tolerance.

But Listeria isn't a major threat on raw poultry as it is on ready-to-eat products. Johnson said. Listeria thrives best where it doesn't have much competition from other bacteria and it likes cold places like the refrigerator.

The above article is a reprint of a news release distributed by the Food Safety Consortium and written by Dave Edmark at the University of Arkansas. For further questions, you may contact Edmark at dedmark@uark.edu or by calling (479) 575-5647.

Grants Received:

Grants are listed in order of receipt...

Billy Hargis	
US Dept. of Higher Education	\$ 67,433
Billy Hargis	
PetAg, Inc.	\$18,000
Ron Okimoto	
Cobb-Vantress, Inc.	\$5,556
Billy Hargis/Lisa Newberry	
Cargill, Inc.	\$24,691
Casey Owens	
Cobb-Vantress, Inc.	\$19,753
Billy Hargis	
USDA ARS	\$12,683
Billy Hargis	
EcoSoft Engineering	\$13,086
Park Waldroup	
DSM Nutritional Products	\$34,000
Bob Wideman/Gisela Erf	
USDA/NRI	\$183,000
Bob Wideman	
Hubbard ISA	\$27,279

Totals on Grants received in Poultry Science since the new fiscal year started:

TOTAL \$1,134,806

Last fiscal year, the total amount was \$1,318,369.00. We are on track to surpass last year's total.

Congratulations to the recipients and thank you to the industry that supports research.





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FACULTY NOTABLES:

Dan Donoghue gave the invited presentation, "Therapeutic or prophylactic antibiotic administration in breeder hens and its potential effect on competitive exclusion cultures in chicks" at the ANECA XXVIII National Meeting in Vera Cruz, Mexico and he gave the invited presentation "Competitive exclusion cultures consisting of lactic acid bacteria plus organic acid treatment may reduce *Campylobacter* colonization in turkeys" at the CHRO 2003 International Meeting on *Campylobacter*, in Arhus, Denmark.

Jason Emmert and **Jerry Wooley** have been busy putting on poultry judging workshops and contests at the following locations in Arkansas; Danville, Springdale, Damascus, Batesville, U of A-Fayetteville, ASU-Beebe, Arkansas Tech University, Lake Hamilton in Hot Springs, U of A Monticello, Camden-Fairview, and Arkansas State University. Two contests at Northeast Oklahoma Community College and Eastern Oklahoma State College are for competition and **Dr. Andrews**, emeritus faculty, will be conducting those.

Gary Davis was also involved in the Danville and Fayetteville judging events.

John Marcy was elected to serve as the Center Director for the National Alliance for Food Safety and Security (NAFSS) Center for Education and Outreach. **Marcy** was also appointed the Chair, Designate for the Institute of Food Technologists' Continuing Technical Education Committee. The Institute sponsors approximately 30 one- and two-day programs throughout the year for food professionals.

Casey Owens gave an invited talk "Live production effects on PSE development" at the Sixth Latin American Conference on Poultry Processing and Product Quality in Queretaro, Mexico Feb. 13.

Susan Watkins gave invited presentations during the past few months at the 2004 Perry County Poultry Production meeting; the Annual International Pheasant Management

NOTABLES continued:

Seminar in Janesville, Wisconsin; the Midwest Poultry Federation Convention in Minneapolis; and the Louisiana Broiler Symposium in Shreveport. **Watkins** also coordinated the Turkey Enteritis Workshop in February at the Shewmaker Small Business Center in Rogers. On hand were 65 attendees and featured UA speakers were **Lisa Newberry**, **David Chapman** and **Dayton Steelman**. The event was sponsored by ELANCO, Jones-Hamilton and WYNCO. **Watkins** attended the final part of the Extension Service First Leadership Training Class in Washington, D.C., March 22-26. She has also been named the Director of The National Egg Quality School, which will be held May 17-20 in Atlanta.

STUDENT NOTABLES:

Three graduate students from the Department of Poultry Science at the University of Arkansas competed and won at the Southern Poultry Science Society Annual Meeting held in Atlanta Jan. 26-27. **Anne Fanatico**, a Ph.D. student of **Casey Owens** and **Jason Emmert** from Fayetteville, won the Most Outstanding Graduate Research Paper and Presentation for the Processing/Products section. **Carol Ojano-Dirain**, a Ph.D. student of **Walter Bottje** from Pamplona in Cagayan, Philippines, also took an award for Most Outstanding Graduate Research Paper and Presentation in the Physiology section. Although she was unable to attend, **Lisa Bielke**, a Ph.D. student of **Billy Hargis**' from Tomball, Texas, received the Alltech Student Manuscript Award for her paper. This paper was presented last year making her eligible to win this prestigious award during this year's meeting.

Carol Ojano-Dirain also took second place presenting the same paper from Atlanta in the Gamma Sigma Delta presentation competition in February.

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