

**Dale Bumpers  
College of  
Agricultural, Food and Life Sciences**

**Honor's Program  
Faculty Mentor List**

**21 January 2003**

**AFLS Unit:** Department of Agricultural and Extension Education

**Faculty Mentor:** Donald M. Johnson

**Address:** 205 Agriculture Building

**Phone:** 479-575-2039

**E-mail:** dmjohnso@uark.edu

**Research Project(s):** Research focuses on computer applications in agriculture and education. Current projects include: (a) longitudinal assessment of student computer experiences and knowledge, (b) development and evaluation of computer simulations, and (c) the effectiveness of real-time data display in computer-based laboratory activities. Dr. Johnson has also mentored undergraduate students in research projects related to energy efficiency in electrical and mechanical systems.

**AFLS Unit:** Department of Agricultural Economics and Agribusiness

**Faculty Mentor:** Bruce L. Ahrendsen

**Address:** 214 Agriculture Building

**Phone:** 479-575-6643

**E-mail:** ahrend@uark.edu

**Research Project(s):** Interests include issues of financial institutions and markets, credit evaluation, financial management, credit programs, risk management, farmland leasing, and asset valuation. Current projects include bank mergers and agricultural credit availability, grower contract profitability, landlord and tenant leasing agreements, and government loan programs.

**Faculty Mentor:** H.L. Goodwin, Jr.

**Address:** 218A Agriculture Building

**Phone:** 479-575-2283

**E-mail:** haroldg@uark.edu

**Research Project(s):** Activities focus on economic and policy issues of the poultry industry and involve interdisciplinary cooperation with the Agricultural Law Center and the Center for Food Science and Technology, as well as Poultry Science and the College of Business. Current research efforts include: transport, storage and feasible alternative utilization of poultry litter, economic impacts of poultry regulation on rural areas, food safety regulation on poultry products, SPS trade barriers to poultry and meat exports, grower-integrator contracting issues and economics of production.

**Faculty Mentor:** Janie Hipp, J.D.

**Address:** 217AA Agriculture Building

**Phone:** 479-575-6935

**E-mail:** jhipp@uark.edu

**Research Project(s):** Legal and policy issues dealing with the environment, agriculture and rural development.

**Faculty Mentor:** Andrew McKenzie

**Address:** 224A Agriculture Building

**Phone:** 479-575-2544

**E-mail:** mckenzie@uark.edu

**Research Project(s):** Interests include futures and options markets and price risk management issues.

**Faculty Mentor:** Michael Thomsen

**Address:** 226 Agriculture Building

**Phone:** 479-575-3932

**E-mail:** mthomsen@uark.edu

**Research Project(s):** Interests include food safety and consumer issues.

**Faculty Mentor:** Eric J. Wailes  
**Address:** 224 Agriculture Building  
**Phone:** 479-575-2278  
**E-mail:** ewailes@uark.edu  
**Research Project(s):** Research activities include analysis of U.S. and global agricultural policies on Arkansas agriculture; U.S. farm bill (price and income support policies, environmental policy, trade policy, energy policy, biotechnology policy); social acceptability of biotechnology, adoption of biotechnology by farmers; marketing and policy issues of organic foods; economic-engineering analysis of grain drying and storage and rice milling; economics of groundwater depletion and water quality issues in Arkansas; analysis of Arkansas, U.S. and global rice economy, long-term projections, market and policy analysis.

**AFLS Unit:** Department of Animal Science

**Faculty Mentor:** Beth Kegley  
**Address:** B110E AFLS Building  
**Phone:** 479-575-3050  
**Email:** ekegley@uark.edu

**Research Project(s):** My main research interest is the impact of nutrition on immune function. This could include supplementing minerals, vitamins, fatty acids, or other nutrients and determining their influence on health either looking at the whole animal or by isolating white blood cells and using them in an in vitro (in lab) experiment. I also work with determining the effects of minerals on metabolism. This could involve feeding cattle or pigs various mineral levels and taking blood and/or tissue samples, as well as measuring animal growth and health.

**Faculty Mentor:** Rick Rorie  
**Office:** E103B AFLS Building  
**Phone:** 479-575-6398  
**Email:** rrorie@uark.edu

**Research Project(s):** Determine the effect of dominance on estrus activity and fertility in cattle. The project will be conducted with dairy heifers. The student will need to observe the heifers and determine their social dominance (pecking order). Estrus will then be induced in the heifers and mounting activity recorded, using an electronic mount monitoring system (HeatWatch). Mounting activity/intensity will be correlated with social status within the herd. The heifers will be inseminated and examined for pregnancy, to determine if social status influences fertility.

**Faculty Mentor:** Charles Rosenkrans, Jr.  
**Address:** B 107-E AFLS Building  
**Phone:** 479-575-4376  
**Email:** crosenkr@uark.edu

**Research Project(s):** Research areas include: animal toxicology, growth and development of gametes, and development of genetic, molecular, and physiological markers of animal growth, reproduction, and health. Most of the research is conducted on cattle and swine; however, mice, rats, and sheep have been used. Students would learn scientific method, laboratory techniques, and have the opportunity to work with animals.

**Faculty Mentor:** Tom Yazwinski  
**Address:** B 110-D AFLS Building  
**Phone:** 479-575-4398  
**Email:** yazwinsk@uark.edu

**Research Project(s):** Research areas include: parasite control and/or pest biology in production as well as companion animals.

**AFLS Unit:** Department of Crop, Soil, and Environmental Sciences

**Faculty Mentor:** Robert K. Bacon

**Address:** 107 Plant Science Building

**Phone:** 479-575-5725

**E-mail:** rbacon@uark.edu

**Research Project(s):** The goal of our research program is to develop improved cultivars of winter wheat and germplasm lines of winter canola. We are involved in evaluating genetic traits of interest and how to best use the appropriate sources of genes for the traits.

**Faculty Mentor:** Kristofor R. Brye

**Address:** 123 Agriculture Building

**Phone:** 479-575-5742

**E-mail:** kbrye@uark.edu

**Research Project(s):** Current projects include 1) evaluating the effects of cultivated agriculture on native soil quality, 2) evaluating the effects of wheat residue management on soybean growth and yield and soil quality, 3) characterizing the short-term effects of land leveling on soil chemical, physical, and biological properties, and 4) characterizing the effects of poultry litter applications to non-graded soils on soil quality-related parameters.

**Faculty Mentor:** Dr. Nilda R. Burgos

**Address:** 1366 W. Altheimer Drive

**Phone:** 479-575-3984

**E-mail:** nburgos@uark.edu

**Research Project(s):** Our research program pertains to weed and herbicide physiology and resistance to herbicides. Some examples of on-going research projects are: gene flow between weedy rice and herbicide-resistant rice; characterization of weedy rice biotypes in Arkansas; the physiological basis for the competitiveness of weedy rice over cultivated rice; mechanism of resistance to herbicides in weedy species; and development of vegetable crops with herbicide tolerance

**Faculty Mentor:** Martha Davis

**Address:** 111 Plant Sciences Building

**Phone:** 479-575-5721

**E-mail:** mdavis@uark.edu

**Research Project(s):** None. Possibility of working one-on-one with students who want assistance with writing papers or making presentations.

**Faculty Mentor:** Benildo G. de los Reyes  
**Address:** 106 (office) & 122(laboratory) Plant Science Building  
**Phone:** 479-575-8435  
**E-mail:** breyes@uark.edu  
**Research Project(s):** My lab uses a multidisciplinary approach (molecular biology, genomics and biochemistry) to elucidate the genetic pathways that control the responses of plants to drought, cold and salinity stresses. Using rice as a model, our long-term goal is to identify stress response gene regulons by transcriptome profiling and expression clustering, promoter motif scanning and analysis of protein-DNA interactions.

**Faculty Mentor:** David E. Longer  
**Address:** 104 Plant Science Building  
**Phone:** 479-575-5731  
**E-mail:** dlonger@uark.edu  
**Research Projects:** Current research interests involve detailed study of the soybean/wheat double crop management system with special emphasis on post harvest management of the wheat straw (residue) prior to soybean planting and the effects of various straw management strategies on soybean yield and soil quality and environmental quality.

**Faculty Mentor:** Dick Oliver  
**Address:** Altheimer Laboratory  
**Phone:** 479-575-3955  
**E-mail:** oliver@uark.edu  
**Research Project(s):** Research goal is to manage weeds in soybean, corn, and wheat through ecology/biology information, cultural practices, and herbicide programs.

**Faculty Mentor:** Dr. Nathan Slaton  
**Address:** 306 Altheimer Building  
**Phone:** 479-575-3910  
**E-mail:** nslaton@uark.edu  
**Research Project(s):** The goal of our research is to enhance nutrient use efficiency in production agriculture by evaluation of plant factors, soil properties, and various management practices on crop growth and yield. A variety of nutrient sources, application methods and times, soil chemical properties, soil test procedures, and management regimes are evaluated to achieve this goal.

**Faculty Mentor:** Dr. Vibha Srivastava  
**Address:** 109 Plant Science Building  
**Phone:** 479-575-4872  
**E-mail:** vibhas@uark.edu  
**Research Project(s):** The major goal of our research is to develop molecular strategies for obtaining precise integration of foreign genes in plants, which is important for the stability of the transgenic plant. We also focus on developing strategies for producing environmentally safe transgenic crops.

**Faculty Mentor:** James McD. (Mac) Stewart  
**Address:** 110 Plant Science Building  
**Phone:** 479-575-5722  
**E-mail:** jstewart@uark.edu  
**Research Project(s):** Our research goal is to develop new genetic resources for cotton improvement. Approaches include both traditional and molecular genetic techniques to identify and utilize useful traits from wild relatives of cotton as well as development of novel traits through genetic engineering.

**Faculty Mentor:** Charles P. West  
**Address:** 214 Alzheimer Laboratory  
**Phone:** 479-575-3982  
**E-mail:** cwest@uark.edu  
**Research Project(s):** Investigation into physiological and genetic mechanisms by which fungal endophytes enhance drought tolerance in tall fescue grass.

**Faculty Mentor:** Duane C. Wolf  
**Address:** 105A Agriculture Building  
**Phone:** 479-575-5739  
**E-mail:** dwolf@uark.edu  
**Research Project(s):** The goal of our research is to use soil microorganisms and plants to cleanup soil contaminated with organic pollutants such as crude oil and creosote. Using several plant species and soil amendments such as poultry litter, fertilizer, and sawdust, we evaluate remediation rates of contaminated soils under various environmental conditions.

**AFLS Unit:** Department of Entomology

**Faculty Mentor:** Fiona L. Goggin

**Address:** 330 Agriculture Building

**Phone:** 479-575-6751

**E-mail:** fgoggin@uark.edu

**Internet Site:** <http://www.uark.edu/depts/entomolo/faculty/goggin.html>

**Research Project(s):** The goal of our research is to identify genes and defensive pathways that can render crop plants resistant to insect and nematode attack. My laboratory uses genomic and molecular techniques as well as biological assays to characterize aphid and nematode resistance in tomato.

**Faculty Mentor:** Donn T. Johnson

**Address:** 311 Agriculture Building

**Phone:** 479-575-2501

**E-mail:** dtjohnso@uark.edu

**Internet Site:** <http://www.uark.edu/depts/entomolo/faculty/johnson.html>

**Research Project(s):** The goal of our research is to inject plant odors through a gas chromatograph linked to an electroantennodetector and identify the odor peaks that are biologically active to insects.

**Faculty Mentor:** Randall G. Luttrell

**Address:** 315 Agriculture Building

**Phone:** 479-575-4433

**E-mail:** luttrell@uark.edu

**Internet Site:** <http://www.uark.edu/depts/entomolo/faculty/luttrell.html>

**Research Project(s):** We work on management systems for insect pests of agronomic crops, especially cotton. Our research is organized around two central focus areas: (1) management of the evolution of resistance to insecticides and insecticidal proteins in transgenic crops, and (2) development of "community" or "landscape" level management systems that optimize the use of biological and ecological information for area-wide management decisions.

**Faculty Mentor:** Dr. Fred Stephen

**Address:** 317 Agriculture Building

**Phone:** 479-575-2451

**Email:** fstephen@uark.edu

**Internet site:** <http://www.uark.edu/%7Efstephen/new/indexfiles/index.html>

**Research Project(s):** Primary area of research is ecology and dynamics of forest insects, with particular emphasis on applied biological control of southern pine beetle through enhancement of parasitism by providing synthetic food to augment nutrition for parasitoid adults. New research is underway on sampling, biology and impact of Red Oak Borer in the Ozark Mountains.

**Faculty Mentor:** Allen Szalanski  
**Address:** 302 Agriculture Building  
**Phone:** 479-575-4342  
**Email:** aszalan@uark.edu  
**Internet Site:** <http://comp.uark.edu/~aszalan/index.html>  
**Research Project(s):** The goal of our research is to study population genetics and molecular diagnostics of economically important insects and the pathogens they carry. Projects include genetics of termites, fall armyworm genetics, molecular detection of tobacco budworm bt resistance, and molecular identification of bacterial pathogens carried by flies.

**AFLS Unit:** Department of Food Science

**Faculty Mentor:** Navam Hettiarachchy

**Address:** N 218 Food Science Building

**Phone:** 479-575-4779

**E-mail:** nhettiar@uark.edu

**Research Project(s):** Current research projects include 1) Extracting and characterizing medicinal compounds in exotic vegetables, spices, and herbs, 2) Utilizing proteins, bio-peptides and phytochemicals as functional ingredients and for use in chronic diseases, 3) Producing natural and novel biopeptides, antimicrobials, and antioxidants incorporated edible films to inhibit/kill food-borne pathogens including *Listeria*, *salmonella*, and *E.coli 0157:H7*, and extend shelf life of meat, poultry, fruits, vegetables, cereals, pizza, and other food products, 4) Producing novel edible packaging by using protein adhesives for sealing food and non-food packaging materials.

**Faculty Mentor:** Mike Johnson

**Address:** 131 Biomass Building Research Laboratory

**Phone:** 479-575-4778

**E-mail:** mjohnson@uark.edu

**Research Project(s):** Project #1: Control of pathogens on ready-to eat foods with edible coatings/films containing natural, digestible biopeptides (bacteriocins). Pathogen target is *Listeria monocytogenes*. Bacteriocins will include nisin and pediocin and coatings will include corn zein and carrageenan.

Project #2: Detection of virulence of bacterial pathogens using hybridoma tissue culture cell lines. Pathogen targets are *Campylobacter jejuni*, enterohemorrhagic *E. coli* and others. This tissue culture model has advantage of letting us detect single hits of cells to determine minimum infectious doses of these pathogens.

**Faculty Mentor:** Steven C. Seideman

**Address:** 205 Food Science Building

**Phone:** 479-575-4221

**E-mail:** seideman@uark.edu

**Research Project(s):** The goal of our research is to examine various food processing adjuncts that may be of use in the production of safe, high-quality foods. Some examples of these adjuncts include use of liver extract as a microbial inhibitor and use of electrically charged water in food processing. We also have a project to develop new, further processed, value-added products for the Fayetteville Farmers Market.

**Faculty Mentor:** Ya-Jane Wang  
**Address:** 214N Food Science Building  
**Phone:** 479-575-3871  
**E-mail:** yjwang@uark.edu  
**Research Project(s):** My research project is entitled “Characterization of oligosaccharides in rice bran.” Oligosaccharides are termed as “prebiotics” because they are preferentially chosen by beneficial bacteria to promote intestinal health. Commercial oligosaccharides are mainly from limited plant sources and rice bran oligosaccharides potentially offer health benefits that are not present in commercial products. This project will determine the structure and composition of oligosaccharides from rice bran.

**AFLS Unit:** Department of Horticulture

**Faculty Mentor:** John R. Clark  
**Address:** 307 Plant Science Building  
**Phone:** 479-575-2810  
**E-mail:** jrclark@uark.edu

**Research Project(s):** Research area is in breeding and genetics of fruit crops, including blueberries, blackberries, grapes, and peaches/nectarines. Undergraduate research can focus from a wide range of options within these crop areas

**Faculty Mentor:** James T. Cole  
**Address:** 305 Plant Science Building  
**Phone:** 479-575-2798  
**E-mail:** jtcole@uark.edu

**Research Project(s):** Current studies are investigating methods of over wintering different plant materials and alternative methods and procedures for the production of ornamental grasses. Research on the effect of environmental factors on the survivability and performance of ornamental landscape plant materials is also being conducted.

**Faculty Mentor:** Doug Karcher  
**Address:** 308 Plant Science Building  
**Phone:** 479-575-5723  
**E-mail:** karcher@uark.edu

**Research Project(s):** 1) Evaluating organic & inorganic amendments for sand-based rootzones; primarily for use in golf course putting greens and athletic fields; 2) Predicting soil physical properties of sand-based rootzones from a particle size distribution; 3) Sensing moisture stress of turf using digital image analysis; 4) Evaluating turfgrass quality using digital image analysis.

**Faculty Mentor:** Brad Murphy  
**Address:** 321 Plant Science Building  
**Phone:** 479-575-2670  
**E-mail:** jbmurph@uark.edu

**Research Project(s):** My research program is in the area of ag-medicine. I have two major projects: one on the production of pharmaceutical proteins in transgenic plants and one on metabolic engineering of phytonutrients in horticultural crops.

**Faculty Mentor:** Michael D. Richardson  
**Address:** 309 Plant Science Building  
**Phone:** 479-575-2860  
**E-mail:** mricha@uark.edu  
**Research Project(s):** The overall objective of our research program is to identify cultural practices, plant species and plant cultivars that enhance turfgrass growth and physiology in stressful environments. The current emphasis is on cold tolerance of warm-season grasses, including bermudagrass and zoysiagrass.

**Faculty Mentor:** Curt R. Rom  
**Address:** 316 Plant Science Building  
**Phone:** 479-575-7324  
**E-mail:** crom@uark.edu  
**Research Project(s):** Fruit crop and wood plant physiology production technologies for organic horticulture, apple cultivar development/evaluation, apple rootstock development and fruit crop management.

**AFLS Unit:** School of Human Environmental Sciences

**Faculty Mentor:** Dr. Marjorie Fitch-Hilgenberg

**Address:** HOEC 118

**Phone:** 479-575-6815

**E-mail:** mfitc@uark.edu

**Research Project(s):** My research focus is the improvement of the quality of life through nutrition. Within that broad area, I am studying the relationships between nutrient intake, antioxidant enzyme activities and the aging process. Also, ongoing research includes the use of Arkansas cash crops to improve the nutrient quality of the diets of Arkansans.

**Faculty Mentor:** Jerald C. Foote, PhD, RD

**Address:** 16A Home Economics Building

**Phone:** 479-575-4599

**E-mail:** jcfoote@uark.edu

**Research Project(s):** Dietary supplement use, safety and toxicology. Professional ethics and dietary supplement use. Sports nutrition and ergogenic aids.

**Faculty Mentor:** Nancy G. Miller, PhD.

**Address:** 17-F Home Economics Building

**Phone:** 479-575-7599

**E-mail:** ngmille@uark.edu

**Research Project(s):** My work investigates the relationship between the individual and the physical environment; specifically, the physiological, psychological and sociological aspects the human being within built spaces. My primary focus is on sense of place with the aging individual.

**Faculty Mentor:** Dr. Mary M. Warnock

**Address:** 119 Home Economics Building

**Phone:** 479-575-4310

**E-mail:** mwarnock@uark.edu

**Research Project(s):** Research efforts include the development of value-added products utilizing the cellulosic fiber kenaf. These products are to be related to the Arkansas craft industry. Biodegradation of nonwoven fabrics produced at SRRC-New Orleans also may be a possibility. *NOTE: Student may need design, construction and other specialized skills in order to develop and execute the completed value-added product.*

**Faculty Mentor:** Dr. Jennifer Webb  
**Address:** 118 Home Economics Building  
**Phone:** 479-575-6662  
**E-mail:** jwebb@uark.edu  
**Research Project(s):** The research addresses the concept of home for older adults. We are examining the role interior architectural components plays in creating a sense of home. Additional research topics include the role of privacy in alternative living environments for older adults.

**AFLS Unit:** Department of Plant Pathology

**Faculty Mentor:** Ken Korth

**Address:** 205 Rosen Alternative Pest Control Center

**Phone:** 479-575-5191

**Email:** [kkorth@uark.edu](mailto:kkorth@uark.edu)

**Internet site:** <http://www.uark.edu/depts/plntpath/KORTH.dir/z-index.home/z-index.html>

**Research Project(s):** Research in my lab focuses on plant responses to chewing insects, and to the factors in the insect that trigger those responses. We use techniques of genetics, molecular biology, and biochemistry to address some of these biological questions.

**Faculty Mentor:** Gene Milus

**Address:** 211 Plant Science Building

**Phone:** 479-575-2676

**E-mail:** [gmilus@uark.edu](mailto:gmilus@uark.edu)

**Research Project(s):** Projects suitable for an honors student during fall or spring semesters could involve the identification of resistance to leaf rust, stripe rust, or Fusarium head blight in wheat varieties and breeding lines. During the summer, there would be opportunities to conduct research on turfgrass diseases. Anthracnose of bentgrass putting greens is of particular interest because of its importance in Arkansas and the potential for patenting an experimental fungicide owned by the Experiment Station.

**Faculty Mentor:** John Rupe

**Address:** 217 Plant Science Building

**Phone:** 479-575-2778

**E-mail:** [jrupe@uark.edu](mailto:jrupe@uark.edu)

**Research Project(s)** Current research projects are investigating important diseases of soybean. Studies involve determining the epidemiology and control of sudden death syndrome, seedling damping-off caused by *Pythium* spp., and control of charcoal rot. These studies involve field, greenhouse, and laboratory work in cultivar resistance, pathogen genetic variability, and tillage.

**Faculty Mentor:** David TeBeest  
**Address:** 217 Plant Science Building  
**Phone:** 479-575-2678  
**E-mail:** dtebeest@uark.edu

**Research Project(s):** Our research is investigating the molecular ecology and epidemiology of rice blast and of anthracnose diseases of sorghum, corn and Aeschynomene. These studies use laboratory, greenhouse and field experiments to determine thresholds for infection and epidemic development and to dissect out changes in populations of the pathogens within populations and the physiological and genetic factors at the molecular level that influence strain competition of these pathogens on their respective hosts.

**AFLS Unit:** Department of Poultry Science

**Faculty Mentor:** Dustan Clark

**Address:** O-205 Poultry Science Building

**Phone:** 479-575-4375

**E-mail:** fdclark@uark.edu

**Research Project(s):** Research on bacterial and viral diseases of poultry. Works with industry on current diseases and problems. Major emphasis on poultry diseases, diagnostics and pathology.

**Faculty Mentor:** Craig Coon

**Address:** O-211 Poultry Science Building

**Phone:** 479-575-4134

**E-mail:** ccoon@uark.edu

**Research Project(s):** Develop metabolic models describing the partitioning of nutrients by broiler breeder hens for maintenance, weight gain, and hatching egg production. Stable isotopes will be used to evaluate the partitioning of nutrients for physiological functions as affected by different strains, pullet feeding regime, body condition at sexual maturity, breeder feeding program, and level of breeder performance. In order to improve chick quality from breeder flocks, chick embryo development related to methylation potential, polyamine formation, and vitamin interaction with amino acid metabolism will be studied.

**Faculty Mentor:** Jason Emmert

**Address:** O-202 Poultry Science Building

**Phone:** 479-575-3595

**E-mail:** jemmert@uark.edu

**Research Project(s):** The goal of our research is to evaluate various feeding programs and feedstuffs for poultry. We are specifically interested in amino acid, vitamin, and mineral requirements and metabolism.

**Faculty Mentor:** Gisela Erf

**Address:** O-406 Poultry Science Building

**Phone:** 479-575-6565

**E-mail:** gferf@uark.edu

**Research Project(s):** Our lab studies immune system development and function in poultry using cellular and molecular techniques. Current projects include studies on the effects of nutritional and environmental factors on the immune system in poultry, the role of the immune system in pulmonary hypertension syndrome in broilers, and autoimmune disease using the Smyth line chicken animal model for human autoimmune vitiligo.

**Faculty Mentors:** Billy Hargis  
**Address:** Poultry Health Research Laboratory  
**Phone:** 479-575-4390  
**E-mail:** bhargis@uark.edu  
**Research Project(s):** Our research involves numerous facets relating to poultry health and disease, with particular emphasis on poultry virology and alternatives to antibiotic chemicals. Much recent progress has been made in the area of novel approaches to excluding harmful bacteria with beneficial bacteria and treatment/prevention of bacterial enteric diseases with viruses that only infect bacteria (bacteriophages).

**Faculty Mentor:** John Kirby  
**Address:** O-409 Poultry Science Building  
**Phone:** 479-575-8623  
**E-mail:** jkirby@uark.edu  
**Research Project(s):** Our lab studies the biology of reproductive function in males and females using cell, molecular and organismal approaches. Currently we are studying the regulation of key genes in the reproductive and stress and axes in birds.

**Faculty Mentor:** Yanbin Li  
**Address:** O-411 Poultry Science Building  
**Phone:** 479-575-2424  
**E-mail:** yanbinli@uark.edu  
**Research Project(s):** We design and evaluate biosensors for rapid detection of pathogens in poultry products for ensuring food safety. We develop predictive microbial models for the survival/growth/death and cross-contamination of pathogenic bacteria in poultry and also conduct microbial risk assessment.

**Faculty Mentor:** Young Min Kwon  
**Address:** O-213 Poultry Science Building  
**Phone:** 479-575-4935  
**Email:** ykwon@uark.edu  
**Research Project(s):** The goal of our research is to determine the genetic factors of foodborne pathogens that are important for persistence in poultry. We are using genetic/genomic approaches to identify the factors of *Salmonella enteritidis* and *Campylobacter jejuni* in chicken infection model.

**Faculty Mentor:** Lisa Newberry  
**Address:** Poultry Health Research Laboratory  
**Phone:** 479-575-8490  
**Email:** lnewber@uark.edu  
**Research Project(s):** Our research focuses primarily on the isolation and characterization of viral and bacterial pathogens from commercial poultry or other avian species. Once identified we evaluate various strategies for prevention, control, and/or treatment including the development of vaccines.

**Faculty Mentor:** Mark S. Parcels  
**Address:** O-404 Poultry Science Building  
**Phone:** 479-575-5494  
**Email:** parcels@uark.edu  
**Research Project(s):** Our laboratory deals with a commercially-important, tumor-causing virus of chickens called Marek's disease virus (MDV). Our interests run from basic gene function, to pathogenic mechanisms to vaccine development.

**Faculty Mentor:** Ron Okimoto  
**Address:** O-406 Poultry Science Building  
**Phone:** 479-575-6565  
**E-mail:** rokimoto@uark.edu  
**Research Project(s):** Our laboratory research involves the molecular genetics of poultry. Current projects range from feather color genetics to identification of genes involved in feed efficiency in broilers. We have had one student complete his honors thesis on feather color in chickens and a second honors candidate working on feather color in quail.

**Faculty Mentor:** Robert F. Wideman  
**Address:** O-402 Poultry Science Building  
**Phone:** 479-575-4397  
**E-mail:** rwideman@uark.edu  
**Research Project(s):** The goal of our research is to evaluate factors that influence respiratory gas exchange and blood flow through the lungs of domestic fowl. We use small animal surgical techniques, digital physiograph recordings, and blood gas analyses to evaluate pulmonary hemodynamics, blood oxygenation, and blood pH in fast growing broiler (meat-type) chickens that are susceptible to pulmonary hypertension syndrome.