

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

**Honor's Program  
Faculty Mentor List**

16 July 2007

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

**Faculty Mentor:** Casandra Cox  
**Address:** 205 Agriculture Building  
**Phone:** 479-575-2040  
**E-mail:** ccrumble@uark.edu  
**Research Project(s):** Research focuses on provide technology and leadership training to 4-H adult leader and youth programs.

**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.

**Faculty Mentor:** Jeff Miller  
**Address:** 205 Agriculture Building  
**Phone:** 479-575-5650  
**E-mail:** jdmiller@uark.edu  
**Research Project(s):** Research interest in communication evaluation ad agricultural communications curriculum development

**Faculty Mentor:** Freddie Scott  
**Address:** 205 Agriculture Building  
**Phone:** 479-575-  
**E-mail:** fscott@uark.edu  
**Research Project(s):** Focus is on Career and Professional Development

**Faculty Mentor:** George Wardlow  
**Address:** 205 Agriculture Building  
**Phone:** 479-575-  
**E-mail:** wardlow@uark.edu  
**Research Project(s):** Research interest in agricultural education program development and quality indicators in education.

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

**Faculty Mentor:** Bruce L. Ahrendsen

**Address:** 217 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:** Bruce Dixon

**Address:** 215 Agriculture Building

**Phone:** 479-575-4408

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

**Research Project(s):** applied econometrics, agricultural finance and economics of climate change. Impact of Chapter 12 bankruptcy on debt restructuring by financially stressed farmers

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

**Address:** 216 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:** 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:** Lucas Parsch

**Address:** 225 Agriculture Building

**Phone:** 479-575-2323

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

**Research Project(s):** characterization of cropland rental arrangements in Arkansas, risk-returns analysis for tenants and landlords, assessment of risk measures for yield and net returns for major field crops for the Delta region of Arkansas, evaluation of no-till crop production, and the use of simulation to evaluate stocking rate risk and rotational grazing for beef production.

**Faculty Mentor:** Jennie Popp  
**Address:** 218B Agriculture Building  
**Phone:** 479-575-2279  
**E-mail:** jhpopp@uark.edu  
**Research Project(s):** natural resource economics emphasizing soil and water quality, environmental economics emphasizing animal waste management, and ag and environmental policy.

**Faculty Mentor:** Michael Popp  
**Address:** 228 Agriculture Building  
**Phone:** 479-575-6838  
**E-mail:** mpopp@uark.edu  
**Research Project(s):** farm and agribusiness management with an emphasis on risk management. New and existing technology, within-firm enterprise resource allocation decisions, and interactions between production and marketing decisions for commercial crop and/or livestock farms. Specific objectives are to identify risk/return tradeoffs associated with enterprise diversification of farm operations; this includes the evaluation of the impact of various crop rotations and production timing decisions on whole farm risk and returns for field crop agriculture; it also includes comparisons of new production alternatives to conventional methods in terms of both profitability and risk exposure.

**Faculty Mentor:** Daniel Rainey  
**Address:** 222 Agriculture Building  
**Phone:** 479-575-5584  
**E-mail:** rainey@uark.edu  
**Research Project(s):** Research interests are in public finance and regional/rural economic development. Impacts of investments in transportation on rural development (Rainey)

**Faculty Mentor:** Martin Redfern  
**Address:** 213 Agriculture Building  
**Phone:** 479-575-2299  
**E-mail:** mredfern@uark.edu  
**Research Project(s):** research has encompassed rural development, resource economics, estimation of willingness-to-pay for non-market goods, food safety, and the impact of changes in one economic sector on the overall economy in a geographic region.

**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. Impact of U.S. food safety regulations on trade in food products

**Faculty Mentor:** Eric J. Wailes  
**Address:** 224 Agriculture Building  
**Phone:** 479-575-2278  
**E-mail:** ewailes@uark.edu  
**Research Project(s):** 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:** Jason Apple

**Address:** AFLS B103C

**Phone:** 479-575-4840

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

**Research Project(s):** The study of the factors affecting postmortem metabolism and meat quality, and nutritional modifications that affect meat quality. Additional areas of interest include pre-harvest food safety, determination of carcass yield and value of livestock, and factors that affect cooked meat palatability.

**Faculty Mentor:** Hayden Brown

**Address:** AFLS B106C

**Phone:** 479-575-4855

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

**Research Project(s):** Genetic improvement of economically important traits in livestock

**Faculty Mentor:** Kenneth Coffey

**Address:** AFLS B106E

**Phone:** 479-575-2112

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

**Research Project(s):** To optimize production and economic efficiency by cows consuming forages that are either prevalent or have potential to become prevalent in Arkansas. To evaluate methods of improving forage utilization by ruminants.

**Faculty Mentor:** Nancy Jack

**Address:** AFLS B110B

**Phone:** 479-575-4380

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

**Research Project(s):** Equine breeding, behavior, and training.

**Faculty Mentor:** Zelpha Johnson

**Address:** AFLS 106

**Phone:** 479-575-2983

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

**Research Project(s):** Animal breeding projects; experimental design and analysis.

**Faculty Mentor:** Beth Kegley

**Address:** B110E AFLS Building

**Phone:** 479-575-3050

**Email:** ekegley@uark.edu

**Research Project(s):** Impact of nutrition on immune function including 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:** Wayne Kellogg  
**Address:** AFLS B103E  
**Phone:** 479-575-6397  
**E-mail:** wkellogg@uark.edu  
**Research Project(s):** Nutrition and dairy cattle management. Conducts research on dairy cattle and forages. Primary emphasis is on minerals in forages and, subsequently, in diets of cattle in Arkansas and on nutrition of dairy calves.

**Faculty Mentor:** David Kreider  
**Address:** AFLS B107C  
**Phone:** 479-575-6323  
**E-mail:** dkreider@uark.edu  
**Research Project(s):** Endocrine and reproductive physiology. Primary research interest in the enhancement of reproduction in cattle and swine.

**Faculty Mentor:** Bryan Kutz  
**Address:** AFLS B107D  
**Phone:** 479-575-4337  
**E-mail:** bkutz@uark.edu  
**Research Project(s):** Youth activities in animal science

**Faculty Mentor:** Keith Lusby  
**Address:** AFLS B107D  
**Phone:** 479-575-3745  
**E-mail:** klusby@uark.edu  
**Research Project(s):**

**Faculty Mentor:** Charles Maxwell  
**Address:** AFLS B106A  
**Phone:** 479-575-2111  
**E-mail:** cmaxwell@uark.edu  
**Research Project(s):** Nutrition and management of swine, especially newborn pigs.

**Faculty Mentor:** Dirk Philipp  
**Address:** AFLS B107C  
**Phone:** 479-575-7914  
**E-mail:** dphilipp@uark.edu  
**Research Project(s):** Improved forage utilization and grazing management related to increased profitability and water quality, especially in the nutrient surplus areas of Northwest AR.

**Faculty Mentor:** Fred Pohlman  
**Address:** AFLS B103D  
**Phone:** 479-575-5634  
**E-mail:** fpohlma@uark.edu  
**Research Project(s):** Meat processing and handling techniques, food safety, animal finishing, lean meat quality and yield, and meat palatability.

**Faculty Mentor:** Jeremy Powell  
**Address:** AFLS B110C  
**Phone:** 479-575-5136  
**E-mail:** jerpow@uark.edu  
**Research Project(s):** Diseases and nutritional disorders in animals.

**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:** 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:** Pengyin Chen  
**Address:** 105 Plant Science Building  
**Phone:** 479-575-7564  
**E-mail:** pchen@uark.edu

**Research Project(s):** Variety development to increase yield, wide range maturities, multiple and durable disease resistance, stress tolerance, conventional and herbicide resistance, lodging and shattering resistance, value-added traits, and improved seed quality. To develop diverse germplasm that would broaden the genetic background and improve the southern soybean gene pool. Value-added specialty traits that would meet various market demands for health benefits and nutritional value from soyfood products such as tofu, natto, soymilk, soy sauce, miso, soynuts, edamame, and bean sprouts.

**Faculty Mentor:** Tommy Daniel  
**Address:** 116D Agriculture Building  
**Phone:** 479-575-5720  
**E-mail:** tdaniel@uark.edu  
**Research Project(s):** Recent research has examined constituents levels and losses in runoff from pastures receiving poultry manure, poultry litter, swine manure, or commercial fertilizer, and phosphorus levels in runoff from soils high in phosphorus. Current research is focusing on understanding the relationship between the level of phosphorus in the soil and that contained in the runoff, especially as it relates to eutrophication.

**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:** John Mattice  
**Address:** 1366 W. Altheimer Drive  
**Phone:** 479-575-6791  
**E-mail:** jmattice@uark.edu  
**Research Project(s):** Pesticide Residues

**Faculty Mentor:** David Miller  
**Address:** 106 Agriculture Building  
**Phone:** 479-575-5747  
**E-mail:** dmmiller@uark.edu  
**Research Project(s):** Soil chemistry

**Faculty Mentor:** Richard Norman  
**Address:** 105 Agriculture Building  
**Phone:** 479-575-5738  
**E-mail:** rnorman@uark.edu  
**Research Project(s):** Investigation of the nitrogen balance in paddy and upland soils.  
Assessment of new fertilizers, urease inhibitors, and nitrification inhibitors.  
Rice culture and mechanization  
Determining the availability in flooded soils of phosphorus, potassium, zinc and other essential nutrients required by the rice plant to produce sustainable grain yields.  
Use of radioactive and stable isotopes as tracers in soil and plant studies.  
Reclaiming problem precision-graded soils with manure and other amendments.

**Faculty Mentor:** Jason Norsworthy  
**Address:** Altheimer Laboratory  
**Phone:** 479-575-3955  
**E-mail:** jnorswor@uark.edu  
**Research Project(s):** Weed Science

**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:** Derrick Oosterhuis  
**Address:** Altheimer Laboratory  
**Phone:** 479-575-3979  
**E-mail:** oosterhu@uark.edu  
**Research Project(s):** Research is mainly on cotton and other major row crops. Interests include: plant-soil water relations, methodologies of measurement, and drought tolerance. Photosynthesis and carbon partitioning in growth and yield development. Root growth distribution and water uptake of agronomic crops. Chemical plant growth regulation and abscission. Plant nitrogen and potassium nutrition. Leaf cuticle characteristics and absorption of foliar-applied fertilizers.

**Faculty Mentor:** Larry Purcell  
**Address:** Altheimer Laboratory  
**Phone:** 479-575-3983  
**E-mail:** lpurcell@uark.edu  
**Research Project(s):** Physiology of nitrogen fixation and nodule metabolism in soybean, and the response of nitrogen fixation in soybean to drought and other environmental stresses. A goal of this research is to increase soybean productivity in specific environments by improved nitrogen fixation. Additional areas of research include responses of plant nitrogen metabolism, leaf gas exchange, pod and flower abortion, and seed growth to water deficits in soybean.

**Faculty Mentor:** Mary C. Savin  
**Address:** 105B Agriculture Building  
**Phone:** 479-575-5740  
**E-mail:** msavin@uark.edu  
**Research Project(s):** Research projects focus on using traditional extraction and innovative molecular techniques to study the structure and function of microbial communities in natural and managed ecosystems. Current projects involve investigations to improve our understanding of the roles microorganisms play in nutrient cycling, ecological interactions, and contaminant degradation.

**Faculty Mentor:** Andrew Sharpley  
**Address:** 111 Plant Science Building  
**Phone:** 479-575-5721  
**E-mail:** sharpley@uark.edu  
**Research Project(s):** Cycling of phosphorus in soil-plant-water systems in relation to soil productivity and water quality and includes the management of animal manures, fertilizers, and crop residues.

**Faculty Mentor:** Vaughn Skinner  
**Address:** 115 Plant Science Building  
**Phone:** 479-575-5479  
**E-mail:** jskinner@uark.edu  
**Research Project(s):** GIS, land use, farm management.

**Faculty Mentor:** 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:** 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):** Develop new genetic resources for cotton improvement including 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 Altheimer 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):** 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:** Jeff Barnes  
**Address:** 314 Agriculture Building  
**Phone:** 479-575-4475  
**E-mail:** jbarnes@uark.edu  
**Research Project(s):** Insect taxonomy and systematics; Arkansas arthropod fauna; rare and endangered habitats; history of entomology and natural history; biology of Diptera

**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):** 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):** Inject plant odors through a gas chromatograph linked to an electroantennodetector and identify the odor peaks that are biologically active to insects.

**Faculty Mentor:** Timothy Kring  
**Address:** 319 Agriculture Building  
**Phone:** 479-575-3186  
**E-mail:** tkring@uark.edu  
**Research Project(s):** Biological Control: Parasites and Predators  
Wheat 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):** 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:** Paul McLeod  
**Address:** 304 Agriculture Building  
**Phone:** 479-575-3397  
**E-mail:** pjmcLeod@uark.edu  
**Research Project(s):** Development of an IPM program for green peach aphid in spinach. Refinement and implementation of an IPM program for managing corn earworm on snap bean.

**Faculty Mentor:** Max Meisch  
**Address:** 300E Agriculture Building  
**Phone:** 479-575-2490  
**E-mail:** meisch@uark.edu  
**Research Project(s):** Medical Entomology  
Bionomics and control of riceland mosquitoes and black flies optimizing non-chemical approaches to integrated management programs.

**Faculty Mentor:** Dayton Steelman  
**Address:** 322 Agriculture Building  
**Phone:** 479-575-2510  
**E-mail:** dsteelm@uark.edu  
**Research Project(s):** Veterinary Entomology

**Faculty Mentor:** Donald C. Steinkraus  
**Address:** 319 Agriculture Building  
**Phone:** 479-575-3187  
**E-mail:** steinkr@uark.edu  
**Research Project(s):** Biological Control: Entomopathogens

**Faculty Mentor:** 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):** Ecology and dynamics of forest insects, with 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):** 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.

**Faculty Mentor:** Robert Wiedenmann  
**Address:** 319 Agriculture Building  
**Phone:** 479-575-2451  
**E-mail:** rwieden@uark.edu  
**Research Project(s):** Biological Control of Insects and Weeds, Invasive Species

**AFLS Unit:** Department of Food Science

**Faculty Mentor:** Ron Buescher

**Address:** N 202 Food Science Building

**Phone:** 479-575-4775

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

**Research Project(s):** Quality improvement and methods of quality analyses and processed vegetables. Current research is directed toward post harvest handling, fermentation, water conservation and value-added product development associated with pickled vegetable manufacturing.

**Faculty Mentor:** Phillip Crandall

**Address:** N 213 Food Science Building

**Phone:** 479-575-7686

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

**Research Project(s):** Research interests in fruit and vegetable processing emphasizing juice and beverage production, reducing the viscosity of fruit concentrates, recovery of BioProducts rich in antimutagenic compounds and pectin, formulation and enrichment of foods with naturally occurring anti-cancer compounds, design and fabrication of food processing and preservation systems for developing countries.

**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:** Luke Howard

**Address:** N206 Food Science Building

**Phone:** 479-575-2978

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

**Research Project(s):** Effect of processing on color, flavor, texture, and nutrient content of horticulture crops; identification and characterization of bioactive phytonutrients and antioxidant capacity in horticultural and cereal crops; and critical fluid technologies for extraction of phytonutrients.

**Faculty Mentor:** Mike Johnson  
**Address:** 131 Biomass Building Research Laboratory  
**Phone:** 479-575-4778  
**E-mail:** mjohanson@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:** Jean-Francois Meullenet  
**Address:** E 22 Food Science Building  
**Phone:** 479-575-6822  
**E-mail:** jfmeull@uark.edu  
**Research Project(s):** Sensory Science and Rheology are my primary research interests. Current research focuses on the development of instrumental methods capable of predicting the sensory perception or acceptance of texture by trained panelists and consumers.

**Faculty Mentor:** Rubén Morawicki  
**Address:** N 216 Food Science Building  
**Phone:** 479-575-4923  
**E-mail:** rmorawic@uark.edu  
**Research Project(s):** *Food Processing:*  
Utilization of byproducts from the processing of agricultural commodities

- Waste streams, to produce or isolate valuable compounds, food ingredients, or fuel
- Tissue byproducts, to biosynthesize secondary metabolites with potential applications

Alternative methods to replace processes with high demand of energy

- Membrane technology
- Emerging processing technologies

Rapid in-line instrumentation for food quality assurance, and monitoring of contaminants and pathogenic bacteria  
*Food Packaging:*  
Use of biodegradable polymers made from renewable resources for construction of food packages  
Combination of natural antimicrobials, antioxidants, or other additives, with biodegradable packaging materials

**Faculty Mentor:** Justin Morris  
**Address:** B 2 Food Science Building  
**Phone:** 479-575-4040  
**E-mail:** jumorris@uark.edu  
**Research Project(s):** Area of expertise is in viticulture and enology with emphasis on the influence of the pre-harvest complex on the final juice of wine quality. Also, emphasis is placed in the area of evaluating new processing variables on wine quality and style. Extensive efforts have been placed on developing new juice products from grape/fruit blends.

**Faculty Mentor:** Andrew Proctor  
**Address:** N 204 Food Science Building  
**Phone:** 479-575-2980  
**E-mail:** aproctor@uark.edu  
**Research Project(s):** Lipid Chemistry and Food Quality  
Fourier transform infra-red spectroscopy of lipid foods and biological systems  
Rice hull utilization for value added products

**Faculty Mentor:** Steven Ricke  
**Address:** N 215 Food Science Building  
**Phone:** 479-575-4678  
**E-mail:** sricke@uark.edu  
**Research Project(s):** Food Safety, Salmonella pathogenesis, genetics, and physiology  
Food fermentations  
Gastrointestinal microbiology

**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:** Terry Siebenmorgan  
**Address:** N 217 Food Science Building  
**Phone:** 479-575-2841  
**E-mail:** tsiebenm@uark.edu  
**Research Project(s):** Rice processing property characterization, drying, storage, milling, and quality assessment.

**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:** Craig Andersen  
**Address:** 313 Plant Science Building  
**Phone:** 479-575-2639  
**E-mail:** crander@uark.edu  
**Research Project(s):** Vegetable Crop Production and Cultivar Evaluation

**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:** Mike Evans  
**Address:** 315 Plant Science Building  
**Phone:** 479-575-3179  
**E-mail:** mrevars@uark.edu  
**Research Project(s):** Responsible for conducting research on edaphics of horticultural substrates. Research areas include alternative media components and amendments and control of Pythium and Phytophthora.

**Faculty Mentor:** Elena Garcia  
**Address:** 316 Plant Science Building  
**Phone:** 479-575-2790  
**E-mail:** megarcia@uark.edu  
**Research Project(s):** Fruit production

**Faculty Mentor:** David Hensley  
**Address:** 316A Plant Science Building  
**Phone:** 479-575-7319  
**E-mail:** dhensley@uark.edu  
**Research Project(s):** Ornamental horticulture, with special interest in landscape management, contracting and design, and arboriculture.

**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:** Jon Lindstrom  
**Address:** 312 Plant Science Building  
**Phone:** 479-575-2645  
**E-mail:** tranell@uark.edu  
**Research Project(s):** Selection and evaluation of woody landscape plants for Arkansas and elsewhere.  
Ornamental plant selection and evaluation  
Ornamental plant breeding (primarily in the genus Buddleja)  
Plant micropropagation  
Cultivar identification of woody ornamental plants using DNA

**Faculty Mentor:** Teddy Morelock  
**Address:** 311 Plant Science Building  
**Phone:** 479-575-2745  
**E-mail:** morelock@uark.edu  
**Research Project(s):** Conduct research in the area of processing vegetable breeding. Major efforts are with spinach and cowpea; also have minor efforts with turnip, mustard, collard, cucumber, pepper and Swiss chard.

**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:** Laurie Apple

**Address:** 229 Home Economics Building

**Phone:** 479-575-4576

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

**Research Project(s):** Product Development, Textiles, Development of Computer Aided Design courses, Student and Faculty Perceptions of University Faculty's Teaching, Research and Availability

**Faculty Mentor:** William Bailey

**Address:** 216 Home Economics Building

**Phone:** 479-575-2058

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

**Research Project(s):** Attitudes toward money; economic psychology and personal financial planning; consumer credit counseling industry and its clients; financial literacy and its public policy; financial stress and its relationship to depression and health.

**Faculty Mentor:** Vernoice Baldwin

**Address:** 118 Home Economics Building

**Phone:** 479-575-6288

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

**Research Project(s):** Human Development and Family Sciences

**Faculty Mentor:** Carole Chase

**Address:** 118 Home Economics Building

**Phone:** 479-575-7482

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

**Research Project(s):** Human Development and Family Sciences

**Faculty Mentor:** Christina Chi

**Address:** 118 Home Economics Building

**Phone:** 479-575-4688

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

**Research Project(s):** Food, Human Nutrition and Hospitality

**Faculty Mentor:** Mardel Crandall

**Address:** 118 Home Economics Building

**Phone:** 479-575-5224

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

**Research Project(s):** Human Development and Family Sciences

**Faculty Mentor:** Jennifer Dura

**Address:** 118 Home Economics Building

**Phone:** 479-575-7482

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

**Research Project(s):** Human Development and Family Sciences

**Faculty Mentor:** Frank Farmer  
**Address:** 224 Home Economics Building  
**Phone:** 479-575-2358  
**E-mail:** flfarmer@uark.edu  
**Research Project(s):** Demography, environmental and natural resource sociology, rural health, policy and program evaluation.

**Faculty Mentor:** 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:** Marie Gentry  
**Address:** 17 B Home Economics Building  
**Phone:** 479-575-2578  
**E-mail:** gmgentry@uark.edu  
**Research Project(s):** Effects of lighting and color in interior environments and critical assessments of luminous environments, behavioral and performance implications of lighting and other variables on the living environments of older adults.

**Faculty Mentor:** Lorna Harding  
**Address:** 118 Home Economics Building  
**Phone:** 479-575-4310  
**E-mail:** lehardi@uark.edu  
**Research Project(s):** Apparel Studies

**Faculty Mentor:** Timothy Killian  
**Address:** 212 Home Economics Building  
**Phone:** 479-575-72174  
**E-mail:** tkillian@uark.edu  
**Research Project(s):** Family care-giving to older persons, family diversity issues, adolescent risk-taking.

**Faculty Mentor:** Sue Martin  
**Address:** 104 Home Economics Building  
**Phone:** 479-575-4578  
**E-mail:** ssmartin@uark.edu  
**Research Project(s):** Quality child care, locus of control, self-concept and cognition, acquisition of science and math abilities in children, child guidance technique, distance education. Currently involved in a research study examining issues related to child care quality.

**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:** Cindy Moore  
**Address:** 105 Home Economics Building  
**Phone:** 479-575-2409  
**E-mail:** ckm001@uark.edu  
**Research Project(s):** Foods, Human Nutrition and Hospitality

**Faculty Mentor:** Allen Powell  
**Address:** 19 Carnall Hall  
**Phone:** 479-575-4689  
**E-mail:** apowell@uark.edu  
**Research Project(s):** Foods and nutrition

**Faculty Mentor:** Lona Robertson  
**Address:** 209 Home Economics Building  
**Phone:** 479-575-4579  
**E-mail:** ljrobert@uark.edu  
**Research Project(s):** Apparel Studies

**Faculty Mentor:** Haroon Sattar  
**Address:** 118 Home Economics Building  
**Phone:** 479-575-2576  
**E-mail:** hsattar@uark.edu  
**Research Project(s):** Interior Design

**Faculty Mentor:** Kathleen Smith  
**Address:** 213 Home Economics Building  
**Phone:** 479-575-2577  
**E-mail:** kasmith@uark.edu  
**Research Project(s):** Apparel Studies

**Faculty Mentor:** Susan Takigiku  
**Address:** 212A Home Economics Building  
**Phone:** 479-575-6369  
**E-mail:** susant@uark.edu  
**Research Project(s):** Substance abuse, parenting, family stress.

**Faculty Mentor:** M. Jean Turner, PhD.  
**Address:** 204 Home Economics Building  
**Phone:** 479-575-2209  
**E-mail:** jturner@uark.edu  
**Research Project(s):** My research focuses on family relationships across adulthood and how they impact well-being. I am involved in projects examining who provides care for older family members when they need it, why they help, and the overall impact on the individuals involved as well as other relationships in the family network. Currently, my primary research activity examines how intergenerational in-law relationships effect the individual and the couple relationship of both generations throughout adulthood.

**Faculty Mentor:** Catherine Wallack  
**Address:** 117 E Home Economics Building  
**Phone:** 479-575-7599  
**E-mail:** cwallack@uark.edu  
**Research Project(s):** Interior Design

**Faculty Mentor:** 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:** Kelly Way  
**Address:** 118 Home Economics Building  
**Phone:** 479-575-4310  
**E-mail:** kway@uark.edu  
**Research Project(s):** Food, Human Nutrition and Hospitality

**Faculty Mentor:** 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.

**Faculty Mentor:** Peggy Whan  
**Address:** 118 Home Economics Building  
**Phone:** 479-575-5129  
**E-mail:** whan@uark.edu  
**Research Project(s):** Economic value and household contribution of men and women, consumer specialization of children, home management practices in family-owned businesses.

**AFLS Unit:** Department of Plant Pathology

**Faculty Mentor:** James Correll  
**Address:** 217 Plant Science Building  
**Phone:** 479-575-2710  
**E-mail:** jcorrell@uark.edu

**Research Project(s):** My basic research efforts are on the genetics and population biology of plant pathogenic fungi. Pathogens of interest include *Pyricularia*, *Colletotrichum*, *Fusarium*, and *Verticillium* species, powdery mildew pathogens, *Peronospora farinosa* f. sp. *spinaciae*, and *Albugo occidentalis*. My applied interests have focused on managing diseases of various crops particularly vegetable crops and rice using Integrated Management Practices. My efforts have focused on the numerous disease management practices including resistance, cultural practices, and chemical and non-chemical methods of disease control.

**Faculty Mentor:** Ken Korth  
**Address:** 205 Rosen Alternative Pest Control Center  
**Phone:** 479-575-5191  
**Email:** 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:** Sung M. Lim  
**Address:** 217 Plant Science Building  
**Phone:** 479-575-2445  
**E-mail:** smlim@uark.edu  
**Research Project(s):** Conducted research on the genetics, physiology, and epidemiology of corn diseases. With colleagues, identified the susceptibility of Cms-T cytoplasm corn to *H. maydis* race T. Discovered that southern corn leaf blight involved a host-specific pathotoxin produced by *H. maydis*. Isolation of a phytoalexin produced in monogenic resistant corn infected with *H. turcicum*, the casual agent of northern corn leaf blight, provided the first evidence of a fungal-inhibitory chemical defense mechanism in monocotyledonous plants.

Conducted research on genetic and epidemiological aspects of foliar, pod, and seed diseases of soybean. Research on the epidemiology of brown spot, bacterial blight and pustule of soybeans, the genetics of resistance to these diseases, soybean mosaic virus, downy mildew, sudden death syndrome, and integrated soybean pest management has defined the economic importance of soybean diseases and has provided methods by which they can be managed most efficiently and economically.

**Faculty Mentor:** Gene Milus  
**Address:** 211 Plant Science Building  
**Phone:** 479-575-2676  
**E-mail:** 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:** Robert Robbins  
**Address:** 217 Plant Science Building  
**Phone:** 479-575-2555  
**E-mail:** rrobbin@uark.edu  
**Research Project(s):** My interests are in basic and applied research in plant parasitic nematodes. My applied interests include screening for resistance to the reniform nematode (*Rotylenchulus reniformis*) in soybean (*Glycines max*) cultivars and breeding lines and the investigation of possible sources of reniform nematode resistance in upland cotton (*Gossypium hirsutum*). I have also worked extensively with the soybean cyst nematode (*Heterodera glycines*).

My basic research is on the taxonomy of plant parasitic nematodes, with recent emphasis on the virus vectoring Longidoridae of the genera *Xiphinema* and *Longidorus* and presently on the family *Hoplolaimidae*. I use a combination of morphometric analyses, statistical comparisons, and biotechniques such as RFLP's and DNA sequencing.

**Faculty Mentor:** Craig Rothrock  
**Address:** 217 Plant Science Building  
**Phone:** 479-575-6687  
**E-mail:** rothrock@uark.edu  
**Research Project(s):** I conduct research on the ecology of soilborne plant pathogens and their control through chemical, cultural and alternative strategies. The research is directed toward developing sustainable cropping systems for cotton and other field crops. Current research activities include *Thielaviopsis basicola*, the cause of black root rot, and the synergistic interaction between *T. basicola* and nematode. Research is characterizing *Rhizoctonia solani* populations, anastomosis groups, in soils under different cropping systems in Arkansas. The importance of *Pythium* root rot in losses associated with temporary flooding for soybean and cool soil temperatures for rice is being investigated in cooperation other plant pathologists. Decision-aids for the application of in-furrow fungicides for the control of cotton seedling diseases are being developed.

**Faculty Mentor:** John Rupe  
**Address:** 217 Plant Science Building  
**Phone:** 479-575-2778  
**E-mail:** 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:** Nicholas B. Anthony  
**Address:** O-407 Poultry Science Building  
**Phone:** 479-575-4833  
**E-mail:** nanthony@uark.edu

**Research Project(s):** The study of growth and reproductive performance as influenced by selection for increased body weight. The utilization of Japanese quail as a model for studying the effects of timing of selection for increased body weight on growth and body composition. The use of total body electrical conductivity as a non-invasive means of measuring carcass composition in poultry.

**Faculty Mentor:** Walter Bottje  
**Address:** O-405 Poultry Science Building  
**Phone:** 479-575-3699  
**E-mail:** wbottje@uark.edu

**Research Project(s):** Current research focus is on the role that mitochondria play in the phenotypic expression of feed efficiency in broilers. This research has been supported by grants from USDA-NRI and Cobb-Vantress, Inc. (Siloam Springs, AR). Previous research emphasis was on the role of mitochondria in the pathophysiology of ascites (pulmonary hypertension syndrome).

**Faculty Mentor:** Keith Bramwell  
**Address:** O-207 Poultry Science Building  
**Phone:** 479-575-7036  
**E-mail:** bramwell@uark.edu

**Research Project(s):** Factors (both management and physiological) that influence fertility and embryonic mortality in broiler breeders. Specifically, he has been involved with studies on the effects of breeder flock age on the decline in fertility and sperm-egg interaction, hatchability and the associated increases in early embryonic mortality from a commercial perspective. Other areas of interest are related to hatching egg handling and storage and the effects on hatchability and embryo livability. His work will continue to focus on the various areas of the poultry industry as they relate to reproduction and hatchery management.

**Faculty Mentor:** David Chapman  
**Address:** O-311 Poultry Science Building  
**Phone:** 479-575-4870  
**E-mail:** dchapman@uark.edu

**Research Project(s):** Research program focuses on control of coccidiosis in the fowl.

**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:** Dan Donoghue  
**Address:** O-408 Poultry Science Building  
**Phone:** 479-575-2913  
**E-mail:** ddonogh@uark.edu  
**Research Project(s):** Preharvest intervention strategies to reduce foodborne colonization of poultry (e.g. Campylobacter and Salmonella) and developing predictive pharmacokinetic models of antibiotic and pesticide transfer in poultry. Also the potential interaction of veterinary drugs and pathogenic bacteria in the intestinal tract. The goal is to reduce the potential for drug and pesticide residues, and pathogens in poultry tissues.

**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:** 479-575-8664  
**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:** Frank Jones  
**Address:** O-204 Poultry Science Building  
**Phone:** 479-575-5443  
**E-mail:** ft@uark.edu  
**Research Project(s):** Research is focused on the areas of pre-harvest food safety, efficient production of high quality animal and poultry feed, prevention of mold growth and mycotoxin contamination in poultry feeds and the efficient processing, and cooling of commercial eggs.

**Faculty Mentor:** Wayne Kuenzel  
**Address:** O-403 Poultry Science Building  
**Phone:** 479-575-6112  
**E-mail:** wkuenzel@uark.edu  
**Research Project(s):** Research addresses the neural regulation of food intake and early sexual maturation.

**Faculty Mentor:** Byung-Whi Kong  
**Address:** O-404 Poultry Science Building  
**Phone:** 479-575-5494  
**E-mail:** bkong@uark.edu  
**Research Project(s):** Research interests focuses on the identification of functional factors for host-virus interactions using functional genomic approaches and the recombinant vaccine development for avian infectious viruses using reverse genetic technologies.

**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:** 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:** John Marcy  
**Address:** O-203 Poultry Science Building  
**Phone:** 479-575-2211  
**Email:** jmarcy@uark.edu  
**Research Project(s):** Research interests are poultry processing and product quality factors, meat microbiology and food safety.

**Faculty Mentor:** Casey Owens  
**Address:** O-209 Poultry Science Building  
**Phone:** 479-575-4281  
**Email:** cmowens@uark.edu  
**Research Project(s):** Research to evaluate the effects of preslaughter environmental conditions and processing techniques on muscle metabolism and meat quality of poultry. Focused on the development of pale, soft, exudative (PSE) meat in turkeys and the use of postmortem electrical stimulation in poultry. Current research focuses on the prevention, development, and improvement of PSE meat in turkeys and chickens.

**Faculty Mentor:** Michael Slavik  
**Address:** O-310 Poultry Science Building  
**Phone:** 479-575-4387  
**E-mail:** mslavik@uark.edu  
**Research Project(s):** Research is food safety with emphasis on developing methods to rapidly detect foodborne bacterial pathogens and finding methods to eliminate these pathogens from poultry and poultry products. Specifically, rapid methods research includes development of PCR assays, image processing analysis, immunoelectrochemical biosensors, flow cytometric assays, membrane-lift assays, and fluorescence immunoassay.

**Faculty Mentor:** Park Waldroup  
**Address:** O-210 Poultry Science Building  
**Phone:** 479-575-2065  
**E-mail:** waldroup@uark.edu  
**Research Project(s):** Research with broilers and turkeys to determine nutrient requirements and interactions, to evaluate new or modified feed ingredients, to compare feeding and management systems and to develop computer models to emulate growth and development of broilers and turkeys. Emphasis is placed on relationship of nutrition to carcass composition. In recent years, research has focused upon feeding and management of the large male broiler and upon nutrient requirements during the withdrawal period.

**Faculty Mentor:** Susan Watkins  
**Address:** O-114 Poultry Science Building  
**Phone:** 479-575-7902  
**E-mail:** swatkin@uark.edu  
**Research Project(s):** Provides the poultry industry with technical support in the areas of drinking water quality, litter management, litter treatments, facility sanitation and bedding material alternatives. Has conducted evaluations on the Bio-burner that has been developed as an alternative poultry floor sanitation procedure. Also conducts applied research evaluations for the industry in the areas of bird strain comparisons and new products used in poultry production.

**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.