Announcement and Prospectus

Department Head, Food Science Department, University of Arkansas, Dale Bumpers College and the Division of Agriculture
The University of Arkansas, Dale Bumpers College of Agricultural, Food, and Life Sciences and the Division of Agriculture invites applications and nominations for the position of Professor and Head, Department of Food Science.

The Department of Food Science is ranked fifth in the nation with a diverse faculty. We are a dynamic department, excelling in research, extension, teaching, and service.

**Job Description**

The University of Arkansas seeks an energetic individual to provide creative and exemplary leadership for the research, teaching, and extension programs for one of the top five Food Science Departments in the nation. The successful candidate will have opportunities to interface with leaders in one of the nation’s most diverse food and business environments where new business and entrepreneurial initiatives are strongly encouraged. The successful candidate will lead proactive efforts to strengthen ongoing, multi-disciplinary research programs in basic and applied food chemistry, food microbiology, food processing, food engineering, and human nutrition. The Department houses an IFT-approved undergraduate program with three concentrations as well as MS and PhD graduate programs. The University of Arkansas is located at Fayetteville, AR in the beautiful Ozark Mountains of Northwest Arkansas. Fayetteville ranked in the top-5 BEST places to live according to the US News and World Report in 2017. Additional information about the Food Science Department and programs is available at https://food-science.uark.edu/

**Responsibilities:**

Candidates must have a demonstrated record of excellence in food science or a closely related field. The candidate must have demonstrated effective leadership, management and communication with faculty, staff and students, as well as other leaders in national and international food science programs. The candidate will have demonstrated ability to work in teams and build programs. Duties include administratively and fiscally leading 12 diverse faculty programs, encouraging faculty development, coordination of extramural funding pursuits together with other university initiatives. The Department Head provides leadership for student recruitment and instruction in the Dale Bumpers College of Agricultural, Food, and Life Sciences and for research and outreach programs in the University of Arkansas System Division of Agriculture.

Fayetteville is a thriving community of 82,830 residents (2015 Census estimate). As the third largest city in Arkansas, Fayetteville provides all of the resources and advantages of a large city while maintaining a quality of life that remains true to its unique heritage. Fayetteville is the county seat of Washington County, Arkansas. One-of-a-kind shopping, historic neighborhoods, exciting nightlife, live local music and fine arts, a nationally-recognized public library, sporting events, community theater, and thousands of acres of park land for a wide range of play, including fishing and free concerts, Fayetteville has something for everyone. In addition to the exciting events in the city, Fayetteville's location in the beautiful Ozark Mountains—including our lakes, rivers, hiking and biking trails—provides wonderful scenic adventures for people who enjoy the outdoors.

With a thriving local economy, educated workforce, and loyal customer base, the number of jobs with in Fayetteville is consistently on the rise. Fayetteville is home to the flagship campus of The University of Arkansas, which has established itself as one of the top public research and academic institutions in the nation. Fayetteville Public Schools are Arkansas’s leaders in both academics and athletics. Mix everything together with 200-plus days of sunshine each year, and you’ll see why we are proud to call Fayetteville home, where life is great and the living is easy. https://www.fayetteville-ar.gov/902/About-Fayetteville
Our Resources

The Food Science Building located about 2 miles from the main campus has a total square footage of 47,000sqft. The complex houses 15 research laboratories, 15 instrumentation rooms, 18 faculty offices, 3 conference rooms (6, 8, and 16 seats), 3 graduate assistant offices capable of housing 42 students, 2 research staff offices capable of housing 20 researchers, a break/lunch room, an undergraduate computer lab, two classrooms (36 and 20 seats), a teaching lab (16 seats), two pilot plants (wet and dry, 6000sqft), a food innovation laboratory, a shop and a storage building.

Through internal and external grants and donations from industry, the food science faculty has been able to maintain well equipped laboratories. Matching funds provided by the Institute of Food Science & Engineering until 2008 played a major role in acquisition of research equipment by faculty and in the procurement of processing equipment for the pilot plant.

The two classrooms in the Food Science Building are equipped with modern technology (computer, internet connection, Elmo, projector, microphone and recording system (Echo 360) capable of recording classroom instruction and seminars).

Position Qualifications

The chair must have:

- An earned Doctorate in Food Sciences or a closely related discipline
- A record of outstanding scholarly achievement and professional activities related to teaching, research, extension, and/or industry that will qualify the individual to be a tenured full professor in the department
- Ability to direct an academic department engaged in teaching, research, and extension activities at a major land-grant university with faculty located throughout the state
- Demonstrated ability to direct interdisciplinary, grant funded fundamental science and applied research
- Ability to lead and manage multidisciplinary programs
- Effective administrative leadership and managerial skills in defining organizational objectives; developing strategic approaches to planning; managing human, fiscal, and physical resources; motivating people and developing effective teams; pursuing entrepreneurial opportunities; generating and managing grant funds in support of teaching, research, and extension; facilitating, mentoring, and retaining new faculty; and securing private funds
- Strong commitment to undergraduate and graduate student recruitment and retention for all academic programs in Food Science
- Demonstrated ability to interact well with students, faculty, staff, and administrators within the university, and external stakeholders at the state, federal, and international levels
- Effective leadership in outreach to industry and engagement with diverse groups
- Commitment to shared governance and fostering strong collaborations among faculty and to continued professional development for self, and faculty and staff
- Commitment to international programs
- Strong support and understanding of the mission of a land grant university
Our Department

The Department of Food Science is responsible for advancing knowledge and technology associated with the discipline of Food Science through effective education, research and outreach programs according to the Land Grant Mission of the University of Arkansas. The Department fosters programs for achieving regional, national and international recognition of excellence and advancing quality of life and professional development of Arkansans.

The Department of Food Science has twelve tenured/tenure-track faculty and three non-tenure track faculty member with full-time (12 month) research, extension and teaching appointments. Faculty and operational programs are assisted by 22 full-time support personnel employees. The total breakdown of FTEs is 2.1 for teaching, 11.0 for research and 0.9 for extension without counting the department head.

Food Science faculty and graduate student research programs are located off-campus at the Arkansas Agricultural Research and Extension Station. Microbiology facilities are located in the Biomass building. The Food Science building complex serves as the main facility for all other Department of Food Science faculty and graduate student research, and it contains the food processing pilot plant. Although the two buildings are two miles from campus they are within 1/2 mile of each other on the Experiment Station farm.

Food Science faculty have established very productive research programs involving microbial food safety, food chemistry, sensory analysis, processing and nutrition with foods originating from plant and animal sources important to Arkansas. All faculty members have been successful in securing external funding to support their research programs. Faculty members of the Department of Food Science are also affiliated scientists with the Institute of Food Science and Engineering, which has effectively stimulated food industry sponsored projects.

Our University

Founded in 1871 as a land grant institution, the University of Arkansas is classified by the Carnegie Foundation among the top two percent of universities in the nation with the highest level of research activity. Ten colleges and schools serve more than 26,700 students with more than 200 academic programs. University of Arkansas students earn nationally competitive awards at an impressive rate and represent 50 states and more than 120 countries.

Located in the stunning Ozark Mountains of Northwest Arkansas, Fayetteville is home to the University of Arkansas campus, known for its spectacular views and ample green spaces. Fayetteville is considered one of the country’s finest college towns, and the surrounding northwest Arkansas region is regularly ranked one of the best places to live in the U.S. Some of the nation’s best outdoor amenities and most spectacular hiking trails are within a short drive of campus.

As an employer, the University of Arkansas offers a vibrant work environment and a workplace culture that promotes a healthy work-life balance. The benefits package includes university contributions to health, dental, life and disability insurance, tuition waivers for employees and their families, 12 official holidays, immediate leave accrual, and a choice of retirement programs with university contributions ranging from 5 to 10% of employee salary.
The Center for Human Nutrition was established in 1993 as part of the Institute of Food Science & Engineering which is part of the Department of Food Science with the University of Arkansas System Division of Agriculture. The Center for Human Nutrition is a cross-campus initiative that brings together interdisciplinary faculty conducting nutrition research in the Division of Agriculture, University of Arkansas Fayetteville, and University of Arkansas for Medical Sciences Northwest.

Mission

The mission of the Center for Human Nutrition is to facilitate and enable interdisciplinary human nutrition research that improves health, productivity, and quality of life.

Goals

1. Develop resources to stimulate and support interdisciplinary nutrition research programs.
2. Enhance recognition of the Center of Human Nutrition’s research programs.
3. Translate nutrition research outcomes to stakeholders and communities.

Our Outreach

The Arkansas Food Innovation Center (AFIC) was established in 2013 on a trial basis to assist local food entrepreneurs in Northwest Arkansas. Since being inaugurated, AFIC has successfully assisted a range of clients from local farmers to entrepreneurs to nonprofit organizations. These efforts have not only aided numerous agricultural producers with product development and market expansion for their crops, but have also helped the community by preventing the waste of surplus crops. These activities have given the AFIC staff the opportunity to enhance their skills and capabilities to better assist local producers. https://afic.uark.edu/about/
Research

Research is a vital component of the Department of Food Science and benefits the food industry in Arkansas, the United States and around the world. As a part of the University of Arkansas System’s Division of Agriculture, the Department of Food Science produces research that supports the Division’s mission to “strengthen agriculture, communities, and families by connecting trusted research to the adoption of best practices.” Faculty in the Department of Food Science conduct research in the following areas:

**Food Chemistry & Biochemistry**
- Carbohydrate Chemistry
- Lipid Chemistry
- Protein Chemistry
- Fruit Program
- Functional Foods

**Food Processing & Engineering**
- Food Production Sustainability
- Grain Processing
- Rice Processing

**Sensory & Consumer Science**
- Chemosensory Perception
- Food Neuropsychophysiology
- Eating Behavior
- Sensory & Consumer Testing

**Nutritional Science**
- Energy Metabolism
- Gut Microbiome
- Metabolic Health
- Nutraceuticals

**Food Microbiology & Safety**
- Foodborne Pathogens
- Public Health
- Retail Food Safety

Division of Agriculture

As a land grant institution, the mission of the Division of Agriculture is to strengthen agriculture, communities and families by connecting trusted research to the adoption of best practices.

The University of Arkansas System Division embraces two parts of the historic land grant mission: the Arkansas Agricultural Station and the Cooperative Extension Service. In January, the Division dedicated the Don Tyson Center for Agricultural Sciences.

This state-of-the-art, LEED-certified building represents the new headquarters for the Agricultural Experiment Station, as well as offering a wing of much-needed new laboratory space, along with working spaces for graduate students.

The Division of Agriculture is grateful to the Tyson Family and the Tyson Foundation for its long support of our work.

**RESULTS**

Researchers show their rice demonstration plots to visitors at the 2014 Arkansas Rice Expo.
Our Faculty

Dr. Griffiths Atungulu: The focus of Dr. Atungulu’s research is to engineer effective strategies to maintain grain (rice, corn, soybean and grain-sorghum) quality and prevent mycotoxin development, especially in on-farm, in-bin drying and storage systems.

Specific points addressed in Dr. Atungulu’s research include:
1. Studying kinetics of grain quality degradation, mold growth, and mycotoxin development during on-farm, in-bin drying and storage of grains.
2. Determination of accurate EMC models for use in the new on-farm, in-bin drying and storage systems.
3. Use of mathematical modeling to optimize performance of the on-farm, in-bin grain drying and storage systems.
4. Development of novel techniques for detection, decontamination, and detoxification of harmful grain molds and mycotoxins.

Dr. Jamie I. Baum: Dr. Baum’s research addresses basic and applied research challenges related to dietary protein intake (e.g. protein source, quality, and quantity) and its impact on body composition, energy metabolism and metabolic health using a molecule-to-man approach.

Research Goals:
1. Determine the role of dietary protein in skeletal muscle energy metabolism.
2. Define the role of dietary protein in metabolic health throughout the lifecycle.
3. Disseminate research findings through cooperative extension.

Dr. Pamela Brady: Ph.D. - University of Tennessee, Knoxville (Food Science)
M.S. - University of Arkansas, Fayetteville (Horticultural Food Science)
B.S. - University of Arkansas, Fayetteville (Horticultural Food Science)

Our Faculty (Cont.)

Dr. Franck Carbonero: The focus of Dr. Carbonero’s research is the impact of diet on the gut microbiome and gut health, phylogenetic and functional diversity of gut microbes, biotransformation of macro and micronutrients by gut microbes and metabolomics.

Dr. Crandall's lab is currently working in 4 research areas: accommodations required by the food industry to use a “greying workforce”, wearable computer technology to train employees, willingness to pay for healthy food additives and Listeria in Viable but Non Culturable biofilms. This research is conducted with 8 graduate students, 3 of whom are Ph.D.'s and the MS students are all full-time employees. They have published 146 refereed articles. He has served as PI or CoPI on more than $3 million dollars in grant support. Phil is a 4th generation teacher and deeply cares about his students.

Dr. Kristen Gibson: is an Associate Professor in the Department of Food Science at the University of Arkansas. Her experience is primarily in the field of Environmental Health Sciences with a focus on microbial water quality and detection of viral pathogens in environmental matrices including food, water, and air. Kristen’s past and present research interests are primarily focused on understanding the fate and transport of pathogens within the environment, optimization of methods for the detection of viral pathogens in food and water and on environmental surfaces, and food safety at the retail and consumer level.

Ph.D.: Johns Hopkins Bloomberg School of Public Health – Environmental Health Sciences, 2010
B.S.: University of Central Florida – Microbiology and Molecular Biology, 2002
Dr. Luke Howard: The Functional Foods Program mission is to improve the awareness of the nutritional quality of fresh and processed plant-based foods. Our goal is to ultimately improve human nutrition through the improvement of existing products and development of new value-added products with disease-preventative and health-promoting benefits. The Research is supported by U.S. Department of Agriculture, Arkansas Biosciences Institute, Institute of Food Science and Engineering at University of Arkansas, Arkansas Division of Agriculture and food companies.

Dr. Sun-Ok Lee: The mission of the Nutrition and Dietary Phytochemicals Program at the University of Arkansas is designed to understand how dietary phytochemicals and bioactive components in foods and natural extracts exert human health benefits. Our goal is to bring forth significant and accurate conclusions about the role of functional foods and natural extracts on human health and provide science-based information important for public education.

Dr. Navam Hettiarachchy: My research program investigates production, structure-function properties of food proteins, proteomics, bioactive peptides, with a multidisciplinary integrated approach of phenolics and plant extracts as antioxidants, antimicrobials, as well as biofilms, and food safety. The overall goal is devoted to developing a better understanding and providing insight in developing and utilizing cutting edge tools and technologies to boost fundamental scientific advancements in the area of protein value addition to industry co-products specially oil seeds and cereals. In the course of development, within the same intellectual pursuit attempts are made to bridge the gap and translate this knowledge to practical purposes in developing innovative and creative food products for wellness and health, with a “nutraceutical trend” approach by teams of the undergraduate and graduate students competing and winning numerous first place national awards and becoming champions. Motivating and coaching teams of students with advanced knowledge in food science led to 11 regional and 2 national champions in IFT College Bowl competitions respectively. I take pride in student learning and their success. I am an IFT Fellow, and have over 500 refereed publications, presentations, 3 protein books co-edited, and 20 book chapters to my credit and hold 6 patents during my tenure at the U of A.
Dr. Ruben Morawicki: The mission of the Food Processing Program at the University of Arkansas is to develop the use of processing techniques to improve the long term sustainability of the food supply chain. As natural resources decline, the concept of sustainability will affect all areas of human activity, especially food production. Currently, food production operates as a linear open system that takes energy and materials from non-renewable resources along with water to produce food. Once these resources become less available, our capability to produce enough food for a growing population will be compromised. Our goal is to research low-environmental-impact technologies and new applications for byproducts and co-products of food industry, to make a more thorough use of resources and decrease the environmental impact of food processing.

Dr. Andrew Proctor: The mission of the Lipid Chemistry & Health Program at the University of Arkansas is to address basic/applied research problems related to food oils, fats and related products, including the development of lipid-based functional foods. The program vision is to be developing innovative research approaches to enhance the health promoting properties of vegetable oil products for use in food, feed and pharmaceutical applications.

Dr. Steven Ricke: The mission of the Food Safety and Foodborne Pathogens Program is to understand mechanisms of foodborne bacterial pathogen (Salmonella, Listeria, and Campylobacter) contamination at all phases of food production and develop a more integrated control effort. Our overall emphasis is on understanding foodborne pathogen growth, survival and pathogenesis. We are currently focusing on Salmonella physiology when grown under gastrointestinal and food processing conditions using a variety of molecular and genomic techniques to determine how metabolic responses overlap with virulence expression when Salmonella spp. become pathogenic. Specific issues we are pursuing include whether intervention treatments predispose Salmonella to be more resistant to particular antimicrobials and how these conditions might influence sustained pathogenesis. This research has implications not only for understanding persistence of Salmonella during food production, but addresses practical issues regarding the choices of antimicrobials as intervention steps.

Dr. Han-Seok Seo is an Associate Professor of Sensory Science and the Director of the University of Arkansas Sensory Service Center providing a full service of sensory and consumer sciences to the food and non-food industries. Dr. Seo is a sensory scientist who combines a wide spectrum of backgrounds and skills in areas that include crop science (B.A.), functionality and processing (M.S.), sensory science (Ph.D.), medical and neuroscience (Dr.rer.med and Post-Doc.), and human ergonomics (Post-Doc.) contributing to improved quality of life and wellness through healthy and joyful eating behavior. The primary goal of the Sensory and Consumer Science Program is to conduct basic and applied research aimed toward a better understanding of multisensory interaction from four different perspectives: 1) within food and non-food products, 2) between humans, 3) under environmental contexts, and 4) behaviors in everyday life.
Dr. Terry Siebenmorgen: Earned his bachelor’s degree in engineering from the University of Arkansas, his master’s degree from Purdue University, and his Ph.D. from the University of Nebraska. Siebenmorgen joined the University of Arkansas faculty in 1984 as a food engineer in the Department of Biological and Agricultural Engineering. He transitioned to the Department of Food Science in 1999, serving two years as the interim department head, before returning to his duties as a faculty member. Siebenmorgen achieved the rank of Distinguished Professor in 2015. His research focuses on factors that affect rice quality during drying and milling.

Siebenmorgen serves as the Director of the University of Arkansas Rice Processing Program, a multi-disciplinary program that serves the U.S. and global rice industry. Since 1994, when the Rice Processing Program was created with input from a core group of industry supporters, Siebenmorgen has grown the program to include more than a dozen sponsors who annually contribute to the program. The Rice Processing Program faculty conduct research that encompasses pre-harvest property characterization, drying, storage, milling, end-use processing and sensory analysis. Each year, more than 100 sponsors, researchers and guests assemble for the program’s Industry Alliance Meeting to learn about current research in the area of rice processing and openly discuss current industry issues.

Dr. Renee Threlfall: is a Research Scientist at the University of Arkansas, Fayetteville. Her research efforts at the Department of Food Science are focused on specialty crops with expertise in enology and viticulture, as well as processing, postharvest evaluation and sensory analysis of fruits (grapes, blackberries, strawberries, peaches, etc.). She teaches an introduction teaches ecology, and viticulture class, Uncorked: Vines to Wines, each fall and wine production in other Food Science classes. In addition, she assists with implementing the mission of the Arkansas Food Innovation Center.

Dr. Ya-Jane Wang: The Carbohydrate Chemistry Program at the University of Arkansas is to address basic and applied research challenges related to carbohydrates. Our vision is to be the leader in graduate education and conduct original research to enhance utilization and performance of carbohydrate-rich bio- resources in a variety of food, pharmaceutical and industrial applications.

To learn more about our department and faculty, please visit https://food-science.uark.edu/about-us.php