DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

UNIVERSITY OF ARKANSAS
Dale Bumpers College of Agricultural, Food & Life Sciences
Poultry Science

PARTNERS

A newsletter for faculty, staff, students, alumni, donors, industry and friends of the Center of Excellence for Poultry Science at the University of Arkansas

July 2020

COVID-19 Update

– Dr. David Caldwell –

Greetings:

I hope this finds you safe and well. Since the distribution of the of the last edition of Partners, the majority of our faculty, staff, and students continue to function in a telecommuting mode of operations. On June 22, 2020, we began to bring a number of essential, mission critical, and time-sensitive research projects back online. This transition has been accomplished by strictly following all necessary mitigation strategies to limit the spread of Coronavirus Disease 2019 (COVID-19). Back in May, the administration for the University of Arkansas and the U of A System Division of Agriculture published a plan for the initial stages of reopening the university and division facilities. This plan, which involves risk assessment and specific planning to ensure the safety and welfare of all personnel and students, will be implemented across four specific phases or stages. We are currently in Stage 2 of this reopen plan. We were prepared to move into Stage 3 of this plan on Monday, July 13, 2020, however, in light of the degree of infection spread in the communities of NW Arkansas, a decision was made to delay progression into the next stage of reopening. We all feel strongly that the leadership of the college and division acted appropriately in this regard and we will await further guidance before resumption of additional mission critical activities.

Currently, all educational and outreach activities performed by our departmental faculty, staff, and students, are being conducted remotely. Business office, HR, and other administrative functions are also being overseen by our personnel working from home. As briefly described above, we have begun to phase in additional essential or critical research activities led by our research active faculty. These projects have been safely conducted according to administratively approved plans for risk assessment and worker safety. Essential activities and functions, including animal care or husbandry at our research farm, have continued and will continue without interruption.

I am pleased to report all of our faculty, staff, and students continue to strictly adhere to CDC guidelines for social distancing in the workplace. We

feel our faculty, staff, and students are taking all necessary precautions to keep themselves and their families safe during these challenging times. I will continue to provide updates with each edition of Partners we distribute.

I hope you enjoy this edition of Partners. If you have any suggestions for improving the delivery of this newsletter or its content, please let me know directly.

Until next time, stay safe, and stay well.

Kindest regards,
David J. Caldwell, Ph.D.

USPOULTRY grant funds animal welfare research for Tyson Foods, Division of Ag

The U.S. Poultry and Egg Association awarded a $110,000 grant through its USPOULTRY Foundation to fund research addressing animal welfare in commercial broiler farms.

The research, “Effect of Variable Light Intensity Program on Broiler Gait Score, Stress and Central Positive Welfare in Commercial Broiler Farm”, is a joint project of the University of Arkansas System Division of Agriculture and Tyson Foods.

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SPOTLIGHT ON

USDA-ARS/Fayetteville

One of the cornerstones of the Center of Excellence for Poultry Science is the integration of the USDA, Agriculture Research Service, Poultry Production and Product Safety Research Unit within the Center. ARS scientists provide long-term, fundamental and applied research focusing on critical issues of the poultry industry; with extensive partnerships with the research faculty and extension personnel within the Center, University/Division and in other university, state, and national programs.The Poultry Production and Product Safety Research Unit investigates ways to reduce the impact of poultry production problems in turkeys and broilers, ensure a wholesome product for the consumer, and reduce the negative environmental impact of poultry production. Unique to the program is a focus on organic and sustainable approaches to poultry production, control of airborne emissions in poultry houses, and developing environmentally friendly management of poultry litter. Scientists share graduate students, post-doctoral fellows and visiting scientists as part of this research partnership within the Center.

Research impact includes demonstration of effective phytochemicals and novel probiotics as alternatives to antibiotic use by the poultry industry, several of which are patented and licensed with Center faculty. New research strategies are focused on novel vaccine development against Salmonella and Campylobacter, investigating the gut-microbiota-brain axis in poultry in an effort to develop tools for pathogen reduction and investigating insect meals as a sustainable feed ingredient. One example of our collaboration is the recently funded project with University of Connecticut. As partners in this $10M Sustainable Agricultural Systems Grant, AFRI, USDA project we will be working collectively to promote sustainability of broiler production. The grant titled Systems-based

Integrated Program for Enhancing the Sustainability of Antibiotic-restricted Poultry Production focuses on enhancing broiler production sustainability by improving bird health, human health and environmental health, and increasing consumer acceptability and economic returns to farmers. Dr. Sami Dridi, POSC faculty member will head up the research to mitigate heat stress and improve bird well-being; Dr. Komala Arsi, POSC and Dr. Annie Donoghue ARS will focus on on-farm reduction of foodborne pathogens through phytochemicals and development of novel insect meals. Drs. Philip Moore, Amanda Ashworth and Josh Lyte all ARS will focus on ammonia control products to improve litter and air quality and bird welfare. Sarah Bramall, POSC will work with the team to develop and teach a sustainable poultry course. This is a five-year project that includes partnerships with two other ARS units and ten other universities across the US.

Faculty Highlight

Dr. Sami Dridi,
Avian endocrinology
and molecular genetics

Dr. Dridi earned his Ph.D. at The National Polytechnic Institute of Lorraine (INPL) and National Institute of Agricultural Research (INRA), France. He completed several postdoctoral research positions at different national and international laboratories such as WVU, UK, and Chapel Hill. Dr. Dridi serves as a professor of Avian Endocrinology & Molecular Genetics

Student Highlight

Antonio Beitia,
Recent poultry science graduate,
Ph.D. in Poultry Nutrition

Antonio Beitia was born and raised on a 4th generation family farm north of Panama, in the province of Chiriquí. A place which is rich in agriculture, hard-working people, joyful people, great traditional food, and dreamlike sceneries. Passion and pride for agriculture were embedded in him for as long as he can remember. Early in his life, he was able to realize the vital role of

in the department of Poultry Science at the University of Arkansas.

By using integrative physiological studies and Top-down/Bottom-up molecular approaches, Dr. Dridi's research focuses on defining the mechanisms involved in heat stress responses, metabolic disorders mainly muscle myopathy and lameness, as well as the regulation of energy homeostasis in poultry. His long-term goal is to identify key molecular signatures and bring both fundamental understanding as well as effective practical solutions to ongoing problems for poultry welfare and production sustainability. His research is supported by both industry and government funding. He is thankful to his team and talented students as well as to his colleagues and collaborators at the national and international levels.

agriculture in the fight against hunger and for the success of a country.

Antonio began his journey when he choose to leave his home country of Panama and travel to the United States as a foreign exchange student in 2010. He was blessed to have a host family that allowed him to magnify his passion for furthering his education. In 2011, he became part of the Crowder College family, a place that, until this day, he holds very close to his heart. It was here where his dreams started to take shape. He earned an Associated in Agriculture from Crowder College in December of 2012. After Crowder, he was recruited by Gary Davis and Dr. Kidd to attended the University of Arkansas. To this day, Antonio says he remembers Dr. Kidd saying, "The sky is the limit in the poultry industry."

In 2014 Antonio earned a bachelor's in Poultry Science and a Masters's in Agriculture Economics in 2017. Throughout his time in Arkansas, he was able to be a Co-founder of Agro-Panama International, which connects agriculture in the United States and Panama. He also served in many leadership positions while being part of the Center of Excellence for Poultry Science. Recently, he completed his Ph.D. in Poultry Nutrition at the University of Arkansas under the supervision of Dr. Craig Coon. His research focused on understanding different nutritional strategies for feeding broiler breeders and their effects on hen and progeny performance. Most recently, he has relocated to Huntsville, AL, to join the Aviagen family as a nutritionist under the Technical Development Program. This program allows him to rotate through strategic business operations, which allows unique access to Aviagen and the entire Global Supply chain.