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Animal Science E-Newsletter, October 2019

University of Arkansas, Fayetteville. Department of Animal Sciences

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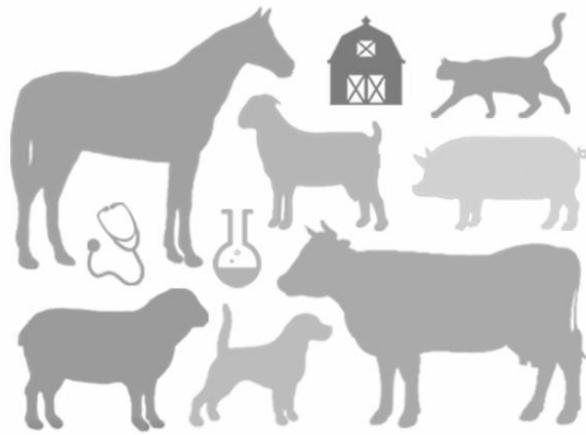
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October 2019



Animal Science Faculty Receive USDA Grant

A team of Animal Science faculty were recently awarded a \$400,000 grant by the USDA National Institute of Food Agriculture to study the respiratory microbiome and metatranscriptome of beef cattle and their influences on bovine respiratory disease (BRD).

The four-year study, which focuses on what is widely considered the most common and costly disease facing beef producers, will have work conducted across multiple Arkansas Agriculture Experiment Stations in Batesville, Savoy and Hope. The group, consisting of Jiangchao Zhao, Beth Kegley, Jeremy Powell, Jung Ae Lee-Bartlett,

John Richeson (West Texas A&M University) and Sarah Capik (Texas A&M AgriLife Research), looks to use the grant money to validate their study.



“This funding is very exciting and timely,” said Zhao. “It will allow our strong interdisciplinary team to investigate the correlations between the bovine respiratory microbiome and BRD with a longitudinal design and multi-location cross-validation.”

Through this research, Zhao and the group hope to validate their study and allow their findings to be used to help predict BRD in calves using the samples obtained from the nasal swabs. The results of these nasal samples could lead directly towards helping beef cattle producers save money and maintain a healthier stock overall. For example, a young calf whose nasal swab comes back clean would not need to be exposed to expensive BRD treatments. However, if a calf’s nasal swab is showing predictive signs of BRD, then it could be diagnosed and treated heavily at a very young age, thus greatly increasing its likelihood of growing up healthier.

“We hope to develop an accurate panel of nasal microbiome biomarkers that could be used to predict and diagnose the onset of BRD with a fast and non-invasive nasal swab sampling method,” said Zhao. “We would also better understand the pathobiology of BRD and hopefully identify some probiotics that could be used to prevent and/or treat BRD to reduce the cost and load of antibiotic treatment.”

This is a four-year project starting from August 1, 2019 to July 31, 2023, with two animal trials for two consecutive years (180 cattle each year). This large animal study with a longitudinal design, multi-location and multi-year cross-validation is expected to have a big impact on the beef cattle industry. }

Equine Judging Team Travels to

Missouri for Practice Contest



The University of Arkansas equine judging team traveled to Carthage, Missouri on October 4 to participate in a practice event in preparation for the National Cutting Horse Association (NCHA) collegiate contest held in December.

The students were given the opportunity to judge live cutting horses and discuss penalties, run scores, and other judging aspects with an approved NCHA official judge. After each division, the judge compared scores and placings of each horse with the students' scores and placings.

The invaluable experience gained from this practice event will help drive the students towards reaching their ultimate goal of winning the 2019 NCHA Judging Contest, which is held in Fort Worth, Texas on December 6 and 7.

Pictured from L-R: Paige Williams, Eva Short, Laurel Dhority }

Animal Science Participates in Bumpers College FFA Tailgate

The Department of Animal Science set up an informational table and participated in the Bumpers College FFA Tailgate prior to the Razorback's home football game against San Jose State on Saturday, September 21.

The tailgate featured informational tables and activities from every Bumpers College academic department, along with games and displays from various clubs and organizations. Food, drinks and snacks were also provided to the large group of FFA members in attendance.}



Agricultural Research and Extension Center Marks Centennial with Renaming Dedication

For 100 years, the Arkansas Agricultural Research and Extension Center has been a center of innovation in agriculture and food research. The center's centennial was celebrated Friday, October 11 by renaming it in honor of the late Milo J. Shult, who served 19 years as vice president for agriculture for the University of Arkansas System, Division of Agriculture.

The Milo J. Shult Agricultural Research and Extension Center (SAREC) is the main research complex for the Division of Agriculture. Through multiple land acquisitions, SAREC has grown from 423 acres to 725 acres, and is centrally located just minutes away from the University of Arkansas, Fayetteville campus. Continuing a long tradition of scientific excellence, faculty and staff of SAREC today pursue research discoveries in every experiment station discipline and work closely with the Cooperative Extension Service to deliver the resulting science and expertise to the public.

The Washington County Cooperative Extension Office, Pauline Whitaker Animal Science Center, and the Dorothy E. King Equine Pavilion also are located at the SAREC. To view the centennial video and learn more about the SAREC, visit [https://aaes.uark.edu/sarec-100-celebration/.](https://aaes.uark.edu/sarec-100-celebration/)}

