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Animal Science E-Newsletter, January 2019

University of Arkansas, Fayetteville. Department of Animal Sciences

Animal Science E-Newsletter

January/February 2019

Club Creates Award for Outstanding Members

The Arkansas Animal Science Pre-Vet club officers have come together to create a new award. The award will be given to outstanding members of the Pre-Vet club, and will carry a monetary value of up to $500. The club will honor the recipients at the Department's annual scholarship and awards banquet in April. Requirements to apply for the award include: a GPA of 3.0 or higher; and being a member of the University of Arkansas Pre-Vet club. If interested in applying, please see Khalisa Kitz in AFLS B110. Applications are due to Khalisa by no later than March 1 at 3:00 p.m.

Animal Science Undergraduates Place First, Second in Competition

Animal Science undergraduate students Sophia Landers and Erin Davis both presented their honors research thesis work at the American Society of Animal Science (ASAS) Southern Section meeting. The annual meeting was held in Oklahoma City January 27 – 29. ASAS invited both ladies to present their research in two formats. The first presentation was a single slide with a three-minute time limit, and the second presentation was a 12-minute presentation. Landers placed first and Davis placed second in a fantastic representation of a University of Arkansas Department of Animal Science honors student.

Landers presented an abstract regarding research conducted to determine the efficacy of extended-release eprinomectin for the reduction of horn flies, face flies and fecal egg counts of parasitic nematodes in replacement beef heifers. "I was absolutely terrified," Landers said. "Not about the competition, but more about sharing the information with my peers." She had a lot of help in preparing for her presentation, Drs. Tom Yazwinski and Jeremy Powell (who make up her honors thesis committee); as well as Chris Tucker, program technician and Eva Wray, PhD candidate helped. "They went out of their way to

help with whatever I needed," stated Landers. "They really helped me make scientific jargon sound like normal facts. Her presentation comes after Landers spent her summer collecting and analyzing samples from Dr. Yazwinski's plots at the Division of Agriculture Physiology farm.

"Relationships among circulating prolactin concentrations, hair coat score, and weights of grazing cows," is Davis' honors thesis she presented at the meeting. When Davis began trying to find a honors project, she was directed to Dr. Charles Rosenkrans and got excited about what he had to offer. "I had Dr. Rosenkrans as a professor for Animal Physiology I, so it was really wonderful being able to work with him and reinforce what I learned in his course with some of the hormonal aspects of the research," Davis explained. "One of the most incredible aspects of this experience has been how much I have been able to learn along the way," She picked up many new lab techniques, and in writing her proposal did a substantial amount of reading and research which allowed her to understand much more of the science behind what is being studied. "Competing in the ASAS competition really reinforced and highlighted that for me. I was so nervous about the question portion following my presentation, but as questions began being asked, I realized that I understand the project inside and out, which is a really incredible feeling," she said.

Landers would encourage any of her fellow students to do undergraduate research. "Take a chance on something you know nothing about to learn something new. Don't be intimidated, ask around and be interested in your research. Afterall, you are going to be spending a lot of hours working on it," she said.

Landers is originally from Dallas, Texas, and Davis is from Sheridan, Arkansas both plan to apply to veterinary school upon graduation from the U of A. }

ANSC Faculty Awarded Animal Health Funds

Drs. Beth Kegley and Jiangchao Zhao both received animal health awards from the University of Arkansas Division of Agriculture, Agricultural Experiment Station. The awards, worth $15,000 each, are for individual projects the faculty are about to begin.

Kegley's project is titled 'Determining nasal, oral and ocular bacterial community relationship with infectious keratoconjunctivitis cattle'; and Zhao's is 'Identification of bovine respiratory microbiome biomarkers for the onset of bovine respiratory diseases'. }

Jogan Honored with Service Learning Teaching Award

Kathi Jogan, was named the recipient of the 2018-2019 Outstanding Contribution

to Service Learning Teaching Award. The Service Learning Initiative Committee recognized the extraordinary commitment and accomplishments of Jogan through her service learning course Equine Assisted Activities and Therapy (EAAT).

At the award ceremony on Jan. 28, Dr. Deacue Fields, Dean of the Dale Bumpers College of Agriculture, Food and Life Sciences, echoed comments by faculty and staff in Bumpers College, and stated that Jogan is an “extremely hard worker,” “always student focused,” and “always seeking ways to improve.” He added that Jogan is constantly making sure that her students have great experience. Ken Coffey, professor and undergraduate program coordinator in the Department of Animal Science, added “amazing” to the list of ways to describe Dr. Jogan. He recalled recommending Jogan’s course to his advisee last year, and at the end of the semester, she wrote a note to him expressing how Jogan’s class had opened up her mind and changed her life.

For her EAAT course, she has partnered with local non-profit EAAT agencies where students can learn and apply their newfound skills. By integrating service learning into her course, Jogan not only demonstrates how behavioral health for individuals with emotional and physical disabilities could be promoted through horse therapy but also helps build students’ character through volunteerism and meaningful community service.
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The Service Learning Initiative is a joint initiative of the University of Arkansas Provost Office and the Honors College with the purpose of formalizing and expanding service learning opportunities on campus. Since 2014, when the Initiative was launched, more than 150 courses have been designated as service learning.

Research Highlight: New Equipment

The department’s research labs are getting an upgrade. Several new pieces of equipment have found their way to our labs in recent weeks.

First, the department has replaced an autoclave that had been used since the 1950s after it was deemed unsafe to be used. The new autoclave will be used to sterilize equipment and media for use in research programs. In addition, all biological waste generated by research projects must be autoclaved before it is disposed of. Most faculty in the department will use the autoclave, funds to purchase this new equipment were provided by the Agricultural Experiment Station, the Honors College, the Department of Animal Science, and individual faculty members’.

Also new to our labs, is a Beckman Coulter CytoFLEX Flow Cytometer. Funded jointly by the Division of Agriculture, the Department of Animal Science and individual faculty; this system is capable of analyzing thousands of cells in a few seconds. Flow cytometry uses fluorescent probes alone or in conjunction with antibodies to detect and characterize cell populations. It is an instrument that is used across multiple areas of research in various ways including: reproduction, microbiology and immunology and hematology. In reproduction, it can be used to determine the percentage of viable and non-viable sperm, oxidative stress, abnormal DNA content, acrosome and sperm membrane integrity, and mitochondrial function. These sperm viability tests are applicable to all

mammals. In microbiology, it allows for rapid detection of single or multiple microbes and their distribution in a population. It can identify and quantify different blood cell populations in an immunology and hematology study.

Lastly, through a collaboration of the office of the University of Arkansas Vice Chancellor for Research, the Agricultural Experiment Station, the departments of Poultry Science and Animal Science, and several individual faculty members, funds have been raised to purchase a new Gamma Counter that will remain housed in the department. (For several years, the only Gamma Counter on the Fayetteville campus has been housed in Animal Science.) It will primarily be used to read radioimmunoassays, which are sensitive methods of analyzing hormones and other biological metabolites. Dr. Charles Looney intends to be the most frequent user of this instrument from the Department of Animal Science, analyzing cattle serum for reproductive hormones. Drs. Jeremy Powell and Beth Kegley will also use it to measure testosterone, cortisol, and insulin concentrations in cattle on various research projects.

A HUGE thank you to Drs. Kegley and Rorie for taking point on the procurement of this new equipment. }

DIVISION OF AGRICULTURE
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FARM BUREAU ARKANSAS

2019

Current Issues and Advances in Food Animal Wellbeing Forum

Thursday, March 28, 2019 | Hughes Center, 1000 E. Parkway Ave., Russellville

9:00 a.m. to 2:00 p.m. | $25 registration includes lunch

Topics Include

- **Recent Events Impacting Beef Production** | Dr. Jacob Hagenmaier, Elanco Animal Health
- **Animal Wellbeing and Health Interactions** | Dr. Janeen Salak-Johnson, Oklahoma State University
- **Impact of Labor Issues on Livestock Welfare** | Dr. Courtney Daigle, Texas A&M University
- **How Beef QualityAssurance (BQA) Impacts Animal Wellbeing** | Chase DeCoite, NCBA
- **Using Audits to Build Bridges** | Dr. Karen Christensen, Tyson Foods

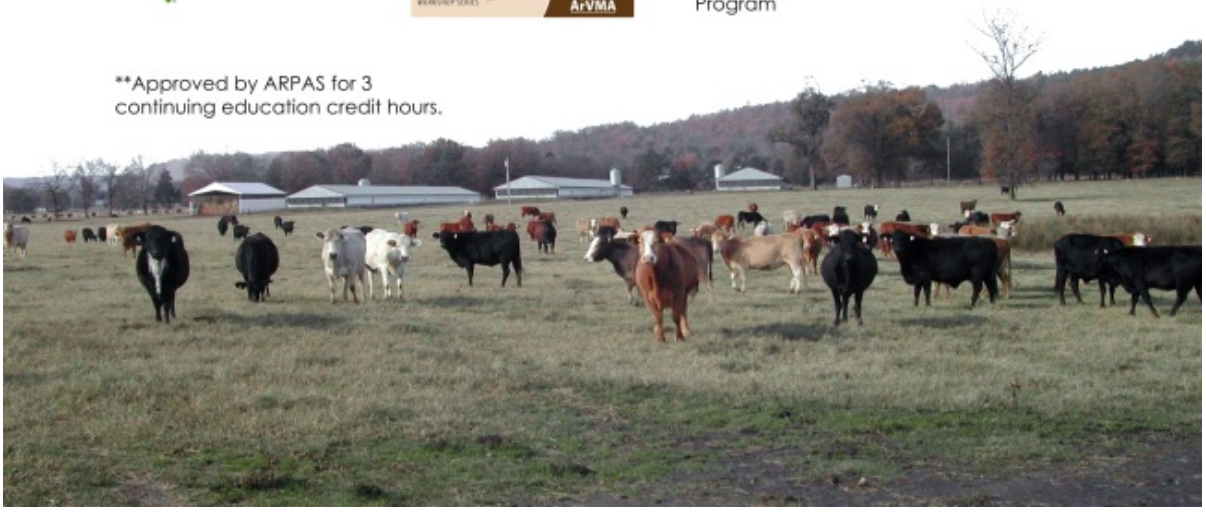
In Cooperation with:

FARM CREDIT

FOOD ANIMAL MEDICINE WORKSHOP SERIES — UofA — ArVMA

Animal Science
King Visiting Scholar
Program

**Approved by ARPAS for 3 continuing education credit hours.



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