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ADS Equine Graduate Student Carter Clark assisting incoming freshmen during a horse grooming demonstration during the 2020 Academic Insight Tours.



MISSISSIPPI STATE UNIVERSITY™
DEPARTMENT OF ANIMAL
AND DAIRY SCIENCES



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ADS FACULTY/STAFF ADAPT TO COVID-19

During the challenging times of the COVID-19 (Coronavirus) pandemic, the faculty and staff of the Department of Animal and Dairy Sciences are working diligently to push forward. Our department is moving through the process of putting all classes and laboratories online for undergraduate and graduate students.

In addition, the advising period has started, and faculty are providing guidance to students in non-traditional ways. Many are overcoming these challenges while working from home and caring for their own family. To stay connected and informed while working remotely, faculty are meeting and sharing ideas using Microsoft Teams and other interactive social platforms.

To learn about ways to prevent the spread of this illness, visit the website for Mississippi State University Extension where tips can be reviewed along with resources and videos - <https://extension.msstate.edu/food-and-health/health/coronavirus>.



**MISSISSIPPI STATE UNIVERSITY™
EXTENSION**

ADS FACULTY ELECTED TO ROBERT HOLLAND FACULTY SENATE AT MSU

**Representatives of the College of Agriculture and Life
Sciences and the Mississippi Agriculture and Forestry
Experiment Stations:**



Dr. Thu Dinh



Dr. Erdogan Memili

Representative of MSU Extension:



Dr. Amanda Stone

Submitted by Dr. Erdogan Memili

EQUINE CLUBS FUNDRAISE AT DIXIE NATIONALS

The Mississippi State University Horseman's Association and Eventing Team spent the weekend at the Dixie National Quarter Horse Show in Jackson, MS, working to raise funds for the two organizations.

Horseman's Association President Jill Hudnall fundraising at Dixie Nationals



The Dixie National Quarter Horse Show is sponsored by the Mississippi Quarter Horse Association (MQHA), which worked with the two clubs by sponsoring a booth for the clubs' fundraising activities at the Dixie Nationals Equine Expo during the show.

The clubs utilized their booth to sell t-shirts and to raffle a basket filled with club t-shirts and horse equipment. Raffle tickets were \$5, and the club announced a winner at the end of the show.

The clubs' fundraising activities are focused on sponsoring a trip for the club members. Both clubs plan to work at other horse shows later this semester by helping various breed associations with show activities as they work to continue fundraising efforts. For individuals interested in learning more about the two equine clubs, they can contact the clubs' advisor, Dr. Molly Nicodemus, at mnicodemus@ads.msstate.edu.

Submitted by Dr. Molly Nicodemus

STUDENTS ENGAGE IN ANIMAL SHELTERS

Students in ADS 2221 Companion Animal Laboratory enjoyed an afternoon last week touring the Oktibbeha County Animal Shelter in Starkville, MS, learning about shelter management and all the animals in the shelter. Students met with the shelter manager, Ms. Sarah Akins, and her staff to tour the various rooms of the shelter, including the new additions to the facility. During the tour, Ms. Akins discussed aspects of managing a shelter, including grant funding, fostering and adopting animals, and the necessity of volunteers. Students got to meet and interact with the animals of the shelter while learning about the steps involved in the adoption process.

To get hands-on experience with shelter management, ADS 2221 students are getting the opportunity to volunteer at the Louisville Animal Shelter in Louisville, MS. They will be assisting with a Louisville Animal Shelter fundraiser - helping to sell Avon products. This is the second year the course has assisted with shelter activities such as caring for the shelter animals and fundraising efforts. For individuals interested in learning more about the course or the students' fundraising activities for the Louisville Animal Shelter, they can contact course instructor Dr. Molly Nicodemus at mnicodemus@ads.msstate.edu.



**ADS 2221
students tour
the cat room
at the
Oktibbeha
County
Animal
Shelter.**

Submitted by Dr. Molly Nicodemus

DR. LIAO DELIVERS INVITED TALK

A Mississippi based grain company, Express Grain Terminals, LLC, invited Dr. Shengfa Liao from the ADS department to speak at their Greenwood Oil Mill on February 6th. The topic was about the nutrition and quality of soybean meal, and Dr. Liao's presentation title was *"An Overview on the Nutrition and Quality of Soybean Meal as a Feed Ingredient for Domestic Animals."* Express Grain, headquartered in Greenwood, MS, is a family-owned and operated agricultural processing and marketing company mainly serving the Mississippi Delta region. The company processes corn, wheat, soybeans, and sorghum through its elevator facilities for the region. More details about the company can be found at <https://www.expressgrain.com/index.php>.



Submitted by Shamimul Hasan

STUDENTS LEARN ABOUT ANIMAL RESCUES

Students in ADS 2221 Companion Animal Laboratory dedicated time to study animal rescues and sanctuaries. As a part of their discussion, students got a chance to tour the Golden Triangle Regional Horse Rescue in West Point, MS ADS 2221 students met with board member Narsis Whigham of the GTR Horse Rescue to learn about managing an animal rescue and how a rescue impacts the community. Students also found out about the volunteer and adoption

ADS 2221 student meeting a horse at the GTR Horse Rescue



ADS 2221 Students with Board Member Narsis Whigham touring the GTR Horse Rescue.

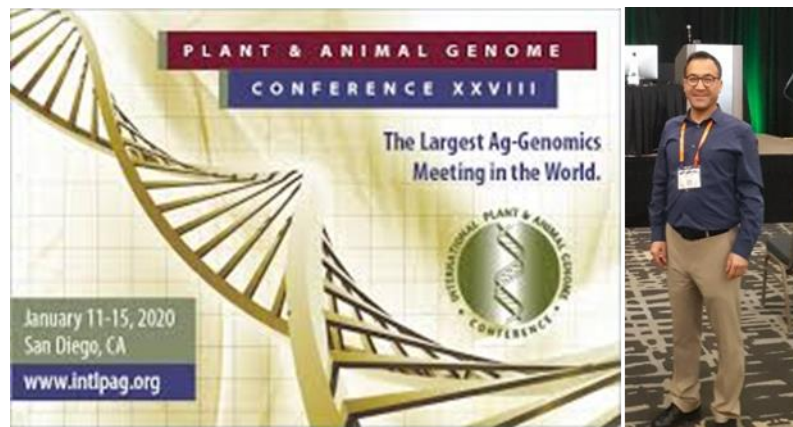


opportunities at the rescue. Students were able to interact with the rescued horses, discovering firsthand the special needs of a rescued animal. The laboratory course is taught by Dr. Molly Nicodemus and graduate teaching assistant Madison Hardcastle. Individuals interested in hearing more about ADS 2221 can contact Dr. Nicodemus at mnicodemus@ads.msstate.edu.

Submitted by Dr. Molly Nicodemus

DR. MEMILI SERVES FOR SCIENCE AND SOCIETY

In January 2020, Dr. Erdogan Memili attended the International Plant and Animal Genome (PAG; <https://www.intlpag.org/>) conference in San Diego, CA, where he served as co-organizer for the Cattle/Sheep/Goat sessions and gave a presentation “Uncovering Sperm Biomarkers of Bull Fertility Using Multiomic Approaches” in the session on Sunday, January 12th. He also participated to the multi-state project, National Animal Genome Resource (NRSP 8). Dr. Memili is the co-chair for next year’s Cattle/Sheep/Goat sessions at the PAG.



In February 2020, Dr. Memili attended the annual meeting of the American Association for Advancement of Science (AAAS; <https://www.aaas.org/>) in Seattle, WA, where he served as a judge for poster presentations in the areas of developmental biology, genetics, and immunology.



Submitted by Dr. Erdogan Memili

STUDENTS VOLUNTEER AT DIXIE NATIONALS



ADS 3221 Students working at the 2020 Dixie National Quarter Horse Show.

The students enrolled in ADS 3221: Practices in Horse Care & Management, got the opportunity to work at the Mississippi Quarter Horse Show at Dixie Nationals in Jackson, MS in February. The students got to volunteer working various aspects of the show at both the Coliseum and the Equine Center. The students helped various horse professionals as they put on the South's largest Quarter Horse show.

Students worked throughout the weeklong show with announcers, judges, and show management learning firsthand about the

different aspects of the horse show. MQHA sponsored hotel rooms and meals for the students during the show. These activities were a part of the service-learning component of the course. Later in this semester, students will assist with other horse shows by working with various breed associations within the state. The course is taught by Dr. Molly Nicodemus and graduate teaching assistants Alicia Gilmore and Madison Hardcastle. For individuals interested in learning more about the course and associated service-learning activities, they can contact the course instructor at mnicodemus@ads.msstate.edu.

Submitted by Dr. Molly Nicodemus

EQUINE CLUBS RECRUIT AT ACADEMIC INSIGHT

During Academic Insight held in mid-February, equine clubs recruited and met with incoming freshmen and their families to showcase activities they are involved in during the year. The equine program of the Animal & Dairy Sciences Department had a strong representation at the event with multiple equine clubs and their members present, including the Equestrian Team,



MSU Eventing Team and Horseman's Association Officers at Academic Insight.

Eventing Team, and the Horseman's Association. The equine clubs set up booths at the Union so families attending the event could come by and visit with members and sign up for club emails. In addition, during the departmental tour sponsored at the new Animal and Dairy Sciences building that afternoon, potential students got to visit with Huntseat Team Coach Hannah Valigura, Horse Judging Team Advisor Dr. Clay Cavinder, and Eventing Team and Horseman's Association Advisor Dr. Molly Nicodemus. Through the club booths and the tour at the ADS building, potential students with an equine interest could interact with those

MSU Equestrian Team Members at Academic Insight.



involved in these activities learning more about what these organizations do and how to get involved. Students wanting further information about the equine activities associated with the ADS Department can refer to the ADS department website located at <https://www.ads.msstate.edu/>.

Submitted by Dr. Molly Nicodemus

GRADUATE STUDENTS SHOWCASE THE EQUINE PROGRAM DURING ACADEMIC INSIGHT TOURS

The 2020 Academic Insight, held on February 15, proved to be a great opportunity for incoming freshmen to learn more about the Department of Animal & Dairy Sciences and included touring the new ADS Building and visiting with faculty and graduate students. This year, the graduate students majoring in equine studies and research were asked to head up the horse demonstration during the event. This gave the equine graduate students a chance to showcase what they have learned in their graduate work, promote the various equine clubs and activities they are involved in, and interact with potential students by giving them a real-life understanding as to what it is like to be an ADS student. Equine graduate students Alicia Gilmore, Hannah Valigura, and Carter Clark assisted with the horse demonstrations and Madison Hardcastle helped with the setup of the equine demonstrations and with leading one of the tour groups. During the demonstrations, the equine graduate students discussed equine clubs and courses offered through the ADS department, covered basic equine handling

L to R: ADS Graduate Students Carter Clark, Alicia Gilmore, and Hannah Valigura discussed collegiate horse activities during the Academic Insight Tours.



and grooming skills, and answered questions about the equine program. The equine graduate students that participated in Academic Insight were advisees of ADS faculty members, including Drs. Cavinder, Memili, and Nicodemus. Students wanting to learn more about the ADS graduate program can refer to the ADS website at <https://www.ads.msstate.edu/>.

Submitted by Dr. Molly Nicodemus

WESTERN NATIONAL 4-H ROUNDUP RESULTS

The Western National 4-H Roundup provided MS youth with opportunities to meet fellow 4-H'ers from across the United States, participate in educational and social workshops, continue with the development of their leadership and citizenship skills, and share personal experiences with others attending the competitions. While attending this competition, Mississippi 4-H'ers experienced and fostered a greater personal growth and learned about career ideas in many fields.

While in Denver, Mississippi 4-H'ers and those attending the trip had opportunities to experience what Denver has to offer. In addition to making new friends and continuing the development of their life-skills, 4-H'ers competed in a variety of national contests.

Of course, the numerous awards breakfasts are when the results of the contests were revealed, and prizes were given to the winners. We had numerous 4-H'ers that represented Mississippi proudly and had great success. Here is a summary of results from our 4-H'ers at the 2020 Western National 4-H Roundup.

- ✓ **Horse Individual Demonstration – 2nd Place**
 - Noah Carpenter, Lee 4-H

- ✓ **Hippology – 9th Place Team Overall**
 - **Team Members: Riley Hawkins, Lili Thomas, Mary Carver Reput, Davi Jo Williams, Lee 4-H**
 - **Team Awards**
 - 10th Place Exam/Slides Phase; 8th Place Stations Phase; 8th Place Judging Phase; 7th Place Team Problem Phase
 - **Individual Awards**
 - Lili Thomas: 10th Place Judging Phase

- ✓ **Horse Bowl – 7th Place Overall Team**
 - **Team Awards**
 - Swayze Browning, Lana Estes, Lacy Raines, Samuel Moody, Owen White, Union 4-H
 - **Individual Awards**
 - Lana Estes, 2nd High Point Individual

WESTERN NATIONAL 4-H ROUNDUP RESULTS

- ✓ **Horse Judging – 3rd Place Team Overall**
 - **Team Members: Sarah Polk, Deanna Bostic, Samantha Young, Rankin 4-H**
 - **Team Awards**
 - **2nd High Team Overall Halter; 7th High Team Overall Performance; 4th High Team Overall Reasons**
 - **Individual Awards**
 - **Sarah Polk: 2nd High Point Individual Overall Halter; 10th High Individual Overall**
 - **Samantha Young: 3rd High Point Individual Overall Performance, 8th High Point Individual Overall reasons; 9th High Individual Overall**
- ✓ **Livestock Judging Team – 12th Place High Team Overall (28 total teams)**
 - **Team Members: Whitney Watts, Mary Beth Ainsworth, Madalyn Boyd, Kathryn Johnson, Lincoln 4-H**
 - **Team Awards**
 - **9th Place Team Reasons; 26th Place Team Goats; 6th Place Team Sheep; 12th Place Team Beef; 5th Place Team Swine**
 - **Individual Awards**
 - **Kathryn Johnson – 1st Place Individual Swine Division; 8th Place Individual Reasons, 15th Place Individual Overall**
 - **Mary Beth Ainsworth – 10th Place Individual Sheep Division**
- ✓ **Meats Judging Team – 11th Place Team**
 - **Team Members: Tucker Woods, Tatum Madden, Shelby Young, Abigayle Case, Covington 4-H**
- ✓ **Livestock Bowl**
 - **Team Members: Kristin Ray, JD Chism, Elizabeth Nichols, Pontotoc 4-H, and Hannah Buse, Jones 4-H**

Submitted by Dr. Dean Jousan

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2020 REFEREED PUBLICATIONS

- Bowman, B.A., M.D. Denny, and **A.E. Stone**. 2020. Exploring Producer Innovation Adoption Using an Extension-Led Trialing Program. *Journal of Extension*. 58(1): v58-1rb2. <https://joe.org/joe/2020february/rb2.php>.
- Özbek, M., M. Hitit, E. Ergün, L. Ergün, F. Beyaz, F. Erhan, N. Yildirim, B. Kandil, O. Özgenç, **E. Memili**. 2020. Expression profile of Toll-like receptor 4 in rat testis and epididymis throughout postnatal development. *First International Journal of Andrologia*. 00:e13518. <https://doi.org/10.1111/and.13518>.
- Gomes, F. P., J. K. Diedrich, A. J. Saviola, **E. Memili**, A. Moura, and J. R. Yates III. 2020. EThcD and 213 nm for top-down analysis of bovine seminal plasma proteoforms on electrophoretic and chromatographic time frames. *Analytical Chemistry*. 92(4): 2979-2987. <https://pubs.acs.org/doi/10.1021/acs.analchem.9b03856>.
- Ugur, M. R., **T. Dinh**, M. Hitit, A. Kaya, E. Topper, B. Didion, and **E. Memili**. 2020. Amino acids of seminal plasma associated with freezability of bull sperm. *Frontiers in Cell and Developmental Biology*. 7(347). <https://www.frontiersin.org/articles/10.3389/fcell.2019.00347/full>.
- Hasan, M.S., **M.A. Crenshaw**, and **S.F. Liao**. 2020. Dietary lysine affects amino acid metabolism and growth performance, which may not involve the GH/IGF- axis, in young growing pigs. *Journal of Animal Science*. 98(1): 1-7. <https://academic.oup.com/jas/article/98/1/skaa004/5700336>.

TIP OF THE ICEBERG

The Mission of ADS is to provide science-based solutions for animal agriculture through innovative and effective Education, Research, and Extension programming efforts from our faculty, staff, and students. Many of these impacts will be highlighted in upcoming editions of *Riding the Range*.

Dr. Dean Jousan, Editor of Riding the Range, a newsletter produced by the Department of Animal and Dairy Sciences at Mississippi State University

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