

MISSISSIPPI STATE  
UNIVERSITY®

# Animal and Dairy

 SCIENCES

# News & Current Events

Vol. 62 September 8, 2017

• Teaching • Research • Extension • Departmental Activities

## Recruiting for the Livestock Judging Team



By Brett Crow

We welcome our on-campus friends to an interest meeting to learn about opportunities for collegiate livestock judging. We'll meet Tuesday, September 12th at 7:30 p.m. in Wise 4043. Contact Brett Crow at [brett.crow@msstate.edu](mailto:brett.crow@msstate.edu) for more information. Hope to see you there!





# STUDENT SPOTLIGHT

Posted to Facebook:



**Mississippi State University Extension Dairy**

August 28 at 8:29pm · 🌐

Meet **Allie McMahan**! Allie is a senior Animal and Dairy Sciences major with a Production Management concentration. She is currently helping with a nutrition project at the Bearden Dairy research Center and helping to plan and organize the Breakfast on the Farm event. She will also assist with a variety of other research projects going on throughout the semester. Allie wants to be AI technician and work with reproduction after graduation. Welcome to the dairy group, Allie!





# DAIRY STAFF SPOTLIGHT

Meet Carly Becker. She's one of the Assistant Herders at the Bearden Dairy Research Center.

She is from Independence, Kentucky and has a B.S. in Animal Science from the University of Kentucky. She assisted with research projects at the University of Kentucky dairy and worked with dairy goats during undergrad career.

She's recently returned from Senegal, West Africa where she was volunteering as an agroforestry extension agent with Peace Corps.

She will be starting graduate school in Spring 2018 working with Dr. Stone while gaining valuable experience as she continues to work with our herd and students at the BDRC.





# Mississippi State University Equestrian Team

Posted to Facebook:



**Mississippi State University Equestrian Team**

September 5 at 11:24am · 🌐

Congratulations to Ashley Ackerman! She will be riding for the Bulldogs in the Intermediate 2 division.



**Mississippi State University Equestrian Team**

September 5 at 11:22am · 🌐

Please welcome Mary Allison Page to the MS State Equestrian Team!





# Breakfast on the Farm



MISSISSIPPI STATE UNIVERSITY  
DEPARTMENT OF ANIMAL  
AND DAIRY SCIENCES

BOO!

FRIDAY, OCTOBER 27 | 9 A.M.-NOON

*open to school groups & field trips*

SATURDAY, OCTOBER 28 | 9 A.M.-NOON

*open to the public & families*

BEARDEN DAIRY RESEARCH CENTER | STARKVILLE

2128 Turkey Creek Road

*\$5 per person*

Breakfast, milk, and ice cream included

DAIRY TOUR

TRICK-OR-"TEAT"

COW COSTUME CONTEST (11 a.m. daily)

HALLOWEEN ACTIVITY

HAUNTED PARLOR

AND MORE!

*Registration required by* **OCTOBER 20**

[extension.msstate.edu/breakfast](http://extension.msstate.edu/breakfast)



MISSISSIPPI STATE UNIVERSITY  
EXTENSION

For more information, contact Amanda Stone  
at 662-769-9941 or [amanda.stone@msstate.edu](mailto:amanda.stone@msstate.edu).



# Upcoming Extension Events

## Beef Extension – Dr. Brandi Karisch Cobie Rutherford



- **Mississippi State University Artificial Insemination School, October 26-28**, Animal and Dairy Sciences Department, Mississippi State, MS

## Equine Events – Dr. Clay Cavinder



- **Upcoming Programs** and publications are online at: <http://extension.msstate.edu/agriculture/livestock/equine/upcoming-programs>
- For more info, contact Dr. Cavinder at [clay.cavinder@msstate.edu](mailto:clay.cavinder@msstate.edu)

## 4-H Events – Dr. Dean Jousan



- **Retinal Image/Classify** for 2017 Mississippi State Fair and 2018 District Dixie National Junior Round-up, **September 12-15**, Various Locations
- **Mississippi State Fair, October 4-15**, Jackson, MS
- For publications and upcoming events, go to: <http://extension.msstate.edu/4-h> or contact Dr. Dean Jousan at [dj230@msstate.edu](mailto:dj230@msstate.edu)

## Dairy Events – Dr. Amanda Stone



- **Breakfast on the Farm**, Dairy tours with a Cow Costume Contest, a “Haunted Parlor, Breakfast with Milk & Ice Cream. **October 27-29**, MSU Bearden Dairy Research Center. \$5 pp; Register by Oct. 20 at [extension.msstate.edu/breakfast](http://extension.msstate.edu/breakfast)

## 2017 Refereed Publications:

**Liao, Shengfa F.**, Martin Nyachoti. Using probiotics to improve swine gut health and nutrient utilization. *Animal Nutrition*. (2017) 1-13. <http://dx.doi.org/10.1016/j.aninu.2017.06.007>.

Kutchy, Naseer A., Ana Velho, Erika S. B. Menezes, Marie Jacobsen, Giselle Thibaudeau, Arlindo Moura, Abdullah Kaya, Andy Perkins, and **Erdogan Memili**, Robert W. Wills. Testis specific histone 2B is associated with sperm chromatin dynamics and bull fertility—a pilot study. *Journal of Reproductive Biology and Endocrinology*. (2017) 15:59. DOI 10.1186/s12958-017-0274-1.

**Lemley, Caleb O.** Investigating reproductive organ blood flow and blood perfusion to ensure healthy offspring. *Animal Frontiers*. doi:10.2527/af.2017-0124.

Keomanivong, F. E., L. E. Camacho, **C. O. Lemley**, E. A. Kuemper, R. D. Yunusova, P. P. Borowicz, J. D. Kirsch, K. A. Vonnahme, J. S. Caton and K. C. Swanson. Effects of realimentation after nutrient restriction during mid- to late gestation on pancreatic digestive enzymes, serum insulin and glucose levels, and insulin-containing cell cluster morphology. *Journal of Animal Physiology and Animal Nutrition*. 101 (2017) 589–604. DOI: 10.1111/jpn.12480.

Menezes, E.B., R.V. de Oliveira, M.F. van Tilburg, E.A. Barbosa, N.V. Nascimento, A.L.M.C.S. Velho, F.B. Moreno, R.A. Moreira, A.C.O. Monteiro-Moreira, G.M.C. Carvalho, A.F. Ramos, **E. Memili**, A.A. Moura. Proteomic analysis of seminal plasma from locally-adapted “Curraleiro Pé-Duro bulls” (*Bos taurus*): identifying biomarkers involved in sperm physiology in endangered animals for conservation of biodiversity. *Animal Reproduction Science*. <http://dx.doi.org/10.1016/j.anireprosci.2017.05.014>.

**Cavinder, C. A.**, A. Sear, R. Valdez, L. White. Utilization of Social Media as a Marketing Tool for Equine Businesses: An Exploratory Study. *North American Colleges and Teachers of Agriculture Journal*. June 2017, Vol 61(2).

Gastal, G. D. A., A. Hamilton, B. G. Alves, S. G. S. de Tarso, **J. M. Feugang**, G. A. Apgar, C. K. Nielsen, E. L. Gastal, W. J. Banz. Ovarian features in white-tailed deer (*Odocoileus virginianus*) fawns and does. *PLOS ONE*. 12(5):30177357. <https://doi.org/10.1371/journal.pone.0177357>.

Aguiar, F.L.N., G.D.A. Gastal, G.M. Ishak, M.O. Gastal, D.I.A. Teixeira, J.R. Figueiredo, E.L. Gastal, **J.M. Feugang**. Effects of FSH addition to an enriched medium containing insulin and EGF after long-term culture on functionality of equine ovarian biopsy tissue. *Theriogenology* 99 (2017) 124-133.

**Feugang, Jean M.** Novel agents for sperm purification, sorting and imaging. *Molecular Reproduction Development*. 2017. 9999:1-10. DOI: 10.1002/mrd.22831.

Borchers, M. R., Y. M. Chang, K. L. Proudfoot, B. A. Wadsworth, **A. E. Stone**, and J. M. Bewley. Machine-learning-based calving prediction from activity, lying, and ruminating behaviors in dairy cattle. *Journal of Dairy Sciences*, Vol.100:1-11. 2017. <https://doi.org/10.3168/jds.2016-11526>.

**Lemley, C. O.** and K. A. Vonnahme. PHYSIOLOGY AND ENDOCRINOLOGY SYMPOSIUM: Alterations in uteroplacental hemodynamics during melatonin supplementation in sheep and cattle. *Journal of Animal Science* 2017.95:2211-2221. doi:10.2527/jas2016.1151.

- Gastal, G.D.A., F.L.N. Aguiar, B.G. Alves, K.A. Alves, S.G.S. de Tarso, G.M. Ishak, **C.A. Cavinder**, **J.M. Feugang**, E.L. Gastal. Equine ovarian tissue viability after cryopreservation and in vitro Culture. *Theriogenology* 97 (2017) 139-147.
- Maki, C R, S Allen, M Wang, SH Ward, **BJ Rude**, HR Bailey, RB Harvey and TD Phillips. Calcium Montmorillonite Clay for the Reduction of Aflatoxin Residues in Milk and Dairy Products. *Journal of Dairy and Veterinary Sciences*. 2017; 2\*3): 555587.
- Regmi, N., T. Wang, **M. A. Crenshaw**, **B. J. Rude**, **S. F. Liao**. Effects of dietary lysine levels on the concentrations of selected nutrient metabolites in blood plasma of late-stage finishing pigs. *Journal of Animal Physiology and Animal Nutrition*. 2017; 1-7. DOI: 10.1111/jpn.12714.
- Wang, Taiji, **Jean M. Feugang**, **Mark A. Crenshaw**, Naresh Regmi, **John R. Blanton Jr.** and **Shengfa F. Liao**. A Systems Biology Approach Using Transcriptomic Data Reveals Genes and Pathways in Porcine Skeletal Muscle Affected by Dietary Lysine. *International Journal of Molecular Sciences* (2017) 18, 885.
- Cain, Amanda J., **Caleb O. Lemley**, F. Kevin Walters, David L. Christiansen, E. Heath King, Richard M. Hopper. Pre-breeding beef heifer management and season affect mid to late gestation uterine artery hemodynamics. *Theriogenology* 87 (2017) 9–15.
- Jones, Barbara W., **Amanda E. Stone**, Connie L. Wood, Kristen J. McQuerry, Joey D. Clark, Denise L. Ray, and Jeffrey M. Bewley, PAS. Case Study: Characterization of milk yield, lying and rumination behavior, gait, cleanliness, and lesions between 2 different freestall bases. *The Professional Animal Scientist* 33:140–149. <https://doi.org/10.15232/pas.2016-01548>.
- Stone, A. E.**, B. W. Jones, C. A. Becker, and J. M. Bewley. 2017. Influence of breed, milk yield, and temperature-humidity index on dairy cow lying time, neck activity, reticulorumen temperature, and rumination behavior. *Journal of Dairy Sciences* 100:1–9. <https://doi.org/10.3168/jds.2016-11607>.
- Hodge, Lauren B., **Brian J. Rude**, **Thu N. Dinh**, **Caleb O. Lemley**. Effect of u-3 Fatty Acid Supplementation to Gestating and Lactating Mares: On Milk IgG, Mare and Foal Blood Concentrations of IgG, Insulin and Glucose, Placental Efficiency, and Fatty Acid Composition of Milk and Serum From Mares and Foals. *Journal of Equine Veterinary Science* 51 (2017) 70–78.
- Littlejohn, B. P., M. C. Roberts, M. N. Bedenbaugh, A. W. Lewis, D. A. Neuendorff, D. G. Riley, J. A. Carroll, **R. C. Vann**, M. Amstalden, R. D. Randel, T. H. Welsh, Jr. (2017). Evaluation of the influence of prenatal transportation stress on GnRH-stimulated luteinizing hormone and testosterone secretion in sexually mature Brahman Bulls. *Journal of Animal Science* 95, 129-138. [www.animalsciencepublications.org/publications/jas](http://www.animalsciencepublications.org/publications/jas).
- Gastal, G D A , B G Alves, K A Alves, M E M Souza, A D Vieira, A S Varela Jr, J R Figueiredo, **J M Feugang**, T Lucia Jr and E L Gastal. Ovarian fragment sizes affect viability and morphology of preantral follicles during storage at 4°C. *Reproduction*, (2017) 153, 577-587.

## 2017 Book Chapters:

- Greene, Jonathan M. and **Peter L. Ryan**. L-Arginine in the Uterus and Placenta and During Gestation in Mammals. In *L-Arginine in Clinical Nutrition*, Nutrition and Health, Chapter 22. 2017. V.B. Patel et al. (eds.). DOI 10.1007/978-3-319-26009-9\_22.



**Stone, A. E.** Precision dairy monitoring technology implementation opportunities and challenges. In *Large Dairy Herd Management*, 3rd Edition. (Edited by David K. Beede).

Wang, Taiji, **M. A. Crenshaw**, M. S. Hasan, G. Wu and **S. F. Liao**. 2017. Effects of dietary lysine levels on the plasma concentrations of growth-related hormones in late-stage finishing pigs. In T. Asao and M. Asaduzzaman. eds. *Amino Acid - New Insights and Roles in Plant and Animal*. Chapter 13. pp. 259-271. InTech, Rijeka, Croatia. DOI: 10.5772/intechopen.68545.