

MISSISSIPPI STATE UNIVERSITY

ANIMAL & DAIRY SCIENCES



WISHING YOU A HAPPY
thanksgiving

WITH BEST WISHES,
MISSISSIPPI STATE ANIMAL & DAIRY SCIENCES

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MSU HEADS TO NEW HAMPSHIRE

New Hampshire dairy producers were very welcoming this week to visitors from Mississippi State, other than allowing all this snow and single digit weather!

Visitors enjoyed talking to such smart and interactive producers and really loved discussing the exciting potential of precision dairy

monitoring technologies with them.

Representatives of our school were lucky to get invited to represent MS's dairy industry.



MISSISSIPPI STATE UNIVERSITY LIVESTOCK JUDGING

What a year with an incredible group of young men and women who represented our 2018 team!! With a 7th place team rank in the "Performance Cattle Division", this year we achieved our first top-ten division finish at our National Contest in Louisville, KY since having re-established our program! We're proud to have also achieved the highest overall team rank since we brought the program back!

Also at the National Contest, team member, Abigail Jenkins, became Mississippi State's first ever, "All American" team member!

Abigail ranked 2nd individually in the "Performance Swine" division (tied for first) as well as 7th overall in the "Performance Cattle" division! Team member, Cody Maddox, was just one point shy of a top-ten finish in that division.

Every team member received individual contest recognition at some point throughout the year and each played a vital role in the best season we've had in modern history! We wish each one only the best as they enter the next phase of life!
2018 Mississippi State Livestock Judging Team

Members:

Abigail Jenkins
Cody Maddox
Gresham Stephens
Logan Stroock
Mikaila Walker



HIGH POINT CHAMPIONS!

CONGRATS TO OUR WESTERN TEAM FOR WINNING BIG!





FOOD PANTRIES OF MISSISSIPPI SUCCESS

DAIRY

Feeling pretty excited to see you all making an impact with food pantries in MS. Through sales of our Hail State and Drink Milk t-shirts, we've been able to donate all this - and are working on even more. Not only are dairy products getting into the hands of families who need it, we are also getting some dairy products off the shelves to help with oversupply.

I know this is a small way to help, but if we all do some small things to help dairy producers, it can become huge! If you bought a shirt, thank you! If not, there are still some left (but not all sizes and colors). If you want to help producers beyond getting a shirt, consider donating milk to a local pantry!



ANIMAL AGRICULTURE IN CHINA

A Study Abroad Course:

- GA 4710/6710 Study Tour - Animal Agriculture in China (3 credit hours)
- Stationed at Anhui Agricultural University in Hefei, Anhui, China, the world's 2nd-largest economy, for 3 weeks, students will learn a great deal of China's animal agricultural practices, animal product consumption patterns, and its veterinary service
- To experience Chinese culture, cuisine, language, and its several very attractive sights



Application Deadline

March 8, 2019

Program Dates

May 8 – 29, 2019

Eligibility/Prerequisites

All undergraduate and graduate students with at least a 2.5 GPA are encouraged to participate

Contact:

Dr. Liao: s.liao@msstate.edu

Price: \$2,290

March 8, 2019 – Application fee: \$150

March 22, 2019 – Program fee: \$2,140



UPCOMING EXTENSION EVENTS

Beef Extension - Dr. Brandi Karisch & Cobie Rutherford

Phone: (662) 325-7465 or brandi.karisch@msstate.edu (662) 325-4344 or cobie.rutherford@msstate.edu

Beef Calendar: <http://extension.msstate.edu/livestock/beef/beef-calendar>

Dairy Events - Dr. Amanda Stone

Phone: (662) 325-8773 or Email: amanda.stone@msstate.edu Website: <http://extension.msstate.edu/dairy>

4-H Events - Dr. Dean Jousan

Phone: (662) 325-2424

Email: dj230@msstate.edu [www.http://extension.msstate.edu/4-h](http://extension.msstate.edu/4-h)

Equine Events - Dr. Clay Cavinder

Contact Dr. Cavinder for information about programs and events. Phone: (662) 325-7566 or clay.cavinder@msstate.edu Website

<http://extension.msstate.edu/agriculture/livestock/equine/upcomingprograms>

2018 Refereed Publications

- Holtcamp, Alexander J., Anuraj T. Sukumaran, Abigail E. Schnedler, Brandon J. McClenton, Emery Kunze, Chris R. Calkins, **Brandi B. Karisch**, **Derris D. Burnett**, **Thu T.N. Dinh**. Effects of feeding endophyte-infected tall fescue seeds to stocker Angus steers on retail quality attributes of beef strip steaks. *Meat Science* 149 (2019) 31-39. <https://doi.org/10.1016/j.meatsci.2018.11.007>
- KAYA, Abdullah, Erdoğan GÜNEŞ, **Erdoğan MEMİLİ**. Application of reproductive biotechnologies for sustainable production of livestock in Turkey. *Turkish Journal of Veterinary and Animal Sciences*. (2018) 42: doi:10.3906/vet-1706-66/
- Moura. Arlindo Alencar, Ana Luiza Cazaux Velho, **Erdogan Memili**, Antônia Moemia Rodrigues Portela, Arabela Guedes Viana, Maria Júlia Barbosa Bezerra, Fábio Róger Vasconcelos. Seminal plasma proteins and metabolites: effects on sperm function and potential as fertility markers. *Proceedings of the 10th International Ruminant Reproduction Symposium* (IRRS 2018); Foz do Iguaçu, PR, Brazil, September 16th to 20th, 2018.
- Viana. A. G. A. , A. M. A. Martins, A. H. Pontes, W. Fontes, M. S. Castro, C. A. O. Ricart, M. V. Sousa, A. Kaya, E. Topper, **E. Memili** & A. A. Moura. Proteomic landscape of seminal plasma associated with dairy bull fertility. *Scientific Reports*. (2018) 8:16323 | DOI:10.1038/s41598-018-34152-w
- Park, Seong B., **Shecoya B. White**, Christy S. Steadman, **Clay A. Cavinder**, **Scott T. Willard**, **Peter L. Ryan**, and **Jean M. Feugang**. Real-Time Bioluminescence Analysis of Escherichia coli O157:H7 Survival on Livestock Meats Stored Fresh, Cold, or Frozen. *Journal of Food Protection*, Vol. 81, No. 11, 2018, Pages 1906–1912. doi:10.4315/0362-028X.JFP-18-207.
- Dinh. T.T.N.**, J.F. Legako, M.F. Miller, J.C. Brooks. Effects of USDA quality grade and cooking on water-soluble precursors of beef flavor. *Meat Science*. 146 (2018) 122-130. <https://doi.org/10.1016/j.meatsci.2018.08.008>.
- Littlejohn, Brittni P., David G. Riley, Thomas H. Welsh, Jr, Ronald D. Randel, **Scott T. Willard**, and **Rhonda C. Vann**. Use of random regression to estimate genetic parameters of temperament across an age continuum in a crossbred cattle population. *Journal of Animal Science*. 2018. 96:2607–2621. doi: 10.1093/jas/sky180.
- Vu, P. T. T., A. J. Holtcamp, A. T. Sukumaran, M. V. V. Le, D. H. Nguyen, & **T. T. N. Dinh**. (2018). Effects of market type and time of purchase on oxidative status and descriptive off-odors and off-flavors of beef in Vietnam. *Meat science*, 145, 399-406. <https://doi.org/10.1016/j.meatsci.2018.07.018>.
- Ishak, G. M. , S. T. Bashir, G. A. Dutra, G. D. A. Gastal, M. O. Gastal, **C. A. Cavinder**, **J. M. Feugang**, and E. L. Gastal. In vivo antral follicle wall biopsy: a new research technique to study ovarian function at the cellular and molecular levels. *Reproductive Biology and Endocrinology* (2018) 16:71. <https://doi.org/10.1186/s12958-018-0380-8>.
- Humphrey, R. M., Z. Yang, M. S. Hasan, **M. A. Crenshaw**, **D. D. Burnett**, J. K. Htoo and **S. F. Liao**. The compensatorily -gained pigs resulted from feeding a methionine-deficient diet had more fat and less lean body mass. *Journal of Applied Animal Nutrition*, Vol. 6; e6; page 1 of 7. <https://doi.org/10.1017/JAN.2018.5>.
- Griffin, Courtney M. , BS; Jenna A. Scott, BS; **Brandi B. Karisch, MS, PhD**; Amelia R. Woolums, DVM, MVSc, PhD, DACVIM, DACVM; **John R. Blanton, MS, PhD**; Ray M. Kaplan, DVM, PhD, DEVPC, DACVM; William B. Epperson, DVM, MS, DACVPM (Epidemiology); David R. Smith, DVM, PhD, DACVPM (Epidemiology). A randomized controlled trial to test the effect of on-arrival vaccination and deworming on stocker cattle health and growth performance. *The Bovine Practitioner*, Vol. 52, No. 1.

2018 Refereed Publications

- Sun, Yuhang , Jin Liu, Gengping Ye, Fang Gan, Mohammed Hamid, **Shengfa Liao**, Kehe Huang. Protective effects of zymosan on heat stress-induced immunosuppression and apoptosis in dairy cows and peripheral blood mononuclear cells. *Cell Stress and Chaperones*. <https://doi.org/10.1007/s12192-018-0916-z>.
- Woolums, Amelia R., **Brandi B. Karisch**, Jonathan G. Frye, William Epperson, David R. Smith, **John Blanton Jr.**, Frank Austin, Ray Kaplan, Lari Hiott, Tiffanie Woodley, Sushim K. Gupta, Charlene R. Jackson, Michael McClelland. Multidrug-resistant Mannheimia haemolytica isolated from high-risk beef stocker cattle after antimicrobial metaphylaxis and treatment of bovine respiratory disease. *Veterinary Microbiology* 221 (2018) 143-152. <https://doi.org/10.1016/j.vetmic.2018.06.005>.
- Sukumaran, Anuraj T., Alexander J. Holtcamp, Yan L. Campbell, **Derris Burnett**, Mark W. Schilling, **Thu T.N. Dinh**. Technological characteristics of pre- and post-rigor deboned beef mixtures from Holstein steers and quality attributes of cooked beef sausage. *Meat Science*. 145 (2018) 71–78. <https://doi.org/10.1016/j.meatsci.2018.06.001>.
- Hart, CG, BE Voelz, KE Brockus, **CO Lemley**. Hepatic steroid inactivating enzymes, hepatic portal blood flow and corpus luteum blood perfusion in cattle. *Reproduction in Domestic Animals*. 2018;53:751–758.
- Camacho, L.E., **C.O. Lemley**, S.T. Dorsam, K.C. Swanson, K.A. Vonnahme. Effects of maternal nutrient restriction followed by realimentation during early and mid-gestation in beef cows. II. Placental development, umbilical blood flow, and uterine blood flow responses to diet alterations. *Theriogenology*. <https://doi.org/10.1016/j.theriogenology.2018.04.013>.
- Lemley, C.O.**, L.E. Camacho, D.M. Hallford, K.A. Vonnahme. Uteroplacental secretion of progesterone and estradiol 17beta in an ovine model of intrauterine growth restriction. *Animal Reproduction Science*. 193 (2018) 68-78. <https://doi.org/10.1016/j.anireprosci.2018.04.001>.
- T. Williams, **B. Rude**, **S. Liao**, C. Mochal-King, **M. Nicodemus**. Effects of fat supplementation on plasma glucose, insulin and fatty acid analysis in ponies maintained on a forage- based diet. *Journal of Animal Physiology and Animal Nutrition*. 2018;1–8. DOI: 10.1111/jpn.12905.
- Gastal, G.D.A., **J.M. Feugang**, F.L.N. Aguiar, A.P.R. Rodrigues, J.M. Scimeca, G.A. Apgar, W.J. Banz, E.L. Gastal. Cryopreservation and in vitro culture of white-tailed deer ovarian tissue. *Theriogenology*. 113 (2018) 253-260.
- Velho, Ana Luiza Cazaux, Einko Topper, Erika Menezes, **Thu Dinh**, Abdullah Kaya, Arlindo Alencar Moura, **Erdogan Memili**. Metabolomic markers of fertility in bull seminal plasma. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0195279>.
- Owen, MPT , EN Ferjak, **CA Cavinder**, KJ McCarty, KC Yankey, CG Hart, **DD Burnett**, **TTN Dinh**, **CO Lemley**. Effects of body condition score (BCS) on steroid- and eicosanoid- metabolizing enzyme activity in various mare tissues during winter anoestrus. *Reproduction in Domestic Animals*. 2018;53:296–303. <https://doi.org/10.1111/rda.13104>.
- Park, Seong B., **Scott T. Willard**, Christy S. Steadman, Atul A. Chaudhari, Shreekumar R. Pillai, Shree R. Singh, **Peter L. Ryan** and **Jean M. Feugang**. Proteomic analysis of antimicrobial effects of pegylated silver coated carbon nanotubes in Salmonella enterica serovar Typhimurium. *Journal of Nanobiotechnology*. (2018) 16:31 <https://doi.org/10.1186/s12951-018-0355-0>.

2018 Refereed Publications

- Cavinder, C. A., PAS, E. N. Ferjak, C. A. Phillips, D. D. Burnett, and T. T. N. Dinh.** REVIEW: The importance of overall body fat content in horses. *The Professional Animal Scientist* 34:125–132. <https://doi.org/10.15232/pas.2017-01708>.
- Sukumaran, Anuraj T. , Alexander J. Holtcamp, April K. Englishbey, Yan L. Campbell, Taejo Kim, Mark W. Schilling, **Thu T.N. Dinh.** Effect of deboning time on the growth of Salmonella, E. coli, aerobic, and lactic acid bacteria during beef sausage processing and storage. *Meat Science* 139 (2018) 49–55.
- Wang, T., **M. A. Crenshaw**, N. Regmi, **B. J. Rude**, M. S. Hasan, A. T. Sukumaran, **T. Dinh**, and **S. F. Liao**. 2018. Effects of dietary lysine level on the content and fatty acid composition of the intramuscular fat in late-stage finishing pigs. *Canadian Journal of Animal Science*. 98: 241-249. DOI: [dx.doi.org/10.1139/cjas-2017-0083](https://doi.org/10.1139/cjas-2017-0083).
- Owen, M.P.T., K.J. McCarty, C.G. Hart, C.S. Steadman, **C.O. Lemley**. Endometrial blood perfusion as assessed using a novel laser Doppler technique in Angus cows. *Animal Reproduction Science*. 190 (2018) 119-126. <https://doi.org/10.1016/j.anireprosci.2018.01.015>.
- Feugang, Jean M. , Shengfa F. Liao, Scott T. Willard, and Peter L. Ryan.** In-depth proteomic analysis of boar spermatozoa through shotgun and gel-based methods. *BMC Genomics*. (2018) 19:62 DOI 10.1186/s12864-018-4442-2.
- Liao, Shengfa F.**, Naresh Regmi, Guoyao Wu. Homeostatic Regulation of Plasma Amino Acid Concentrations. *Frontiers in Bioscience, Landmark*. 23, 640-655, January 1, 2018.
- Feugang, Jean M. , Shengfa F. Liao, Scott T. Willard, and Peter L. Ryan.** In-depth proteomic analysis of boar spermatozoa through shotgun and gel-based methods. *BMC Genomics*. (2018) 19:62 DOI 10.1186/s12864-018-4442-2.
- Liao, Shengfa F.**, Naresh Regmi, Guoyao Wu. Homeostatic Regulation of Plasma Amino Acid Concentrations. *Frontiers in Bioscience, Landmark*. 23, 640-655, January 1, 2018.

2018 Book Chapters:

Jain, Sapna, Seong B. Park, Shreekmar R. Pillai, **Peter L. Ryan**, **Scott T. Willard** and **Jean M. Feugang**. Applications of Fluorescent Quantum Dots for Reproductive Medicine and Disease Detection. In *Unraveling the Safety Profile of Nanoscale Particles and Materials—From Biomedical to Environmental Applications*, Chapter 6, pp. 133-148, <http://dx.doi.org/10.5772/intechopen.72978>.