

- Teaching
- Research
- Extension
- Departmental Activities

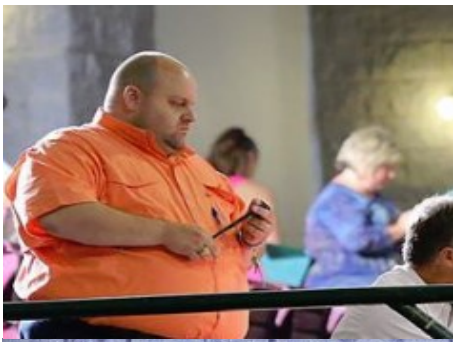


Visiting UC Davis Adjunct Professor

Submitted by Dr. Shengfa Liao and Mr. Shamimul Hasan



Dr. Huaijun Zhou, Associate Professor and Chancellor's Fellow from the Department of Animal Science, University of California, Davis, CA, was invited to visit our Department of Animal & Dairy Sciences on June 23~25, 2016. As an adjunct faculty member of our department, Dr. Zhou currently serves as a member in Mr. M. Shamimul Hasan's Ph.D. Graduate Committee. During this visit, the graduate students including Taiji Wang, Shamimul Hasan, and Casey Durfey, in Dr. Liao's research group, had an opportunity to interact with Dr. Zhou and discussed their respective research projects in a small group meeting. After the meeting, Dr. Zhou presented a research seminar, titled "Improving food security in Africa by enhancing resistance to Newcastle disease and heat stress in chickens". The faculty, staff, and graduate students from the Departments of Animal & Dairy Sciences and Poultry Science, as well as representatives from the Institute for Genomics, Biocomputing & Biotechnology (IGBB) of MSU attended. For details about Dr. Zhou's research program, please visit <http://animalscience.ucdavis.edu/faculty/Zhou>.



Southern Regional Horse Show Practice



Submitted by Dr. Clay Cavinder

4H students qualified for Southern Regionals this year. To prepare for this event, **Dr. Clay Cavinder** and the new Equestrian Team Coach, **Ashley Shiffler**, offered students a free practice clinic on July 9th at the Mississippi State Horse Park. They offered coaching and practice on WP/HUS, Showmanship, Horsemanship/HSE, Ranch Riding, Trail/Ranch Trail, Reining, Speed Events and Western Riding.



1st Mississippi State Summer Horsemanship Clinic



Submitted by Dr. Clay Cavinder

These clinics will be taught throughout the state each summer. Agents and/or volunteers can organize one of these 2 day clinics in their area by contacting **Dr. Clay Cavinder** and he will send the clinicians to teach. This first clinic was held in Winona on July 8-9. Two more clinics are scheduled this month in Starkville and Canton, both on July 18-19.

AQHA Horsemanship Camps in Europe



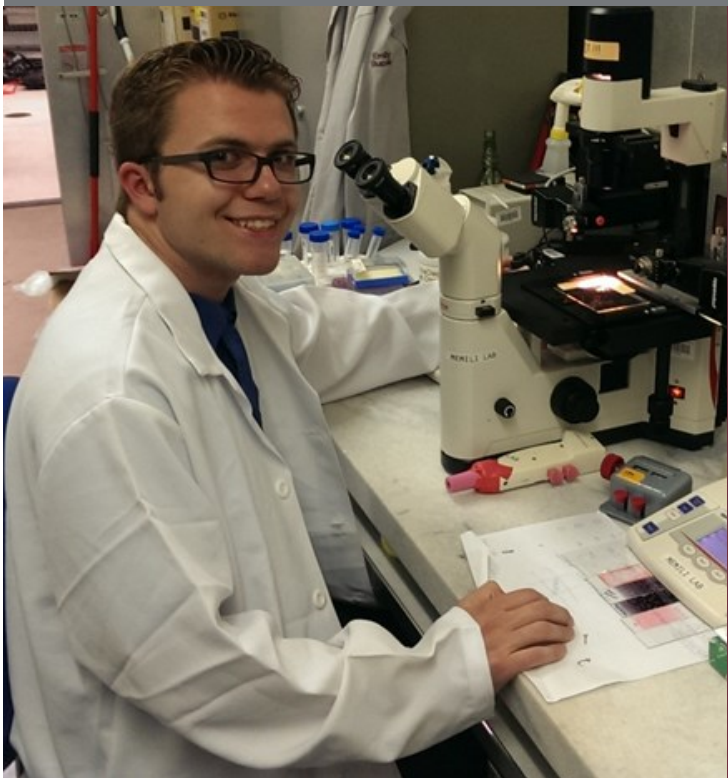
Submitted by Dr. Clay Cavinder

In June, Ashley Shiffler, Ashley Palmer, Hannah Miller, Samantha Miller and Dr. Clay Cavinder traveled to Germany, Slovenia, Austria, and Italy to teach horsemanship camps.





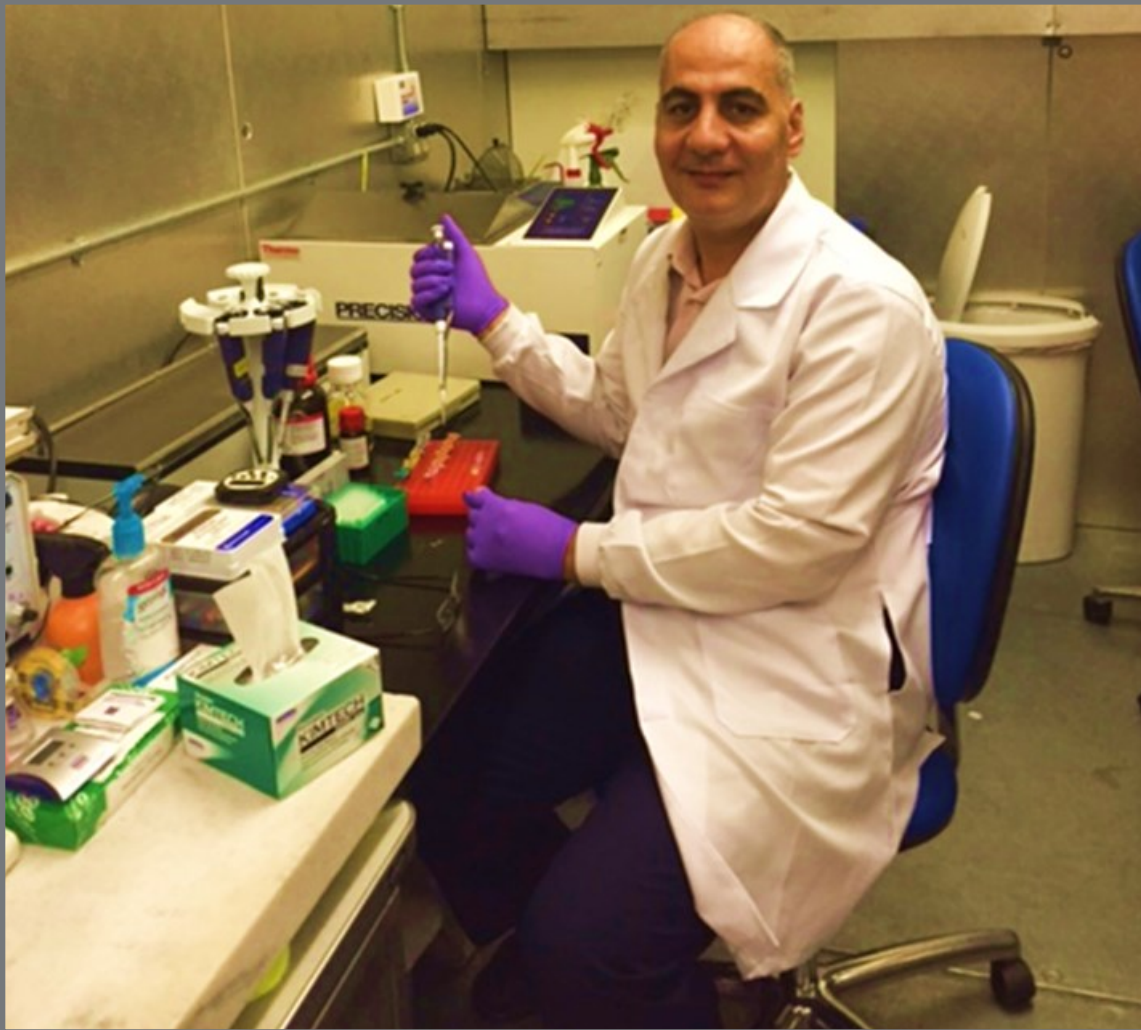
As an invited plenary speaker, Dr. Erdogan Memili presented “Genomic and Functional Genomic Approaches to Improve Livestock Production and Product Quality” at the International Livestock Genomics Conference in Lahore, Pakistan, May 30-31, 2016. Dr. Memili’s talk on the research from Mississippi State and the visit also facilitated international collaborations both in research and education, and enhanced the visibility of MSU. As the world’s 6th most populous country, Pakistan ranks top 2nd on the numbers of water buffalo in the world.



Austin Chiappetta, a junior biology and biochemistry double-major at the University of Northwestern in St. Paul, MN, has just started pursuing his mentored research in **Dr. Erdogan Memili’s** laboratory at the Department of Animal and Dairy Sciences (ADS).

Austin has received a competitive fellowship through the National Science Foundation’s (NSF) Research Experiences for Undergraduates (REU) Program on Computational Biology directed by Dr. Andy Perkins of MSU’s Department of Computer Science and Engineering (CSE). Austin’s research is a collaboration between ADS and CSE, and it involves elucidating epigenetic mechanisms regulating bull fertility using modern approaches in molecular, cell and developmental biology as well as in computational biology.

Austin plans to generate new knowledge on functional genomics of bull fertility, present his research at MSU’s Summer Undergraduate Research Symposium and at an international conference, and publish his findings in a peer reviewed scientific journal.



Research and Education

Submitted by Dr. Erdogan Memili



Dr. Hazem Ahmed El-Debaky, a researcher at the National Research Center, Cairo, Egypt is conducting a 6-month research project in Dr. Erdogan Memili's laboratory at the Department of Animal and Dairy Sciences (ADS). Funded through a competitive fellowship from the USAID grant, Dr. El-Debaky is conducting original research on functional genomics of bull fertility. He plans to apply the new knowledge and technical skills to the improvement of Water Buffalo agriculture in Egypt. Dr. El-Debaky graduated from Faculty of Veterinary Medicine of Cairo University, and earned his Master and Ph.D. in biochemistry and molecular biology in the same college. He is an active member in many scientific societies including Egyptian Veterinary Medical Association, Egyptian Society of Biochemistry, Society of Biochemistry and Molecular Biology, and National Committee for Biochemistry and Molecular Biology (ENBMB) of the Academy of Scientific Research & Technology.

2016 Refereed Publications:

- Lamb, G. C., PAS, V. R. G. Mercadante, D. D. Henry, P. L. P. Fontes, C. R. Dahlen, **J. E. Larson**, and N. DiLorenzo. Invited Review: Advantages of current and future reproductive technologies for beef cattle production. *The Professional Animal Scientist* 32 (2016):162–171; <http://dx.doi.org/10.15232/pas.2015-01455>.
- Regmi, Naresh, Taiji Wang, **Mark A. Crenshaw**, **Brian J. Rude**, Guoyao Wu, **Shengfa F. Liao**. Effects of dietary lysine levels on plasma free amino acid profile in late-stage finishing pigs. *SpringerPlus* (2016) 5:888, DOI 10.1186/s40064-016-2463-3.
- Mayer, J. J., J. D. Davis, J. L. Purswell, E. J. Koury, N. H. Younan, **J. E. Larson**, and T. M. Brown-Brandl. 2016. Development and characterization of a continuous tympanic temperature logging (CTTL) probe for bovine animals. *Transactions of the ASABE*. 59:703-714. (DOI: 10.13031/trans.59.11367).
- Gilfeather, CL and **CO Lemley**. 2016. Effects of Interferon-Tau and Steroids on Cytochrome P450 Activity in Bovine Endometrial Epithelial Cells. *Reproduction in Domestic Animals*, 51, 415–420 (2016); doi: 10.1111/rda.12695.
- Prezotto, L. D., L. E. Camacho, **C. O. Lemley**, F. E. Keomanivong, K. A. Vonnahme and K. C. Swanson, J. S. Caton. Nutrient restriction and realimentation in beef cows during early and mid-gestation and maternal and fetal hepatic and small intestinal in vitro oxygen consumption. *The Animal Consortium* 2015. doi:10.1017/S1751731115002645.
- Ye, G., J. Liu, Y. Liu, X. Chen, **S. F. Liao**, D. Huang, and K. Huang. 2016. Feeding glycerol-enriched yeast culture improves lactation performance, energy status, and hepatic gluconeogenic enzyme expression of dairy cows during the transition period. *J. Anim. Sci.* doi: 10.2527/jas.2015-0021.
- Cline, G. F., A. M. Muth-Spurlock, B. E. Voelz, **C. O. Lemley**, and **J. E. Larson**. 2016. Evaluating blood perfusion of the corpus luteum in beef cows during fescue toxicosis. *J. Anim. Sci.* 94:90-95.
- Brockus, K. E., C. G. Hart, C. L. Gilfeather, B. O. Fleming, **C. O. Lemley** (2016). Dietary melatonin alters uterine artery hemodynamics in pregnant Holstein heifers. *Domestic Animal Endocrinology*, 55, 1-10.
- Kaya, A., **E. Memili**. Sperm macromolecules associated with bull fertility. *Animal Reproduction Science*. (2016), <http://dx.doi.org/10.1016/j.anireprosci.2016.02.015>
- Hunt, M.R., J.F.Legako, **T.T.N. Dinh**, A.J.Garmyn, T.G.O'Quinn, C.H. Corbin, R.J. Rathmann, J.C. Brooks, M.F. Miller. Assessment of volatile compounds, neutral and polar lipid fatty acids of four beef muscles from USDA Choice and Select graded carcasses and their relationships with consumer palatability cores and intramuscular fat content. *Meat Science* 116 (2016) 91–101.
- Keomanivong, F. E., **C. O. Lemley**, L. E. Camacho, R. Yunusova, P. P. Borowicz, J. S. Caton, A. M. Meyer, K. A. Vonnahme and K. C. Swanson. Influence of nutrient restriction and melatonin supplementation of pregnant ewes on maternal and fetal pancreatic digestive enzymes and insulin-containing clusters. *Animal* (2016), 10:3, pp 440–448.

Brockus, KE, CG Hart, BO Fleming, T Smith, **SH Ward** and **CO Lemley**. Effects of Supplementing Holstein Heifers with Dietary Melatonin during Late Gestation on Growth and Cardiovascular Measurements of their Offspring. *Reproduction in Domestic Animals*. 51, 240–247 (2016); doi: 10.1111/rda.12672 ISSN

Vasquez, Erick S., **Jean M. Feugang**, **Scott T. Willard**, **Peter L. Ryan** and Keisha B. Walters. Bioluminescent magnetic nanoparticles as potential imaging agents for mammalian spermatozoa. *Journal of Nanobiotechnology*. (2016) 14:20.