

**MISSISSIPPI STATE  
UNIVERSITY**

**Animal and Dairy  
SCIENCES**



**News**  
*& Current Events*

Vol. 51 April 21, 2017

• Teaching • Research • Extension • Departmental Activities

## MISSISSIPPI STATE UNIVERSITY HORSE JUDGING and EQUESTRIAN TEAMS



**Saturday, May 6th at 4:45 p.m. \* The Mill Conference Center**

**Cost: \$35 per person, \$400 for table sponsorship of 10**

~ Festivities ~

**Live Screening of the 143rd Kentucky Derby \* Silent and Live Auctions  
Dinner and Team Slideshows**

**Awards for "Best Dressed" and "Best Derby Hat"**

**Spring Derby Attire: <https://www.kentuckyderby.com/party/fashion>**

**RSVP by Friday, April 28**

Email Dr. Clay Cavinder at [clay.cavinder@msstate.edu](mailto:clay.cavinder@msstate.edu)

# 2017 Mississippi State University Dairy Open House



**Saturday May 20, 2017**

**10:00 AM to 2:00 PM**

(lunch will be provided)

**MSU Bearden Dairy Research Center**

**2128 Turkey Creek Road**

**Starkville, MS 39759**



**Speaker topics will include:**

How and why to manage heat stress

Economics of center pivots

How to effectively feed pastured cows



Attendees will also have the opportunity to tour the farm, see the center pivot in action, and learn about pasture management techniques (what to do and what not to do – from our own experience)

Contact Amanda Stone for more information: [amanda.stone@msstate.edu](mailto:amanda.stone@msstate.edu) or 662-769-9941

**MISSISSIPPI STATE**  
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# OKLAHOMA CITY SPRING SWEEPSTAKES



By Dr. Clay Cavinder

The 2017 MSU Horse Judging team competed in its first contest on April 12 in Oklahoma City at the Spring Sweepstakes. The team was 2nd high team in Performance and 11th overall out of 33 colleges and university teams. Hannah Kruse, a sophomore from New Haven, MO, was 7th high individual in Performance, and Alex Blackburn, sophomore from Franklin, TN, was 6th high individual in Performance.



Mary Claire Cornett, Hattiesburg

Shawna Downs, Raleigh, NC

Rachel McDaniel, Brookhaven, MS

Christian Hines, Mountain Brook, AL

Hannah Kruse, New Haven, MO

Cheyenne Jones, Hickory Flat, MS

Alex Blackburn, Franklin, TN

Tori Stroupe, Tupelo

# Upcoming Extension Events

## Beef Extension – Dr. Brandi Karisch Cobie Rutherford



- **Beef Cattle Boot Camp** on **April 21, 2017** in Starkville, MS
- **MSU Beef Unit Field Day** on **April 29, 2017** in Starkville, MS

## Equine Events – Dr. Clay Cavinder



- **Management 101: Ranch Horse Series**-Tues. 6-9 pm in Verona, **April 11-May 16**
- **Cow Horse and Ranch Handling Clinic** on **May 13, 2017** from **9am - 3pm**—prepare for competing in 2 new classes at the 2017 State 4H Show. \$30 fee; Lunch provided; Forrest Co. Multipurpose Center, Hattiesburg, MS
- For more info, contact Dr. Cavinder at [clay.cavinder@msstate.edu](mailto:clay.cavinder@msstate.edu)

## 4-H Events – Dr. Dean Jousan



- **State 4-H Livestock Judging Contest**, MSU South Farm, Starkville on **Saturday, May 20, 2017**.

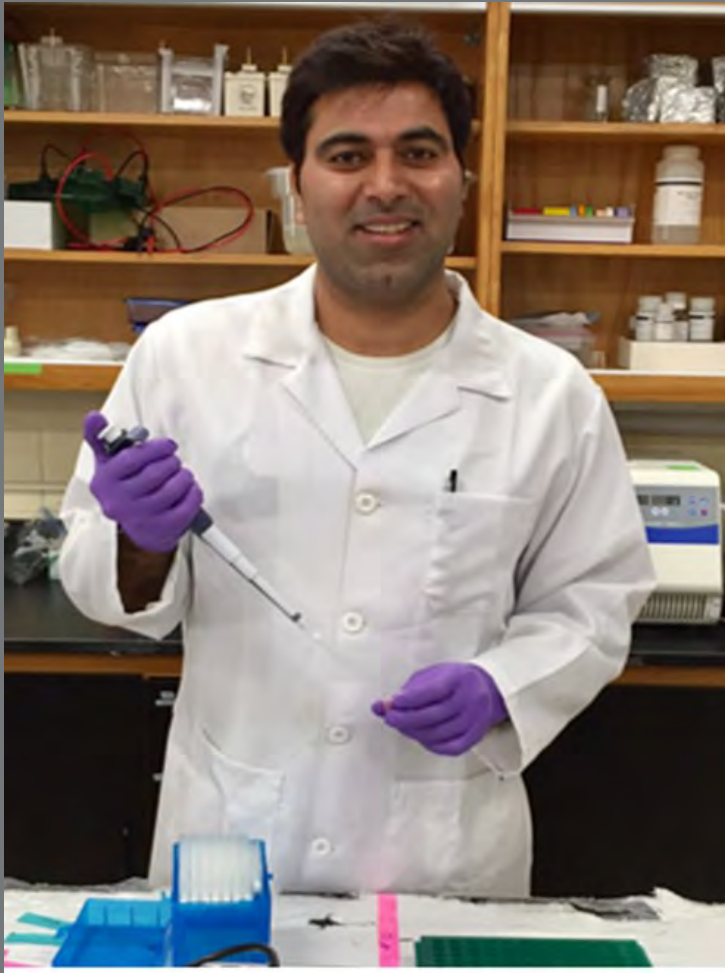
## Dairy Events – Dr. Amanda Stone



- **Bearden Dairy Research Center Open House:** May 20, 2017

# FUTURE FRONTIERS OF SCIENCE

By Dr. Erdogan Memili



## Kutchy receives COMPASS Outreach Grant from the American Society of Cell Biology

Naseer A. Kutchy, a Ph.D. candidate in the Department of Animal and Dairy Sciences, received Committee for Postdocs and Students (COMPASS) Outreach Grant (\$500) from the American Society of Cell Biology (ASCB; <http://www.ascb.org/>) for his proposal titled “*Cell Biology for Life*”.

The goals of the funded project are to inspire middle school students to study the essential unit of life and encourage careers in science, and help build a sustainable resource for the study of cell biology at Starkville Science Club. (<https://starkvillescienceclub.wordpress.com/>)

The rationale is that students will develop better understanding and appreciation of cell biology and pursue careers in science. The significance is that the students empowered with knowledge of cell biology will help advance science and solve major challenges in agriculture, natural resources, and medicine.

Working under the guidance of his project advisors, **Dr. Erdogan Memili** of Department of Animal and Dairy Sciences, and Dr. Jessica Tegt of Department of Wildlife, Fisheries, and Aquaculture, Naseer plans to purchase microscopes and slides of different cell types for Starkville Science Club. In addition, Naseer will develop and deliver a presentation and workshop for the middle school students in Starkville Science Club.

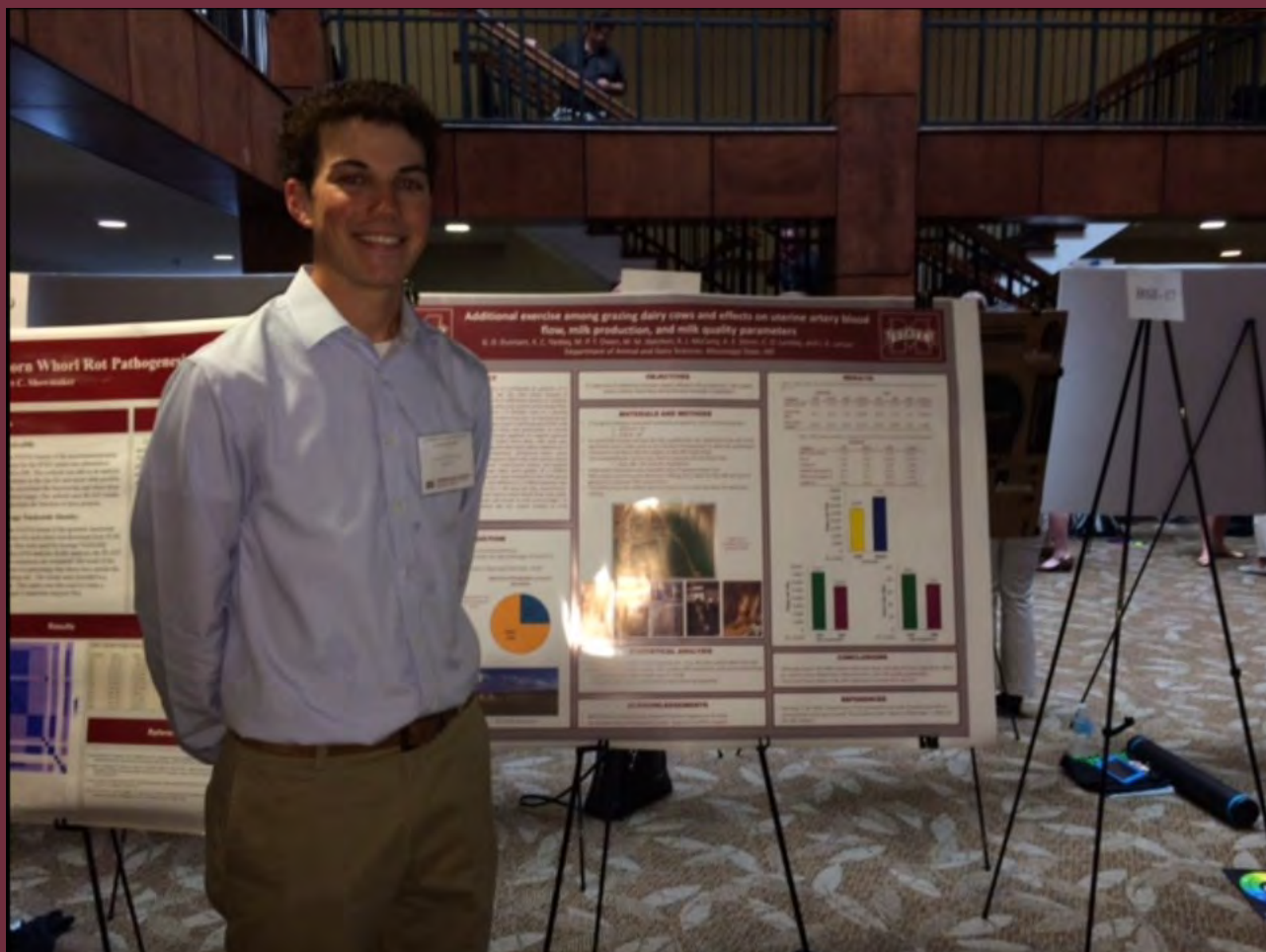
Recipient of the competitive Ph.D. fellowship from the Indian Council for Agricultural Research (ICAR), Naseer, is pursuing his dissertation research “*Sperm Genetic and Epigenetic Mechanisms Regulating Bull Fertility*” with guidance from his graduate advisor and mentor, **Dr. Memili**.



# 2017 Undergraduate Research Symposium hosted by the Shackouls Honors College



By Dr. Jamie Larson



Gunnar Dunham conducted a project involving the grazing dairy cows at the Bearden Dairy Research Center. The aim of this study was to determine if additional exercise in grazing, lactating dairy cows affected milk production, milk quality, and uterine artery blood flow during late gestation.

We put pedometers on grazing cows and walked them daily to increase the number of steps they took. This did not change milk production or quality and did not alter blood flow to the uterus during late gestation.

Undergraduate volunteers assisted Gunnar and he worked closely with several graduate students and **Drs. Stone, Lemley and Larson.**

# EXCELLENCE in UNDERGRADUATE RESEARCH

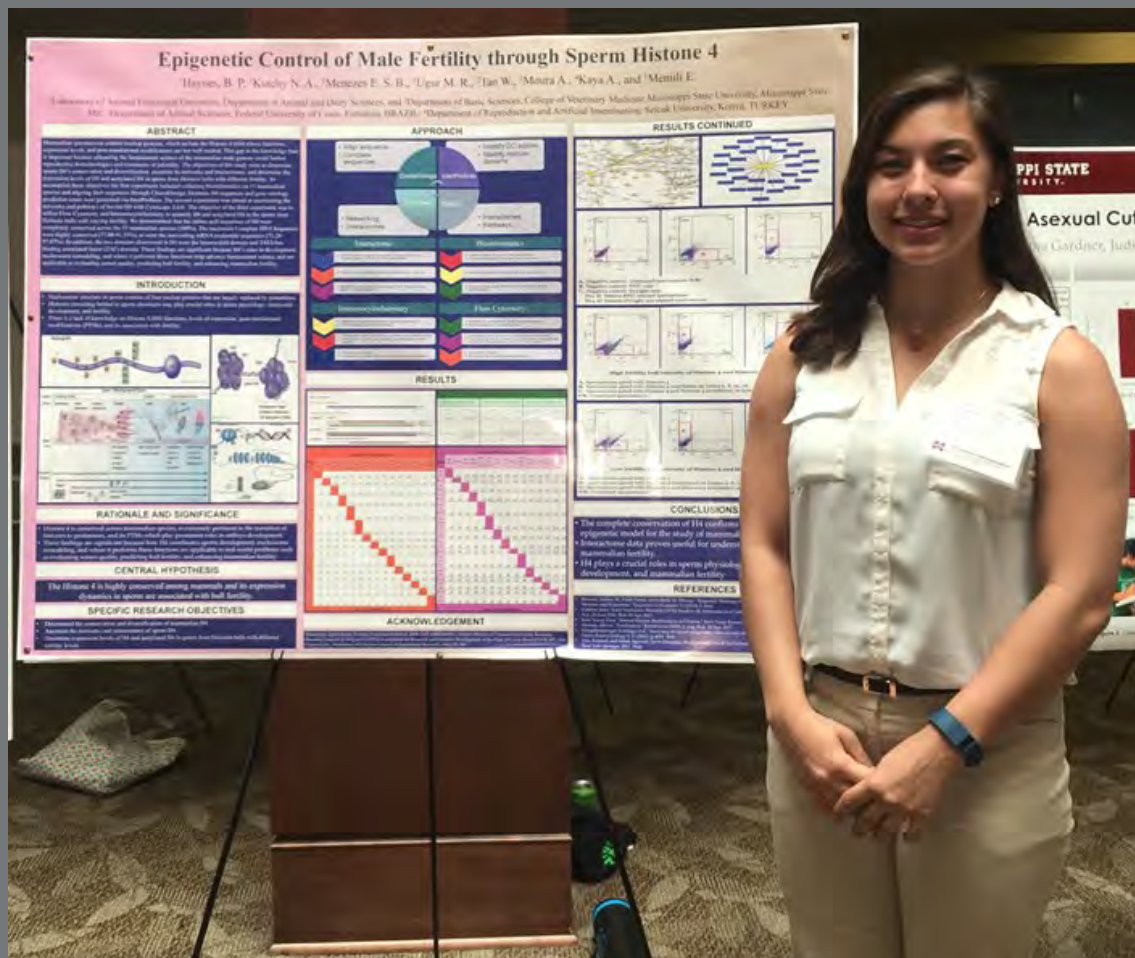
By Dr. Erdogan Memili



Peyton Haynes, a senior majoring in Animal and Dairy Sciences with a concentration of science/veterinary medicine, and minoring in chemistry, has received second best in the Biological Sciences and Engineering category and an honorable mention in the Public Health abstract competition at Mississippi State University's Spring Undergraduate Research Symposium. (<http://www.honors.msstate.edu/research>)

On Thursday April 13, 2017, Peyton presented her poster "Epigenetic Control of Male Fertility through Sperm Histone 4" and spoke on her topic for the Thesis Research Competition at the Symposium.

Peyton's presentations stem from her research in Dr. Erdogan Memili's laboratory where she has also received guidance from graduate mentor Naseer Kutchy, and others, and took the class ADS 4440 Research Experiential Practicum as well.







THE DEPARTMENT OF ANIMAL AND  
DAIRY SCIENCES AT  
MISSISSIPPI STATE UNIVERSITY

*cordially invite you to attend the*

**2017 ANNUAL AWARDS BANQUET**

*Monday April 24, 2017*

*Hors d'oeuvres and live music beginning at 6:30*

*Program beginning at 7:00*

*Desserts and music following*

*East Building B, MSU campus*



*Please RSVP by April 17th*

*662-325-2802 or [J.Larson@msstate.edu](mailto:J.Larson@msstate.edu)*

 **CRAWLIN' CALEB'S  
BLUES REVUE**





**Graduate Student Assistantship  
Dairy Systems Management  
Department of Animal and Dairy Sciences  
Mississippi State University**

One graduate research assistantship (M.S. in Animal and Dairy Sciences) will be available for a fall 2017 start with a focus on pasture dairy management, including methods to abate heat and prevent mastitis.

This assistantship includes an annual salary stipend, tuition and fees, and health insurance benefits. Each student will also have the opportunity to be involved in other departmental activities including participation in dairy Extension programs, assisting with dairy 4-H activities, assisting with undergraduate courses, and presenting work at regional and national meetings.

**Qualifications:**

Applicants must have earned a BS degree in animal sciences, biology, or a related field with a minimum 3.0 GPA. The ideal student will have a strong background in animal production, a strong work ethic, and excellent written and oral communication skills. Experience with dairy cattle is preferred. Additionally, applicants should have an interest in assisting with dairy Extension activities. The student should be able to work independently and within a team environment.

**Application Process:**

1. Contact Dr. Amanda Stone ([amanda.stone@msstate.edu](mailto:amanda.stone@msstate.edu)) by email with (1) a statement of interest, (2) a copy of a current resume/CV, (3) and current GPA/GRE scores.
2. Complete the official graduate program application:  
[https://mybanner.msstate.edu/prod/wwwskzlog.P\\_Displ.cgi?Non](https://mybanner.msstate.edu/prod/wwwskzlog.P_Displ.cgi?Non)

Applications will be accepted until May 31, 2017 or until a candidate is found.

Contact Amanda Stone at [amanda.stone@msstate.edu](mailto:amanda.stone@msstate.edu) or 662-769-9941 if you have any questions or want to learn more about potential projects.

## 2017 Refereed Publications:

- 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: