



**Sunday, January 22, 2023**

**Undergraduate Student Competition**

Chair: W. Brandon Smith, Auburn University; Zully Contreras-Correa, Mississippi State University  
2:00 PM - 3:00 PM  
Salon F

2:00 p.m. **Undergraduate Student Competition Introduction and Logistics**

2:10 p.m. 4 **Survey of mycoplasma wenyonii infection in a Texas beef battle herd**  
Nicole A. Bloch <sup>1</sup>, Barry Lambert <sup>1</sup>, Jeff A. Brady <sup>2</sup>, Kimberly B. Wellmann <sup>3</sup>, Dennis Reed <sup>4</sup>,  
Cheyenne L. Runyan <sup>1</sup>

<sup>1</sup>Tarleton State University, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>Department of Animal Science, Tarleton State University, <sup>4</sup>Dublin Veterinary Clinic

2:15 p.m. 5 **Effect of soy co-products in supplements for grazing cattle on growth, complete blood cell counts, and inflammatory response following a lipopolysaccharide challenge**

Bralee S. Lansdell <sup>1</sup>, Kirsten A. Midkiff <sup>2</sup>, Rachel M. Scott <sup>1</sup>, Robin A. Cheek <sup>2</sup>, Brittini P. Littlejohn <sup>1</sup>,  
Jeremy G. Powell <sup>2</sup>, Doug L. Galloway <sup>2</sup>, Jana L. Reynolds <sup>2</sup>, Benjamin P. Shoulders <sup>2</sup>, Beth B. Kegley <sup>3</sup>

<sup>1</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science, <sup>2</sup>University of Arkansas System Division of Agriculture, <sup>3</sup>University of Arkansas Division of Agriculture

2:20 p.m. 6 **Comparison of ammonia concentrations between flush and pull-plug waste management systems in wean-finish swine barns**

Olivia J. Kittle <sup>1</sup>, Suzanne M. Leonard <sup>1</sup>, Mark Knauer <sup>1</sup>, Glen Almond <sup>1</sup>  
<sup>1</sup>North Carolina State University

2:25 p.m. 7 **Assessment of a chew-sensor technology for quantifying feeding behaviors in sheep**

Shelby L. Major <sup>1</sup>, Jennifer R. Weinert-Nelson <sup>1</sup>, Jessica Werner <sup>2</sup>, Donald Ely <sup>3</sup>, Tracy Hamilton <sup>1</sup>,  
Matthew Hamilton <sup>3</sup>, LeeAnn Jacks <sup>3</sup>, Brittany Harlow <sup>1</sup>

<sup>1</sup>USDA-ARS, Forage-Animal Production Research Unit, <sup>2</sup>University of Hohenheim, Animal Nutrition and Rangeland Management in the Tropics and Subtropics, <sup>3</sup>University of Kentucky, Department of Animal and Food Sciences

2:30 p.m. 8 **Differential growth performance in conventionally and artificially raised lambs fed high-concentrate and high-forage post-weaning diets**

Katherine G. Parsley <sup>1</sup>, Jennifer R. Weinert-Nelson <sup>2</sup>, Donald Ely <sup>1</sup>, Tracy Hamilton <sup>2</sup>, Matthew Hamilton <sup>1</sup>,  
LeeAnn Jacks <sup>1</sup>, Brittany Harlow <sup>2</sup>

<sup>1</sup>University of Kentucky, Department of Animal and Food Sciences, <sup>2</sup>USDA-ARS, Forage-Animal Production Research Unit

2:35 p.m. 9 **Relationship between progesterone and reproductive tract microbiota in pregnant gilts**

Erin Stockland<sup>1</sup>, Kyle J. Hickman-Brown<sup>1</sup>, Molly S. Smith<sup>1</sup>, Brooke E. McAnally<sup>1</sup>, Joe Cain<sup>1</sup>, Heewon Seo<sup>1</sup>, Fuller W. Bazer<sup>1</sup>, Greg Johnson<sup>1</sup>, Jeffrey G. Wiegert<sup>1</sup>, Rebecca K. Poole<sup>1</sup>  
<sup>1</sup>Texas A&M University

2:40 p.m. 10 **Preliminary effect of cottonseed as a source of gossypol on hepatic portal blood flow as an indicator of metabolism in meat does artificially infected with *Haemonchus contortus***

Emily Callender<sup>1</sup>, Nicolas Marchant<sup>1</sup>, Lindsey Dearborn<sup>1</sup>, Zully E. Contreras-Correa<sup>1</sup>, Caleb O. Lemley<sup>1</sup>, Michael Pesato<sup>2</sup>, Leyla Rios<sup>1</sup>  
<sup>1</sup>Mississippi State University, <sup>2</sup>College of Veterinary Medicine. Mississippi State University

2:45 p.m. 11 **Impact of a Cache Valley Fever outbreak on lambing performance in a landrace hair sheep flock: A case study**

MacKenzie Robertson<sup>1</sup>, Stephan Wildeus<sup>1</sup>, Dahlia O'Brien<sup>1</sup>, Kevin Pelzer<sup>2</sup>  
<sup>1</sup>Virginia State University, <sup>2</sup>Virginia Tech

2:50 p.m. 12 **The efficacy of a natural fungus (*Duddingtonia flagrans*) in controlling gastrointestinal nematodes in lactating meat goat does**

Javin Davis<sup>1</sup>, Dahlia O'Brien<sup>1</sup>, Kwame Matthews<sup>2</sup>, Stephan Wildeus<sup>1</sup>, Niki C. Whitley<sup>3</sup>, Susan Schoenian<sup>4</sup>  
<sup>1</sup>Virginia State University, <sup>2</sup>Delaware State University, <sup>3</sup>Fort Valley State University, <sup>4</sup>University of Maryland

**SERA 41 Symposium**

Chair: S. Leanne Dillard, Auburn University  
2:30 PM - 5:30 PM  
Salon C

**Graduate Student Competition - MS**

Chair: Rebecca Poole, Texas A&M University; Brittni Littlejohn, University of Arkansas System, Division of Agriculture, Department of Animal Science  
3:15 PM - 5:30 PM  
Salon F

3:15 p.m. **Graduate Student Competition - MS Introduction and Logistics**

3:25 p.m. 13 **Stockpiling Bahiagrass to extend the grazing season and decrease winter supplementation costs for South Alabama cattle producers**

Michael A. Agar<sup>1</sup>, Kim K. Mullenix<sup>1</sup>, Carol Vasco<sup>1</sup>, S. Maggie Justice<sup>1</sup>, Kelly Palmer<sup>1</sup>, Ken Kelley<sup>1</sup>, Josh Elmore<sup>1</sup>, Chris Parker<sup>1</sup>, Anthony Wiggins<sup>1</sup>  
<sup>1</sup>Auburn University

3:30 p.m. 14 **Mitigation strategies for heifer development on 'KY-31' tall fescue**

Madison L. Boone<sup>1</sup>, Russell C. Carrell<sup>2</sup>, Rush Fuller<sup>1</sup>, Leanne L. Dillard<sup>1</sup>  
<sup>1</sup>Auburn University, <sup>2</sup>Cargill Animal Nutrition

3:35 p.m. 15 **Search for non-genomic markers as puberty predictors in *Bos Indicus* cattle**

Meghan Campbell <sup>1</sup>, Cecilia Constantino c. Rocha <sup>1</sup>, Andrey Cordeiro <sup>1</sup>, Felipe Silva <sup>1</sup>, Thiago Martins <sup>2</sup>, Alexandra Bennett <sup>1</sup>, Todd Thrift <sup>1</sup>, Fernanda M. Rezende <sup>1</sup>, Raluca G. Mateescu <sup>1</sup>, Mario Binelli <sup>1</sup>

<sup>1</sup>University of Florida, <sup>2</sup>Mississippi State University

3:40 p.m. 16 **Supplement type influenced the immune response of nursing ewes to the natural challenge of gastrointestinal parasites while grazing in woodlands**

Santoshi Chaudhary <sup>1</sup>, Uma Karki <sup>1</sup>, Bhuwan Shrestha <sup>1</sup>, Sadikshya Lamsal <sup>1</sup>

<sup>1</sup>Tuskegee University

3:45 p.m. 17 **Using Photobiomodulation to improve Bovine Oocyte Maturation**

Kendall D. Richey <sup>1</sup>, Matt J. Hersom <sup>1</sup>, William C. Bridges <sup>1</sup>, Celina M. Checura <sup>1</sup>

<sup>1</sup>Clemson University

3:50 p.m. 18 **Influence of pregnant cattle grazing endophyte-infected tall fescue on innate immune response of male offspring**

Sidney N. Dunkel <sup>1</sup>, Don S. Hubbell <sup>2</sup>, Doug L. Galloway <sup>3</sup>, Charles R. Looney <sup>4</sup>, Jeremy G. Powell <sup>3</sup>, Brittni P. Littlejohn <sup>1</sup>

<sup>1</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science, <sup>2</sup>UA Livestock and Forestry Station, retired, <sup>3</sup>University of Arkansas System Division of Agriculture, <sup>4</sup>University of Arkansas

3:55 p.m. 19 **Relationship between pH in vagina and a successful pregnancy in small ruminant recipients**

Sarah-Jane French <sup>1</sup>, Cheyenne L. Runyan <sup>1</sup>, Andrew M. Cassens <sup>1</sup>, David Roper <sup>1</sup>

<sup>1</sup>Tarleton State University

4:00 p.m. 20 **The microbiome of reproductive tissues and amniotic and allantoic fluid of pregnant gilts during mid- and late gestation**

Kyle J. Hickman-Brown <sup>1</sup>, Molly S. Smith <sup>1</sup>, Brooke E. McAnally <sup>1</sup>, Joe Cain <sup>1</sup>, Heewon Seo <sup>1</sup>, Fuller W. Bazer <sup>1</sup>, Greg Johnson <sup>1</sup>, Jeffrey G. Wiegert <sup>1</sup>, Rebecca K. Poole <sup>1</sup>

<sup>1</sup>Texas A&M University

4:05 p.m. 191 **Effect of inclusion of hempseed meal on rumen papillae morphology and rumen fermentation of Boer X Spanish intact male goats**

Khim B. Ale <sup>1</sup>, Frank W. Abrahamsen <sup>1</sup>, Reshma Gurung <sup>2</sup>, Santoshi Chaudhary <sup>3</sup>, Tej Gautam <sup>3</sup>, Nar K. Gurung <sup>1</sup>

<sup>1</sup>Department of Agricultural and Environmental Sciences, College of Agriculture, Environment, and Nutrition Sciences, Tuskegee University, Tuskegee, AL 36088, USA, <sup>2</sup>Integrative Biosciences Ph.D. Program, Tuskegee University, Tuskegee, AL 36088, USA, <sup>3</sup>Tuskegee University

4:10 p.m. 22 **Influence of cell-mediated immune response classification on performance of heat-stressed dairy cattle**

Briana P. Johnston <sup>1</sup>, Mauricio X. S. Oliveira <sup>2</sup>, Carly A. Becker <sup>2</sup>, Thomas H. Welsh <sup>3</sup>, Ronald D. Randel <sup>4</sup>, Caleb O. Lemley <sup>5</sup>, Amanda E. Stone <sup>6</sup>, Brittini P. Littlejohn <sup>7</sup>

<sup>1</sup>Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville,

<sup>2</sup>Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State,

<sup>3</sup>Texas A&M University, Department of Animal Science, College Station, TX, <sup>4</sup>Texas A&M AgriLife Research, Overton, TX, <sup>5</sup>Mississippi State University, <sup>6</sup>Mississippi State University, Department Animal and Dairy Science, <sup>7</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science

4:15 p.m. **Graduate Student Competition - MS Break**

4:30 p.m. 23 **Comparison of whole cottonseed to a traditional supplement (20% breeder cubes) in commercial beef cows: impacts on animal performance, metabolites, and methane emissions**

Avianna A. Liuzzo <sup>1</sup>, Ryan R. Reuter <sup>1</sup>, Blake K. Wilson <sup>1</sup>

<sup>1</sup>Oklahoma State University

4:35 p.m. 24 **Effects of oral supplementation of Cannabidiol on young stallion behavior**

Cheyenne, A. C. Mason <sup>1</sup>, Payton C. Byaers <sup>1</sup>, Trinette N. Jones <sup>2</sup>, Barbara Jones <sup>2</sup>, Kimberly A. Guay <sup>2</sup>

<sup>1</sup>Tarleton State University, <sup>2</sup>Department of Animal Science, Tarleton State University

4:40 p.m. 25 **Effect of cyclic monensin feeding on *in situ* degradability of low quality forage fed to ruminally cannulated beef steers**

Lauren Smyth <sup>1</sup>, Jamie Foster <sup>2</sup>, Kayla Hook <sup>1</sup>, Natasha L. Mast <sup>3</sup>

<sup>1</sup>Texas A&M University - Kingsville, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>Texas A&M University Kingsville

4:45 p.m. 26 **Effect of monensin inclusion on the rumen prokaryote microbiome in *Bos indicus* and *Bos taurus* steers consuming bermudagrass hay**

Jennifer Giesey <sup>1</sup>, Jeff A. Brady <sup>2</sup>, Olabiyi Obayomi <sup>2</sup>, Tryon A. Wickersham <sup>3</sup>, Natasha L. Mast <sup>4</sup>

<sup>1</sup>Texas A&M University - Kingsville, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>Texas A&M University, <sup>4</sup>Texas A&M University Kingsville

4:50 p.m. 27 **Bacterial community diversity in fresh extended boar semen**

Brooke E. McAnally <sup>1</sup>, Molly S. Smith <sup>1</sup>, Jeffrey G. Wiegert <sup>1</sup>, Vignesh Palanisamy <sup>1</sup>, Sapna Chitlapilly Dass <sup>1</sup>, Rebecca K. Poole <sup>1</sup>

<sup>1</sup>Texas A&M University

4:55 p.m. 28 **Effect of dietary hempseed meal on growth performance and dry matter intake in yearling rough-stock bulls**

Samantha L. McGovern <sup>1</sup>, Jeff A. Brady <sup>2</sup>, Kimberly A. Guay <sup>1</sup>, Cheyenne L. Runyan <sup>3</sup>, Thomas W. Schwertner <sup>4</sup>, Lane A. Smith <sup>4</sup>, Ryon W. Springer <sup>1</sup>, Kimberly B. Wellmann <sup>1</sup>

<sup>1</sup>Department of Animal Science, Tarleton State University, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>Tarleton State University, <sup>4</sup>Department of Wildlife and Natural Resources, Tarleton State University

5:00 p.m. 29 **Impact of extended feeding duration on trained panel analysis of locally grown beef**

Elizabeth S. Neal <sup>1</sup>, Robin A. Cheek <sup>2</sup>, Shane Gadberry <sup>3</sup>, Jeremy G. Powell <sup>2</sup>, Derico Setyabrata <sup>4</sup>, Janeal W. Yancey <sup>5</sup>, Beth B. Kegley <sup>6</sup>, Kelly R. Vierck <sup>5</sup>

<sup>1</sup>Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville, AR, <sup>2</sup>University of Arkansas System Division of Agriculture, <sup>3</sup>UA Livestock and Forestry Station, <sup>4</sup>Purdue University, <sup>5</sup>Department of Animal Science, Division of Agriculture, University of Arkansas System, Fayetteville, <sup>6</sup>University of Arkansas Division of Agriculture

5:05 p.m. 30 **Prenatally stressed Brahman bull calves had elevated pro-inflammatory cytokines and transportation-induced mitochondrial impairments**

Jessica L. Simons <sup>1</sup>, Lauren T. Wesolowski <sup>2</sup>, Pier L. Semanchik <sup>1</sup>, Charles R. Long <sup>3</sup>, George A. Perry <sup>4</sup>, Ronald D. Randel <sup>4</sup>, Ryon Walker <sup>5</sup>, Thomas H. Welsh <sup>6</sup>, Sarah H. White-Springer <sup>7</sup>

<sup>1</sup>Texas A&M University and AgriLife Research, Department of Animal Science, <sup>2</sup>Department of Animal Science, Texas A&M University and Texas A&M AgriLife Research, <sup>3</sup>School of Veterinary Medicine and Biomedical Sciences, Texas A&M University, <sup>4</sup>Texas A&M AgriLife Research, Overton, TX, <sup>5</sup>Texas A&M University, <sup>6</sup>Texas A&M University, Department of Animal Science, College Station, TX, <sup>7</sup>Texas A&M University

5:10 p.m. 31 **Correlation of the reproductive microbiome and cytokine profiles with plasma progesterone concentrations in postpartum beef cows prior to timed artificial insemination**

Molly S. Smith <sup>1</sup>, Kyle J. Hickman-Brown <sup>1</sup>, Brooke E. McAnally <sup>1</sup>, Gabriela Dalmaso <sup>1</sup>, Ramiro V. Oliveira <sup>1</sup>, Ky Pohler <sup>1</sup>, Rebecca K. Poole <sup>1</sup>

<sup>1</sup>Texas A&M University

5:15 p.m. 32 **Depot-specific transcriptome and adipocyte metabolism in intramuscular and subcutaneous adipose tissue in beef cattle**

Alexandra P. Tegeler <sup>1</sup>, Jean Fiallo-Diez <sup>1</sup>, Tainara Michelotti <sup>1</sup>, Lauryn Flores <sup>1</sup>, Oscar J. Benitez <sup>1</sup>, Bradley J. Johnson <sup>1</sup>, Clarissa Strieder-Barboza <sup>1</sup>

<sup>1</sup>Texas Tech University

5:20 p.m. 33 **Supplementation level effects on early-weaned beef calves receiving annual ryegrass**

Joao Silva <sup>1</sup>, Joao Vendramini <sup>1</sup>, Philippe Moriel <sup>1</sup>, Hiran Silva <sup>1</sup>, Vinicius Izquierdo <sup>1</sup>, Jaime Garzon <sup>1</sup>, Nauara Lage <sup>1</sup>

<sup>1</sup>University of Florida

**Graduate Student Competition - PHD**

Chair: Rebecca Poole, Texas A&M University; Brittini Littlejohn, University of Arkansas System, Division of Agriculture, Department of Animal Science

4:00 PM - 5:30 PM

Salon E

4:00 p.m. **Graduate Student Competition - PHD Introduction and Logistics**

4:10 p.m. 34 **Successive bouts of exercise influences the inflammatory cytokine response in Thoroughbred horses regardless of recovery aid supplementation**

Madison R. Barshick <sup>1</sup>, Julia Riley <sup>1</sup>, Megan Pelletier <sup>1</sup>, Madison Gonzalez <sup>1</sup>, Sally Johnson <sup>1</sup>

<sup>1</sup>Virginia Polytechnic and State Institution

- 4:15 p.m. 35 **Effects of supplementing pre- and probiotic feed ingredients on performance, health, and physiological responses in feedlot cattle**  
Autumn Pickett <sup>1</sup>, Reinaldo F. Cooke <sup>1</sup>, Eduardo Colombo <sup>1</sup>, Luiz Fernando Dias Batista <sup>1</sup>, Alice P. Brandão <sup>1</sup>  
<sup>1</sup>Texas A&M University
- 4:20 p.m. 36 **Productive and physiological responses of feedlot cattle receiving different sources of Ca salts of fatty acids in the finishing diet**  
Eduardo Colombo <sup>1</sup>, Reinaldo F. Cooke <sup>1</sup>, Shea Mackey <sup>1</sup>, Autumn Pickett <sup>1</sup>, Luiz Fernando Dias Batista <sup>1</sup>, Ky Pohler <sup>1</sup>, Osvaldo Sousa <sup>2</sup>, Bruno I. Cappellozza <sup>3</sup>, Alice P. Brandão <sup>1</sup>  
<sup>1</sup>Texas A&M University, <sup>2</sup>Nutricorp, <sup>3</sup>Chr. Hansen A/S
- 4:25 p.m. 37 **Supplemented with Yucca schidigera extract to feedlot cattle consuming diets with or without monensin**  
Shea Mackey <sup>1</sup>, Reinaldo F. Cooke <sup>1</sup>, Autumn Pickett <sup>1</sup>, Egleu D. M Mendes <sup>2</sup>, Luiz Fernando Dias Batista <sup>1</sup>, Eduardo Colombo <sup>1</sup>  
<sup>1</sup>Texas A&M University, <sup>2</sup>Texas A&M University / Department of Animal Science
- 4:30 p.m. 38 **Effects of dietary supplementation with an immuno-modulator on feed intake and reproductive performance in sows**  
Richard T. Niblett <sup>1</sup>, Kimberly A. Williams <sup>1</sup>, Marguerite B. Cross <sup>1</sup>, Alexis L. Clapp <sup>1</sup>, Mark J. Estienne <sup>1</sup>  
<sup>1</sup>Virginia Tech
- 4:35 p.m. 39 **An in-vitro model of the equine fecal microbiome to assess how horse population affects fermentation following a starch challenge**  
Cassandra R. Gluck <sup>1</sup>, Vivek Fellner <sup>1</sup>, Sarah McLeod <sup>1</sup>, Sue Stuska <sup>2</sup>, Shannon E. Pratt-Phillips <sup>1</sup>  
<sup>1</sup>North Carolina State University, <sup>2</sup>Cape Lookout National Seashore
- 4:40 p.m. 40 **Texel genetics increase muscle growth by altering satellite cell characteristics**  
Maslyn A. Greene <sup>1</sup>, Susan K. Duckett <sup>1</sup>  
<sup>1</sup>Clemson University
- 4:45 p.m. 41 **Effect of finishing system on growth, efficiency, and carcass Quality of dairy × beef hybrids**  
Ally J. Grote <sup>1</sup>, Addie Wommack <sup>1</sup>, Garrett Farran <sup>1</sup>, Colton A. Robison <sup>1</sup>, Paul A. Beck <sup>1</sup>, Blake K. Wilson <sup>1</sup>, Troy Wistuba <sup>2</sup>, Olivia N. Genther Schroeder <sup>2</sup>  
<sup>1</sup>Oklahoma State University, <sup>2</sup>Purina Animal Nutrition
- 4:50 p.m. 42 **Adrenomedullin stimulates proliferation, migration and adhesion of porcine trophectoderm cells via CALCRL-AKT-TSC2-MTORC1 cell signaling pathway**  
Bangmin Liu <sup>1</sup>, Sudikshya Paudel <sup>1</sup>, William L. Flowers <sup>1</sup>, Jorge A. Piedrahita <sup>1</sup>  
<sup>1</sup>North Carolina State University
- 4:55 p.m. 43 **Metabolomic analysis of uterine luminal fluid during the peri-implantation period of pregnancy in pigs**  
Bangmin Liu <sup>1</sup>, Likun Duan <sup>1</sup>, Xiaojing Liu <sup>1</sup>, Xiaoqiu Wang <sup>1</sup>  
<sup>1</sup>North Carolina State University

5:00 p.m. 44 **Impacts of pre- and postpartum heat stress abatement on physiology and performance of grazing *Bos indicus* -influenced cow-calf pairs**

Vinicius Izquierdo<sup>1</sup>, Joao Silva<sup>1</sup>, Hiran Silva<sup>1</sup>, Juliana Ranches<sup>2</sup>, Jeffery A. Carroll<sup>3</sup>, Nicole C. Burdick Sanchez<sup>3</sup>, Joao Bittar<sup>1</sup>, Joao Vendramini<sup>1</sup>, Philippe Moriel<sup>1</sup>

<sup>1</sup>University of Florida, <sup>2</sup>Oregon State University; EOARC, <sup>3</sup>USDA-ARS, Livestock Issues Research Unit

5:05 p.m. 45 **Effects of genomic residual feed intake on performance, feed efficiency and greenhouse gas emissions in Holstein heifers**

Keara O'Reilly<sup>1</sup>, Gordon E. Carstens<sup>1</sup>, Jocelyn R. Johnson<sup>2</sup>, Nader Deeb<sup>2</sup>, Pablo Ross<sup>3</sup>

<sup>1</sup>Department of Animal Science, Texas A&M University, <sup>2</sup>ST Genetics, <sup>3</sup>STgenetics

5:10 p.m. 46 **Adrenomedullin: A novel peptide hormone for uterine receptivity and conceptus elongation in pigs?**

Sudikshya Paudel<sup>1</sup>, Bangmin Liu<sup>1</sup>, Magdalena J. Cummings<sup>1</sup>, Xiaoqiu Wang<sup>1</sup>

<sup>1</sup>North Carolina State University

5:15 p.m. 47 **Influence of melatonin supplementation in pregnant cattle consuming endophyte-infected tall fescue seed on offspring performance**

Rachel M. Scott<sup>1</sup>, Randi F. Benefield<sup>2</sup>, Charles R. Looney<sup>3</sup>, Rhonda C. Vann<sup>4</sup>, Beth B. Kegley<sup>5</sup>, Jeremy G. Powell<sup>6</sup>, Ken P. Coffey<sup>3</sup>, Caleb O. Lemley<sup>4</sup>, Brittini P. Littlejohn<sup>1</sup>

<sup>1</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science,

<sup>2</sup>Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville,

<sup>3</sup>University of Arkansas, <sup>4</sup>Mississippi State University, <sup>5</sup>University of Arkansas Division of Agriculture, <sup>6</sup>University of Arkansas System Division of Agriculture

## Monday, January 23, 2023

### Breeding and Genetics

Chair: Fernando Biase, Virginia Tech; Allison Renwick, The University of Tennessee College of Veterinary Medicine

8:00 AM - 10:15 AM

Salon D

8:00 a.m. 52 **Effects of oral supplementation of Cannabidiol on young Stallion behavior**

Cheyenne, A. C. Mason<sup>1</sup>, Payton C. Byaers<sup>1</sup>, Trinette N. Jones<sup>2</sup>, Barbara Jones<sup>2</sup>, Kimberly A. Guay<sup>2</sup>

<sup>1</sup>Tarleton State University, <sup>2</sup>Department of Animal Science, Tarleton State University

8:15 a.m. 53 **Effects of genomic residual feed intake on performance, feed efficiency and greenhouse gas emissions in Holstein heifers**

Keara O'Reilly<sup>1</sup>, Gordon E. Carstens<sup>1</sup>, Jocelyn R. Johnson<sup>2</sup>, Nader Deeb<sup>2</sup>, Pablo Ross<sup>3</sup>

<sup>1</sup>Department of Animal Science, Texas A&M University, <sup>2</sup>ST Genetics, <sup>3</sup>STgenetics

8:30 a.m. 54 **Image based sampling to assess horn fly abundance on cattle**

Amanda M. Warner<sup>1</sup>, Ashley Ling<sup>1</sup>, Taylor Krause<sup>1</sup>, Nancy Hinkle<sup>1</sup>, Bradley Heins<sup>1</sup>, Dean Pringle<sup>2</sup>, Samuel E. Aggrey<sup>1</sup>, Romdhane Rekaya<sup>1</sup>

<sup>1</sup>University of Georgia, <sup>2</sup>University of Florida

8:45 a.m. 55 **Investigating the potential benefits of an immunostimulant (mycobacterium cell wall fraction) treatment on increased pregnancy success of embryo transfer recipients**

Trinity Vidlund<sup>1</sup>, Stefania Pancini<sup>1</sup>, Guillermo Goncharenko<sup>1</sup>, Nicholas W. Dias<sup>1</sup>, Hannah Craun<sup>1</sup>, Zachary Klonicke<sup>1</sup>, Randall Hinshaw<sup>2</sup>, Matthew Switzer<sup>2</sup>, Ryan Giles<sup>2</sup>, Vitor R G. Mercadante<sup>3</sup>

<sup>1</sup>Virginia Tech, <sup>2</sup>Ashby Genetics, <sup>3</sup>Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

9:00 a.m. 56 **Relationship between pH in vagina and a successful pregnancy in small ruminant recipients**

Sarah-Jane French<sup>1</sup>, Cheyenne L. Runyan<sup>1</sup>, Andrew M. Cassens<sup>1</sup>, David Roper<sup>1</sup>

<sup>1</sup>Tarleton State University

9:15 a.m. 57 **Relationship between proportion of *Bos indicus* genetics of dams and calf performance from a 31-year multibreed herd dataset**

Thiago Martins<sup>1</sup>, Cecilia Constantino c. Rocha<sup>2</sup>, Joseph Danny D. Driver<sup>2</sup>, Owen Rae<sup>2</sup>, Mauricio A. Aguirre Elzo<sup>2</sup>, Raluca G. Mateescu<sup>2</sup>, José Eduardo E. Portela Santos<sup>2</sup>, Mario Binelli<sup>2</sup>

<sup>1</sup>Mississippi State University, <sup>2</sup>University of Florida

9:30 a.m. 58 **Reproductive performance of beef cow-calf operations in VA with a Fall or Spring Breeding Season**

Guillermo Goncharenko<sup>1</sup>, Stefania Pancini<sup>1</sup>, Nicholas W. Dias<sup>1</sup>, Hannah Craun<sup>1</sup>, Trinity Vidlund<sup>1</sup>, Zachary Klonicke<sup>1</sup>, Tracey Redifer<sup>1</sup>, John Currin<sup>1</sup>, Sherrie Clark-Deener<sup>1</sup>, Jamie L. Stewart<sup>1</sup>, Vitor R G. Mercadante<sup>2</sup>

<sup>1</sup>Virginia Tech, <sup>2</sup>Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

9:45 a.m. 59 **Supranutritional selenium supplementation during different trimesters of pregnancy in beef cows affects gene expression of monocyte cells**

Wellison Jarles j. Da Silva Diniz<sup>1</sup>, Gerd Bobe<sup>2</sup>, Joseph J. Klopfenstein<sup>2</sup>, T. Zane Davis<sup>3</sup>, Alison K. Ward<sup>4</sup>, Jean A. Hall<sup>2</sup>

<sup>1</sup>Auburn University, <sup>2</sup>Oregon State University, <sup>3</sup>USDA-ARS-Poisonous Plant Research Lab, <sup>4</sup>North Dakota State University

10:00 a.m. 60 **Survey of mycoplasma wenyonii infection in a Texas beef battle herd**

Nicole A. Bloch<sup>1</sup>, Barry Lambert<sup>1</sup>, Jeff A. Brady<sup>2</sup>, Kimberly B. Wellmann<sup>3</sup>, Dennis Reed<sup>4</sup>, Cheyenne L. Runyan<sup>1</sup>

<sup>1</sup>Tarleton State University, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>Department of Animal Science, Tarleton State University, <sup>4</sup>Dublin Veterinary Clinic

**Kunkle Symposium**

Chair: Jennifer J. Tucker, University of Georgia

8:00 AM - 11:30 AM

Salon C

8:00 a.m. **Kunkle Symposium Introduction**



8:05 a.m. 50 **Gene editing applications in livestock production**

Andre Garcia <sup>1</sup>

<sup>1</sup>American Angus Association

8:50 a.m. 49 **Prediction of beef heifer reproductive potential using molecular markers**

Paul W W. Dyce <sup>1</sup>, Priyanka Banerjee <sup>1</sup>, Wellison Jarles j. Da Silva Diniz <sup>1</sup>, Soren P. Rodning <sup>1</sup>

<sup>1</sup>Auburn University

9:35 a.m. **Kunkle Symposium Break**

9:50 a.m. 51 **Use of plant secondary metabolites and impact on beef cattle production**

Michael D. Flythe <sup>1</sup>, Brittany Harlow <sup>2</sup>

<sup>1</sup>Forage-Animal Production Research Unit/ USDA-ARS, <sup>2</sup>USDA-ARS, Forage-Animal Production Research Unit

10:35 a.m. 192 **Use of automated technologies in dairy cattle reproduction**

Ronaldo Cerri <sup>1</sup>

<sup>1</sup>The University of British Columbia

### **Physiology I**

Chair: Vitor R Mercadante, Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

8:00 AM - 11:45 AM

Salon G

8:00 a.m. 66 **Randel Lecture: Ensuring a Leading Role for USA Animal Protein in Our World's Food Future**

Jack H. Britt <sup>1</sup>

<sup>1</sup>North Carolina State University, Raleigh NC

9:00 a.m. 67 **Influence of cell-mediated immune response classification on performance of heat-stressed dairy cattle**

Briana P. Johnston <sup>1</sup>, Mauricio X. S. Oliveira <sup>2</sup>, Carly A. Becker <sup>2</sup>, Thomas H. Welsh <sup>3</sup>, Ronald D. Randel <sup>4</sup>, Caleb O. Lemley <sup>5</sup>, Amanda E. Stone <sup>6</sup>, Brittini P. Littlejohn <sup>7</sup>

<sup>1</sup>Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville,

<sup>2</sup>Department of Animal and Dairy Sciences, Mississippi State University, Mississippi State,

<sup>3</sup>Texas A&M University, Department of Animal Science, College Station, TX, <sup>4</sup>Texas A&M

AgriLife Research, Overton, TX, <sup>5</sup>Mississippi State University, <sup>6</sup>Mississippi State University,

Department Animal and Dairy Science, <sup>7</sup>University of Arkansas System, Division of Agriculture,

Department of Animal Science

9:15 a.m. 68 **Characterization of bovine extracellular vesicles isolated from colostrum**

Audrey Brown <sup>1</sup>, Rafaela Rodrigues dos Santos <sup>2</sup>, Yeseul Ahn <sup>3</sup>, Ulrich Bickel <sup>3</sup>, Fernanda T.

Rosa <sup>2</sup>

<sup>1</sup>School of Veterinary Medicine, Texas Tech University, <sup>2</sup>Texas Tech University, <sup>3</sup>Jerry H. Hodge School of Pharmacy, Texas Tech University Health Sciences Center

9:30 a.m. 69 **Correlation of the reproductive microbiome and cytokine profiles with plasma progesterone concentrations in postpartum beef cows prior to timed artificial insemination**

Molly S. Smith<sup>1</sup>, Kyle J. Hickman-Brown<sup>1</sup>, Brooke E. McAnally<sup>1</sup>, Gabriela Dalmaso<sup>1</sup>, Ramiro V. Oliveira<sup>1</sup>, Ky Pohler<sup>1</sup>, Rebecca K. Poole<sup>1</sup>  
<sup>1</sup>Texas A&M University

9:45 a.m. **Physiology I Break**

10:00 a.m. 70 **Influence of melatonin supplementation in pregnant cattle consuming endophyte-infected tall fescue seed on performance and uterine artery hemodynamics**

Rachel M. Scott<sup>1</sup>, Randi F. Benefield<sup>2</sup>, Charles R. Looney<sup>3</sup>, Jeremy G. Powell<sup>4</sup>, Beth B. Kegley<sup>5</sup>, Ken P. Coffey<sup>3</sup>, Caleb O. Lemley<sup>6</sup>, Brittni P. Littlejohn<sup>1</sup>  
<sup>1</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science,  
<sup>2</sup>Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville,  
<sup>3</sup>University of Arkansas, <sup>4</sup>University of Arkansas System Division of Agriculture, <sup>5</sup>University of Arkansas Division of Agriculture, <sup>6</sup>Mississippi State University

10:15 a.m. 71 **Effects of periparturient vaginal betadine lavages on dam and neonatal immune responses**

Riley D. Messman<sup>1</sup>, Rebecca M. Swanson<sup>1</sup>, Caleb O. Lemley<sup>1</sup>  
<sup>1</sup>Mississippi State University

10:30 a.m. 72 **Seminal plasma uterine priming reduces offspring growth and alters uterine artery indices of vascular resistance in embryo-recipient beef cows.**

Rebecca M. Swanson<sup>1</sup>, Riley D. Messman<sup>1</sup>, Caleb O. Lemley<sup>1</sup>  
<sup>1</sup>Mississippi State University

10:45 a.m. 73 **Comparison of GnRH administration day in the 7 & 7 Synch versus 8 & 6 Synch protocol for fixed-timed artificial insemination in beef heifers**

Clayton E. Schowe<sup>1</sup>, Wyatt E. Weber<sup>1</sup>, B R. Kutz<sup>1</sup>, Benjamin P. Shoulders<sup>2</sup>, Jana L. Reynolds<sup>2</sup>, Jeremy G. Powell<sup>2</sup>, Charles R. Looney<sup>1</sup>  
<sup>1</sup>University of Arkansas, <sup>2</sup>University of Arkansas System Division of Agriculture

11:00 a.m. 74 **Ovulatory follicle and corpus luteum development of *Bos taurus* cows under nutrient restriction**

Hannah Craun<sup>1</sup>, Guillermo Goncherenko<sup>1</sup>, Stefania Pancini<sup>1</sup>, Nicholas W. Dias<sup>1</sup>, Trinity Vidlund<sup>1</sup>, Zachary Klonicke<sup>1</sup>, Baker White<sup>1</sup>, Emma Seekford<sup>1</sup>, Gabriel J. Pent<sup>2</sup>, Darren D. H. Henry<sup>3</sup>, Alan Ealy<sup>4</sup>, Fernando Biase<sup>1</sup>, Ky Pohler<sup>5</sup>, Cliff C. Lamb<sup>5</sup>, Vitor R G. Mercadante<sup>6</sup>  
<sup>1</sup>Virginia Tech, <sup>2</sup>Virginia Tech - SVAREC, <sup>3</sup>University of Georgia, <sup>4</sup>Virginia Polytechnic Institute and State University, <sup>5</sup>Texas A&M University, <sup>6</sup>Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

11:15 a.m. 75 **Using Photobiomodulation to improve Bovine Oocyte Maturation**

Kendall D. Richey<sup>1</sup>, Matt J. Hersom<sup>1</sup>, William C. Bridges<sup>1</sup>, Celina M. Checura<sup>1</sup>  
<sup>1</sup>Clemson University

11:30 a.m. 76 **Search for non-genomic markers as puberty predictors in *Bos Indicus* cattle**

Meghan Campbell<sup>1</sup>, Cecilia Constantino c. Rocha<sup>1</sup>, Andrey Cordeiro<sup>1</sup>, Felipe Silva<sup>1</sup>, Thiago Martins<sup>2</sup>, Alexandra Bennett<sup>1</sup>, Todd Thrift<sup>1</sup>, Fernanda M. Rezende<sup>1</sup>, Raluca G. Mateescu<sup>1</sup>, Mario Binelli<sup>1</sup>

<sup>1</sup>University of Florida, <sup>2</sup>Mississippi State University

**Extension**

Chair: Deidre Harmon, North Carolina State University; Audrey Earnhardt, Texas A&M AgriLife Research

8:30 AM - 10:00 AM  
Salon E

8:30 a.m. 178 **Academic Quadrathlon as an in-service training tool**

Katie Mason<sup>1</sup>, Malerie Fancher<sup>1</sup>, Jennie L. Ivey<sup>1</sup>, Lew G. Strickland<sup>1</sup>, Troy N. Rowan<sup>2</sup>, Elizabeth Eckelkamp<sup>1</sup>, Justin D. Rhinehart<sup>1</sup>, Jessica Shanks<sup>1</sup>, Aaron Fisher<sup>1</sup>, Tom Tabler<sup>1</sup>, Saulo Zoca<sup>1</sup>, Sawyer Main<sup>1</sup>

<sup>1</sup>University of Tennessee Institute of Agriculture, <sup>2</sup>University of Tennessee - Knoxville

8:45 a.m. 179 **An evaluation of Oklahoma beef calf market characteristic trends from 2011 to 2021**

Timothy P. Vining<sup>1</sup>, Kellie C. Raper<sup>1</sup>, Derrell S. Peel<sup>1</sup>, Jeff Robe<sup>1</sup>, Brian M. Freking<sup>1</sup>, Dana L. Zook<sup>1</sup>, Marty G. New<sup>1</sup>, Paul A. Beck<sup>1</sup>

<sup>1</sup>Oklahoma State University

9:00 a.m. 180 **Assessment of weaning and backgrounding management practices used by Alabama cattle producers**

S. Maggie Justice<sup>1</sup>, Kim K. Mullenix<sup>1</sup>, Daniel A. Tigue<sup>1</sup>, Michelle F. Elmore<sup>1</sup>, Callie Stanford<sup>1</sup>, Max Runge<sup>1</sup>

<sup>1</sup>Auburn University

9:15 a.m. 181 **Effect of temperature and humidity on daily feeding behavior in swine**

Zack Peppmeier<sup>1</sup>, Suzanne M. Leonard<sup>1</sup>, Mark Knauer<sup>1</sup>

<sup>1</sup>North Carolina State University

9:30 a.m. 182 **North Carolina Small Ruminant Improvement Program workshops build producer knowledge of important management techniques**

Johnny R. Rogers<sup>1</sup>, Andrew R. Weaver<sup>2</sup>, Emily Cope<sup>1</sup>

<sup>1</sup>North Carolina State University, <sup>2</sup>Department of Animal Science, North Carolina State University

9:45 a.m. 183 **Sow location within farrowing room impacts reproduction during heat stress**

Mark Knauer<sup>1</sup>, Zack Peppmeier<sup>1</sup>, Suzanne M. Leonard<sup>1</sup>

<sup>1</sup>North Carolina State University

## Teaching and Undergraduate Education

Chair:

10:00 AM - 11:45 AM

Salon F

10:00 a.m. 77 **Assessing value of a Novel NC State University two-week Animal Science study abroad course In Chiang Mai, Thailand for post-pandemic student education**

Jenna Wagner <sup>1</sup>, Ethan Renfro <sup>1</sup>, Jane Stine <sup>2</sup>, Erica Ward <sup>2</sup>, Kimberly D. Ange-van Heugten <sup>1</sup>  
<sup>1</sup>NC State University, <sup>2</sup>Loop Abroad

10:15 a.m. 78 **Assessment of a chew-sensor technology for quantifying feeding behaviors in sheep**

Shelby L. Major <sup>1</sup>, Jennifer R. Weinert-Nelson <sup>1</sup>, Jessica Werner <sup>2</sup>, Donald Ely <sup>3</sup>, Tracy Hamilton <sup>1</sup>, Matthew Hamilton <sup>3</sup>, LeeAnn Jacks <sup>3</sup>, Brittany Harlow <sup>1</sup>  
<sup>1</sup>USDA-ARS, Forage-Animal Production Research Unit, <sup>2</sup>University of Hohenheim, Animal Nutrition and Rangeland Management in the Tropics and Subtropics, <sup>3</sup>University of Kentucky, Department of Animal and Food Sciences

10:30 a.m. 79 **Cross-training future workforce on data handling and interpretation for precision agriculture systems**

Sushil Paudyal <sup>1</sup>, Mahendra Bhandari <sup>2</sup>, Lucy Huang <sup>3</sup>  
<sup>1</sup>Texas A&M University, <sup>2</sup>Texas A&M Agrilife Research, <sup>3</sup>Texas A&M University Corpus Christi

10:45 a.m. 80 **Differential growth performance in conventionally and artificially raised lambs fed high-concentrate and high-forage post-weaning diets**

Katherine G. Parsley <sup>1</sup>, Jennifer R. Weinert-Nelson <sup>2</sup>, Donald Ely <sup>1</sup>, Tracy Hamilton <sup>2</sup>, Matthew Hamilton <sup>1</sup>, LeeAnn Jacks <sup>1</sup>, Brittany Harlow <sup>2</sup>  
<sup>1</sup>University of Kentucky, Department of Animal and Food Sciences, <sup>2</sup>USDA-ARS, Forage-Animal Production Research Unit

11:00 a.m. 81 **Examination of undergraduate and graduate student experiences in an undergraduate research course**

Maslyn A. Greene <sup>1</sup>, Susan K. Duckett <sup>1</sup>  
<sup>1</sup>Clemson University

11:15 a.m. 82 **Impact of Applying Quality Matters Essential Standards in an Animal Science Physiology Course**

Shweta Trivedi <sup>1</sup>, Kylie Deuser <sup>2</sup>, Yaxin Zheng <sup>2</sup>  
<sup>1</sup>NC State University, <sup>2</sup>NC State

11:30 a.m. 189 **Network analysis of survey results from a large enrollment course: Investigating dynamics among students' background, career aspirations and decision-making related to Anima Science**

Alice P. Brandão <sup>1</sup>, Sushil Paudyal <sup>1</sup>, Shawn Ramsey <sup>1</sup>, Kathrin Dunlap <sup>1</sup>  
<sup>1</sup>Texas A&M University

## Meats

Chair: Dana Hanson, North Carolina State University

10:30 AM - 12:00 PM

Salon D

10:30 a.m. 62 **Awardee Talk: Correlation between color parameters and internal and surface metmyoglobin content of the *psoas major* muscle**

Morgan Denzer<sup>1</sup>, Daqing Piao<sup>1</sup>, Morgan Pfeiffer<sup>1</sup>, Gretchen G. Mafi<sup>1</sup>, Ranjith Ramanathan<sup>1</sup>  
<sup>1</sup>Oklahoma State University

11:00 a.m. 61 **Altering fatty acid ratios to regulate Adipocyte Hypertrophy *In vitro***

Aliute-Nkoyo S. Udoka<sup>1</sup>, Susan K. Duckett<sup>1</sup>

<sup>1</sup>Clemson University

11:15 a.m. 63 **Fatty acid profile of beef from feedlot young bulls of two genetic groups**

Barbara Rodrigues<sup>1</sup>, Jhones O. Sarturi<sup>1</sup>, Leandro Samia<sup>2</sup>, Ramon C. Alvarenga<sup>3</sup>, Dante Lanna<sup>4</sup>, Fernando Souza<sup>2</sup>

<sup>1</sup>Texas Tech University, <sup>2</sup>Federal University of Minas Gerais, <sup>3</sup>Brazilian Agricultural Research Corporation Maize & Sorghum, <sup>4</sup>University of São Paulo

11:30 a.m. 64 **Impact of extended feeding duration on trained panel analysis of locally grown beef**

Elizabeth S. Neal<sup>1</sup>, Robin A. Cheek<sup>2</sup>, Shane Gadberry<sup>3</sup>, Jeremy G. Powell<sup>2</sup>, Derico Setyabrata<sup>4</sup>, Janeal W. Yancey<sup>5</sup>, Beth B. Kegley<sup>6</sup>, Kelly R. Vierck<sup>5</sup>

<sup>1</sup>Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville, AR, <sup>2</sup>University of Arkansas System Division of Agriculture, <sup>3</sup>UA Livestock and Forestry Station, <sup>4</sup>Purdue University, <sup>5</sup>Department of Animal Science, Division of Agriculture, University of Arkansas System, Fayetteville, <sup>6</sup>University of Arkansas Division of Agriculture

11:45 a.m. 65 **Texel genetics increase muscle growth by altering satellite cell characteristics**

Maslyn A. Greene<sup>1</sup>, Susan K. Duckett<sup>1</sup>

<sup>1</sup>Clemson University

## Pastures and Forages I

Chair: Paul Beck, Oklahoma State University

1:00 PM - 3:00 PM

Salon D

1:00 p.m. 109 **Invited Talk: Grazing management and stocking strategy decisions for pasture-beef systems: Experimental confirmation vs testimonials and perceptions**

Monte Rouquette<sup>1</sup>

<sup>1</sup>Texas A&M AgriLife Research at Overton

1:30 p.m. 110 **Improving southern bermudagrass pastures with alfalfa: An evaluation of the impacts of alfalfa establishment timing and crabgrass competition**

Kendall S. Whatley<sup>1</sup>, Renata N. Oakes<sup>2</sup>, Lisa T. L. Baxter<sup>1</sup>, Jennifer J. J. Tucker<sup>1</sup>

<sup>1</sup>University of Georgia, <sup>2</sup>University of Tennessee

1:45 p.m. 111 **Forage mass and nutritive value of cool-season grass-legume mixtures overseeded into bahiagrass pastures**

Peyton Zessin<sup>1</sup>, Kim K. Mullenix<sup>1</sup>, Carol Vasco<sup>1</sup>, Liliane Silva<sup>2</sup>, S. Maggie Justice<sup>1</sup>, Josh Elmore<sup>1</sup>, Leanne L. Dillard<sup>1</sup>, Chris Parker<sup>1</sup>, Micayla H. West<sup>3</sup>

<sup>1</sup>Auburn University, <sup>2</sup>Clemson University, <sup>3</sup>Auburn University

2:00 p.m. 112 **Herbage mass, nutritive value, and grain yield of four wheat varieties managed as a dual-purpose crop**

Micayla H. West<sup>1</sup>, Brandon B. Smith<sup>2</sup>, Adam Rabinowitz<sup>2</sup>, Kim K. Mullenix<sup>2</sup>, Leanne L. Dillard<sup>2</sup>

<sup>1</sup>Auburn University, <sup>2</sup>Auburn University

2:15 p.m. 113 ***In Situ* digestive kinetics of four bermudagrass cultivars**

Abigail R. Hines<sup>1</sup>, Werner G. Bergen<sup>1</sup>, Kim K. Mullenix<sup>1</sup>, Leanne L. Dillard<sup>1</sup>, Todd R. Callaway<sup>2</sup>, Brandon B. Smith<sup>1</sup>

<sup>1</sup>Auburn University, <sup>2</sup>University of Georgia

2:45 p.m. 114 **Evaluation of assertions from educational, outreach and engagement programs in pasture-based livestock systems**

Miguel S. Castillo<sup>1</sup>, Marcelo Wallau<sup>2</sup>

<sup>1</sup>North Carolina State University, <sup>2</sup>University of Florida

**Ruminant Animal Production I: Nutrition I**

Chair: Matt Hersom, Clemson University; Abigail Hines, Auburn University

1:30 PM - 3:15 PM

Salon C

1:30 p.m. 95 **Effect of monensin inclusion on the rumen prokaryote microbiome in *Bos indicus* and *Bos taurus* steers consuming bermudagrass hay**

Jennifer Giesey<sup>1</sup>, Jeff A. Brady<sup>2</sup>, Olabiyi Obayomi<sup>2</sup>, Tryon A. Wickersham<sup>3</sup>, Natasha L. Mast<sup>4</sup>

<sup>1</sup>Texas A&M University - Kingsville, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>Texas A&M University,

<sup>4</sup>Texas A&M University Kingsville

1:45 p.m. 96 **Effect of cyclic monensin feeding on *in situ* degradability of low quality forage fed to ruminally cannulated beef steers**

Lauren Smyth<sup>1</sup>, Jamie Foster<sup>2</sup>, Kayla Hook<sup>1</sup>, Natasha L. Mast<sup>3</sup>

<sup>1</sup>Texas A&M University - Kingsville, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>Texas A&M University Kingsville

2:00 p.m. 97 **Can fecal volatile fatty acids be used as an indicator of Ruminant volatile fatty acids?**

Abigail R. Hines<sup>1</sup>, Diva N. Rigney<sup>1</sup>, Haley Lowrey<sup>1</sup>, Kim K. Mullenix<sup>1</sup>, Courtney Heaton<sup>1</sup>, Leanne L. Dillard<sup>1</sup>, Brandon B. Smith<sup>1</sup>

<sup>1</sup>Auburn University

2:15 p.m. 98 **Utilizing gas flux from an automated head chamber system to estimate dietary energy values in cattle fed a finishing diet**

Jarret A. Proctor<sup>1</sup>, Jason K. Smith<sup>2</sup>, Stacey A. Gunter<sup>3</sup>, Matthew R. Beck<sup>4</sup>

<sup>1</sup>Texas A&M University, <sup>2</sup>Texas A&M AgriLife Extension, <sup>3</sup>USDA-ARS, Oklahoma and Central Plains Agricultural Research Center, <sup>4</sup>USDA-ARS

2:30 p.m. 99 **Dietary inclusion of a high-anthocyanin corn cob meal into feedlot rations reduces *in vitro* methane emissions**

Nathan S. Long<sup>1</sup>, Jarret A. Proctor<sup>1</sup>, Jason K. Smith<sup>2</sup>, Juan M. Piñeiro<sup>2</sup>, Ryan C. Foster<sup>1</sup>, Vinicius N. Gouvea<sup>3</sup>, Bobbie L. Castleberry<sup>4</sup>, Bridgette D. Hiltbrunner<sup>4</sup>, Wenwei W. Xu, PhD.<sup>3</sup>, Morgan K. Molsbee<sup>3</sup>, Matthew R. Beck<sup>4</sup>

<sup>1</sup>Texas A&M University, <sup>2</sup>Texas A&M AgriLife Extension, <sup>3</sup>Texas A&M AgriLife Research, <sup>4</sup>USDA-ARS

2:45 p.m. 100 **Methane production in roughage-lacking diets containing ionized amino acids as antibiotic alternative**

Geraldo Balieiro Neto<sup>1</sup>, Márcio Jorge<sup>2</sup>, Alexandre Berndt<sup>3</sup>, Marcela S.J. Munhoz<sup>2</sup>, Bruna R. Amancio<sup>4</sup>, Carlos E.K.M.C Jordao<sup>3</sup>

<sup>1</sup>Animal Science Institute from Sao Paulo Government - BRAZIL, <sup>2</sup>MJ Nutricao Animal, <sup>3</sup>Embrapa, <sup>4</sup>Animal Science Institute from Sao Paulo Government

3:00 p.m. 101 **Supplemented with *Yucca schidigera* extract to feedlot cattle consuming diets with or without monensin**

Shea Mackey<sup>1</sup>, Reinaldo F. Cooke<sup>1</sup>, Autumn Pickett<sup>1</sup>, Egleu D. M Mendes<sup>2</sup>, Luiz Fernando Dias Batista<sup>1</sup>, Eduardo Colombo<sup>1</sup>

<sup>1</sup>Texas A&M University, <sup>2</sup>Texas A&M University / Department of Animal Science

**Physiology II**

Chair: Pedro L.P Fontes, University of Georgia; Vinicius Izquierdo, University of Florida

1:30 PM - 5:00 PM

Salon G

1:30 p.m. 83 **Depot-specific transcriptome and adipocyte metabolism in intramuscular and subcutaneous adipose tissue in beef cattle**

Alexandra P. Tegeler<sup>1</sup>, Jean Fiallo-Diez<sup>1</sup>, Tainara Michelotti<sup>1</sup>, Lauryn Flores<sup>1</sup>, Oscar J. Benitez<sup>1</sup>, Bradley J. Johnson<sup>1</sup>, Clarissa Strieder-Barboza<sup>1</sup>

<sup>1</sup>Texas Tech University

1:45 p.m. 84 **Puerto Rican slick-haired Holstein cattle exhibit enhanced mammary gland hemodynamics compared to their wild-type haired counterparts**

Zully E. Contreras-Correa<sup>1</sup>, Héctor L. Sánchez-Rodríguez<sup>2</sup>, Gladycia Muñiz-Colón<sup>3</sup>, Caleb O. Lemley<sup>1</sup>

<sup>1</sup>Mississippi State University, <sup>2</sup>University of Puerto Rico-Mayagüez, <sup>3</sup>University of Puerto Rico Mayaguez

2:00 p.m. 85 **Evaluation of an oral supplemental cannabidiol product for acceptability in mature horses**

Jessica L. Leatherwood<sup>1</sup>, Julia Leise<sup>1</sup>, Brittany L. Paris<sup>1</sup>, James M. George<sup>1</sup>, Rafael Martinez<sup>2</sup>, Kati G. Glass<sup>1</sup>, Tryon A. Wickersham<sup>1</sup>

<sup>1</sup>Texas A&M University, <sup>2</sup>Sam Houston State University

2:15 p.m. 86 **Biomarkers of inflammation in neonatal calves supplemented with condensed solubles from milk permeate**

Rafaela Rodrigues dos Santos<sup>1</sup>, Audrey Brown<sup>2</sup>, Nirosh Senevirathne<sup>3</sup>, Venkateswarlu Sunkesula<sup>4</sup>, Johan S. Osorio<sup>5</sup>, Erminio Trevisi<sup>6</sup>, Fernanda T. Rosa<sup>1</sup>

<sup>1</sup>Texas Tech University, <sup>2</sup>School of Veterinary Medicine, Texas Tech University, <sup>3</sup>Department of Animal Science, Cornell University, <sup>4</sup>Idaho Milk Products, <sup>5</sup>Virginia Tech University, <sup>6</sup>Department of Animal Sciences, Food and Nutrition (DIANA), Università Cattolica del Sacro Cuore

2:30 p.m. 87 **Milk yield, vaginal temperature, and solar radiation exposure in slick and wild type-haired Puerto Rican Holstein cows**

Héctor L. Sánchez-Rodríguez<sup>1</sup>, Zully E. Contreras-Correa<sup>2</sup>, Caleb O. Lemley<sup>2</sup>, Katherine Domenech-Pérez<sup>3</sup>, Gladycia Muñiz-Colón<sup>4</sup>

<sup>1</sup>University of Puerto Rico-Mayagüez, <sup>2</sup>Mississippi State University, <sup>3</sup>University of Puerto Rico at Mayaguez, <sup>4</sup>University of Puerto Rico Mayaguez

2:45 p.m. 88 **Influence of pregnant cattle grazing endophyte-infected tall fescue on innate immune response of male offspring**

Sidney N. Dunkel<sup>1</sup>, Don S. Hubbell<sup>2</sup>, Doug L. Galloway<sup>3</sup>, Charles R. Looney<sup>4</sup>, Jeremy G. Powell<sup>3</sup>, Brittini P. Littlejohn<sup>1</sup>

<sup>1</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science, <sup>2</sup>UA Livestock and Forestry Station, retired, <sup>3</sup>University of Arkansas System Division of Agriculture, <sup>4</sup>University of Arkansas

3:00 p.m. **Physiology II Break**

3:15 p.m. 89 **Influence of melatonin supplementation in pregnant cattle consuming endophyte-infected tall fescue seed on offspring performance**

Rachel M. Scott<sup>1</sup>, Randi F. Benefield<sup>2</sup>, Charles R. Looney<sup>3</sup>, Rhonda C. Vann<sup>4</sup>, Beth B. Kegley<sup>5</sup>, Jeremy G. Powell<sup>6</sup>, Ken P. Coffey<sup>3</sup>, Caleb O. Lemley<sup>4</sup>, Brittini P. Littlejohn<sup>1</sup>

<sup>1</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science, <sup>2</sup>Department of Animal Science, Division of Agriculture, University of Arkansas, Fayetteville, <sup>3</sup>University of Arkansas, <sup>4</sup>Mississippi State University, <sup>5</sup>University of Arkansas Division of Agriculture, <sup>6</sup>University of Arkansas System Division of Agriculture

3:45 p.m. 90 **Exposure to endophyte-infected tall fescue negatively impacts pulmonary arterial pressure in beef cattle**

Edwin Benjamin Rajo<sup>1</sup>, Katherine Williams<sup>1</sup>, Andrew R. Weaver<sup>2</sup>, Carrie L. Pickworth<sup>1</sup>, Derek Foster<sup>1</sup>, Daniel H. Poole<sup>1</sup>

<sup>1</sup>North Carolina State University, <sup>2</sup>Department of Animal Science, North Carolina State University

4:00 p.m. 91 **Ex vivo fermentation of corn and hay by rumen bacteria from sheep and cattle**

Jennifer R. Weinert-Nelson<sup>1</sup>, Donald Ely<sup>2</sup>, Michael D. Flythe<sup>3</sup>, Tracy Hamilton<sup>1</sup>, Jessica Ferrell<sup>1</sup>, Matthew Hamilton<sup>2</sup>, LeeAnn Jacks<sup>2</sup>, Brittany Harlow<sup>1</sup>

<sup>1</sup>USDA-ARS, Forage-Animal Production Research Unit, <sup>2</sup>University of Kentucky, Department of Animal and Food Sciences, <sup>3</sup>Forage-Animal Production Research Unit/ USDA-ARS



4:15 p.m. 92 **Prenatally stressed Brahman bull calves had elevated pro-inflammatory cytokines and transportation-induced mitochondrial impairments**

Jessica L. Simons<sup>1</sup>, Lauren T. Wesolowski<sup>2</sup>, Pier L. Semanchik<sup>1</sup>, Charles R. Long<sup>3</sup>, George A. Perry<sup>4</sup>, Ronald D. Randel<sup>4</sup>, Ryon Walker<sup>5</sup>, Thomas H. Welsh<sup>6</sup>, Sarah H. White-Springer<sup>7</sup>

<sup>1</sup>Texas A&M University and AgriLife Research, Department of Animal Science, <sup>2</sup>Department of Animal Science, Texas A&M University and Texas A&M AgriLife Research, <sup>3</sup>School of Veterinary Medicine and Biomedical Sciences, Texas A&M University, <sup>4</sup>Texas A&M AgriLife Research, Overton, TX, <sup>5</sup>Texas A&M University, <sup>6</sup>Texas A&M University, Department of Animal Science, College Station, TX, <sup>7</sup>Texas A&M University

4:30 p.m. 93 **Impact of different stressors on physiological and immunological variables in dairy calves**

Kesley B. Kohl<sup>1</sup>, Nicole C. Burdick Sanchez<sup>2</sup>, Paul R. Broadway<sup>2</sup>, Jeffery A. Carroll<sup>2</sup>, Jerrad F. Legako<sup>3</sup>, Samantha N. Barker<sup>3</sup>, Thomas W. Dobbins<sup>3</sup>, Christy L. Bratcher<sup>4</sup>, Kaitlyn Loomas<sup>4</sup>

<sup>1</sup>Texas Tech University, <sup>2</sup>USDA-ARS, Livestock Issues Research Unit, <sup>3</sup>Texas Tech University, Department of Animal and Food Sciences, <sup>4</sup>Texas Tech University, Department of Animal and Food Science

4:45 p.m. 94 **Changes in vaginal microbiome of beef cows enrolled in an estrous synchronization protocol**

Nicholas W. Dias<sup>1</sup>, Gustavo Schettini<sup>1</sup>, Guillermo Goncherenko<sup>1</sup>, Stefania Pancini<sup>1</sup>, Fernando Biase<sup>1</sup>, Vitor R G. Mercadante<sup>2</sup>

<sup>1</sup>Virginia Tech, <sup>2</sup>Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

**Small Ruminant Production I**

Chair: Joan Burke, USDA ARS Dale Bumpers Small Farms Research Center

2:00 PM - 3:45 PM

Salon E

2:00 p.m. 121 **Evaluation of effects of garlic extract on health parameters and gut health in St. Croix sheep**

Sree Navya Inupala<sup>1</sup>, Priyanka Pande<sup>1</sup>, MD Rasel Uzzaman<sup>1</sup>, Mulumebet Worku<sup>1</sup>

<sup>1</sup>NC A&T State University

2:15 p.m. 122 **Response of ruminant neutrophils on fresh filtered garlic preparation**

MD Rasel Uzzaman<sup>1</sup>, Priyanka Pande<sup>1</sup>, Sree Navya Inupala<sup>1</sup>, Sowmya Jagana<sup>1</sup>, Mulumebet Worku<sup>1</sup>

<sup>1</sup>NC A&T State University

2:30 p.m. 123 **Evaluating the effect of garlic on the gut health of meat goats**

Sowmya Jagana<sup>1</sup>, Sree Navya Inupala<sup>1</sup>, Priyanka Pande<sup>1</sup>, MD Rasel Uzzaman<sup>1</sup>, Mulumebet Worku<sup>1</sup>

<sup>1</sup>NC A&T State University

2:45 p.m. 124 **Effect of inclusion of hempseed meal on rumen papillae morphology and rumen fermentation of Boer X Spanish intact male goats**

Khim B. Ale <sup>1</sup>, Frank W. Abrahamsen <sup>1</sup>, Reshma Gurung <sup>2</sup>, Santoshi Chaudhary <sup>3</sup>, Tej Gautam <sup>3</sup>, Nar K. Gurung <sup>1</sup>

<sup>1</sup>Department of Agricultural and Environmental Sciences, College of Agriculture, Environment, and Nutrition Sciences, Tuskegee University, Tuskegee, AL 36088, USA, <sup>2</sup>Integrative Biosciences Ph.D. Program, Tuskegee University, Tuskegee, AL 36088, USA, <sup>3</sup>Tuskegee University

3:00 p.m. 125 **Residual effects of creep feed management on reproductive performance of meat goat does across multiple years**

Emily G. Hayes <sup>1</sup>, Lauren Stevens <sup>1</sup>, Shaneqwa Thomas <sup>1</sup>, Kaylee Hillin <sup>1</sup>, Richard Browning <sup>1</sup>

<sup>1</sup>Tennessee State University

3:15 p.m. 126 **The efficacy of a natural fungus (*Duddingtonia flagrans*) in controlling gastrointestinal nematodes in lactating meat goat does**

Javin Davis <sup>1</sup>, Dahlia O'Brien <sup>1</sup>, Kwame Matthews <sup>2</sup>, Stephan Wildeus <sup>1</sup>, Niki C. Whitley <sup>3</sup>, Susan Schoenian <sup>4</sup>

<sup>1</sup>Virginia State University, <sup>2</sup>Delaware State University, <sup>3</sup>Fort Valley State University, <sup>4</sup>University of Maryland

3:30 p.m. 127 **Preliminary effect of cottonseed as a source of gossypol on the artificial infection of meat does with *Haemonchus contortus***

Hannah Brasher <sup>1</sup>, Lindsey Dearborn <sup>1</sup>, Tina Nguyen <sup>1</sup>, Zeta Mooney <sup>1</sup>, Michael Pesato <sup>2</sup>, Felipe Torres-Acosta <sup>3</sup>, Carlos Sandoval-Castro <sup>4</sup>, Leyla Rios <sup>1</sup>

<sup>1</sup>Mississippi State University, <sup>2</sup>College of Veterinary Medicine, Mississippi State University,

<sup>3</sup>Faculty of Veterinary Medicine at the Universidad Autonoma de Yucatan (UADY), <sup>4</sup>Fac Medicina Veterinaria y Zootecnia, Universidad Autonoma de Yucatan

**Biotechnology Symposium: Biotechnology Advancements in Data Collection**

Chair: Daniel Poole, North Carolina State University

2:00 PM - 4:30 PM

Salon F

2:00 p.m. **Biotechnology Symposium Introduction**

2:05 p.m. 194 **Leveraging animal nutrition to enhance sustainability of food production systems**

Robin R. White <sup>1</sup>

<sup>1</sup>Virginia Tech

2:50 p.m. 195 **Fescue Toxicosis: Understanding the fungal cause and the fungal solution**

Carolyn A. Young <sup>1</sup>

<sup>1</sup>North Carolina State University

3:35 p.m. **Biotechnology Symposium Break**

3:45 p.m. 196 **CRISPR technology and its many applications with select examples related to animal agriculture**

Rodolphe Barrangou <sup>1</sup>

<sup>1</sup>North Carolina State University

### **Pastures and Forages II**

Chair: S. Leanne Dillard, Auburn University

3:15 PM - 5:00 PM

Salon D

3:15 p.m. 115 **A challenging and motivational presentation to past, present and future animal and forage scientists and professionals**

Peter J. Ballerstedt <sup>1</sup>

<sup>1</sup>Barenbrug USA

3:45 p.m. 116 **Stockpiling Bahiagrass to extend the grazing season and decrease winter supplementation costs for South Alabama cattle producers**

Michael A. Agar <sup>1</sup>, Kim K. Mullenix <sup>1</sup>, Carol Vasco <sup>1</sup>, S. Maggie Justice <sup>1</sup>, Kelly Palmer <sup>1</sup>, Ken Kelley <sup>1</sup>, Josh Elmore <sup>1</sup>, Chris Parker <sup>1</sup>, Anthony Wiggins <sup>1</sup>

<sup>1</sup>Auburn University

4:00 p.m. 117 **Effects of cattle removal date on sustainability of cool-season annual grazed cover crop systems**

Mason Henson <sup>1</sup>, Leanne L. Dillard <sup>1</sup>, Kim K. Mullenix <sup>1</sup>, Russell B. Muntifering <sup>1</sup>, Russell C. Carrell <sup>2</sup>, Audrey Gamble <sup>1</sup>

<sup>1</sup>Auburn University, <sup>2</sup>Cargill Animal Nutrition

4:15 p.m. 118 **Nutrient cycling potential from manure from heifers fed four bermudagrass cultivars**

Abigail R. Hines <sup>1</sup>, Cynthia Siziba <sup>2</sup>, Kim K. Mullenix <sup>1</sup>, Leanne L. Dillard <sup>1</sup>, Brandon B. Smith <sup>1</sup>

<sup>1</sup>Auburn University, <sup>2</sup>Earth University

4:30 p.m. 119 **Mitigation strategies for heifer development on 'KY-31' tall fescue**

Madison L. Boone <sup>1</sup>, Russell C. Carrell <sup>2</sup>, Rush Fuller <sup>1</sup>, Leanne L. Dillard <sup>1</sup>

<sup>1</sup>Auburn University, <sup>2</sup>Cargill Animal Nutrition

4:45 p.m. 120 **Supplementation level effects on early-weaned beef calves receiving annual ryegrass**

Joao Silva <sup>1</sup>, Joao Vendramini <sup>1</sup>, Philippe Moriel <sup>1</sup>, Hiran Silva <sup>1</sup>, Vinicius Izquierdo <sup>1</sup>, Jaime Garzon <sup>1</sup>, Nauara Lage <sup>1</sup>

<sup>1</sup>University of Florida

## Ruminant Animal Production II: Health

Chair: Matt Hersom, Clemson University; Samantha Johnson, West Virginia University

3:30 PM - 5:30 PM

Salon C

3:30 p.m. 190 **Assessment of weaning management on growth performance and health in Southeastern beef calves**

S. Maggie Justice<sup>1</sup>, Kim K. Mullenix<sup>1</sup>, Daniel A. Tigue<sup>1</sup>, Peyton Zessin<sup>1</sup>, Leanne L. Dillard<sup>1</sup>, Soren P. Rodning<sup>1</sup>, Manuel Chamorro<sup>1</sup>

<sup>1</sup>Auburn University

3:45 p.m. 102 **A comparison of deworming protocols using eprinomectin and fenbendazole in grazing beef steers.**

Eva M. Wray<sup>1</sup>, Chris Tucker<sup>1</sup>, Jana L. Reynolds<sup>2</sup>, Benjamin P. Shoulders<sup>2</sup>, Kirsten A. Midkiff<sup>2</sup>, Jeremy G. Powell<sup>2</sup>

<sup>1</sup>University of Arkansas, <sup>2</sup>University of Arkansas System Division of Agriculture

4:00 p.m. 103 **Impact of fescue variety on fecal egg counts in mature beef cattle**

Katherine Williams<sup>1</sup>, Edwin Benjamin Rajo<sup>1</sup>, Andrew R. Weaver<sup>2</sup>, Daniel H. Poole<sup>1</sup>, Carrie L. Pickworth<sup>1</sup>

<sup>1</sup>North Carolina State University, <sup>2</sup>Department of Animal Science, North Carolina State University

4:15 p.m. 104 **Exposure to environmental pollutant GenX chemical modulates innate and adaptive immunity genes in cow Neutrophils**

Sarah Adjei-Fremah<sup>1</sup>, Priyanka Pande<sup>2</sup>, Mulumebet Worku<sup>2</sup>, Sowmya Jagana<sup>2</sup>, Sree Navya Inupala<sup>2</sup>, Therese Sabater<sup>2</sup>, Dongyang Deng<sup>2</sup>, MD Rasel Uzzaman<sup>2</sup>

<sup>1</sup>Winston-Salem State University, <sup>2</sup>NC A&T State University

4:30 p.m. 105 **Effects of monensin on intake, growth performance, and health of newly-received feedlot calves**

Ryan C. Foster<sup>1</sup>, Vinicius N. Gouvea<sup>2</sup>, Jarret A. Proctor<sup>1</sup>, Mackenzie M. Smithyman<sup>3</sup>, Matthew R. Beck<sup>4</sup>, Nathan S. Long<sup>1</sup>, Jason K. Smith<sup>5</sup>, Glenn C. Duff<sup>3</sup>

<sup>1</sup>Texas A&M University, <sup>2</sup>Texas A&M AgriLife Research, <sup>3</sup>New Mexico State University, <sup>4</sup>USDA-ARS, <sup>5</sup>Texas A&M AgriLife Extension

4:45 p.m. 106 **Serial evaluation of *A. marginale* positivity rate within a single herd of mature beef cows**

Lauren R. Rogers<sup>1</sup>, Grayson Robbins<sup>1</sup>, Grace Clark<sup>2</sup>, Emily McDermott<sup>3</sup>, Kathryn E. Reif<sup>4</sup>, Bernard W. Krumpelman<sup>5</sup>, Doug L. Galloway<sup>6</sup>, Jeremy G. Powell<sup>6</sup>

<sup>1</sup>University of Arkansas, Department of Animal Science, <sup>2</sup>University of Arkansas, <sup>3</sup>University of Arkansas, Division of Agriculture, Department of Entomology and Plant Pathology, <sup>4</sup>Kansas State University, College of Veterinary Medicine, Department of Diagnostic Medicine/Pathobiology, <sup>5</sup>University of Arkansas, Division of Agriculture, Department of Animal Science, <sup>6</sup>University of Arkansas System Division of Agriculture

5:00 p.m. 107 **Effects of supplementing pre- and probiotic feed ingredients on performance, health, and physiological responses in feedlot cattle**

Autumn Pickett<sup>1</sup>, Reinaldo F. Cooke<sup>1</sup>, Eduardo Colombo<sup>1</sup>, Luiz Fernando Dias Batista<sup>1</sup>, Alice P. Brandão<sup>1</sup>

<sup>1</sup>Texas A&M University

5:15 p.m. 108 **Effect of soy co-products in supplements for grazing cattle on growth, complete blood cell counts, and inflammatory response following a lipopolysaccharide challenge**

Bralee S. Lansdell<sup>1</sup>, Kirsten A. Midkiff<sup>2</sup>, Rachel M. Scott<sup>1</sup>, Robin A. Cheek<sup>2</sup>, Brittni P. Littlejohn<sup>1</sup>, Jeremy G. Powell<sup>2</sup>, Doug L. Galloway<sup>2</sup>, Jana L. Reynolds<sup>2</sup>, Benjamin P. Shoulders<sup>2</sup>, Beth B. Kegley<sup>3</sup>

<sup>1</sup>University of Arkansas System, Division of Agriculture, Department of Animal Science,

<sup>2</sup>University of Arkansas System Division of Agriculture, <sup>3</sup>University of Arkansas Division of Agriculture

**Tuesday, January 24, 2023**

**Small Ruminant Production II**

Chair: Andrew Weaver, North Carolina State University; Santoshi Chaudhary, Tuskegee University

8:00 AM - 9:30 AM  
Salon E

8:00 a.m. 153 **Meat quality of Barbados Blackbelly and St. Croix hair sheep lambs rendered short scrotum or castrated at weaning**

Daisha Beal<sup>1</sup>, Jung H. Lee<sup>1</sup>, Stephan Wildeus<sup>2</sup>, Dahlia O'Brien<sup>2</sup>, Anil Singh<sup>1</sup>, Brou Kouakou<sup>1</sup>  
<sup>1</sup>Fort Valley State University, <sup>2</sup>Virginia State University

8:15 a.m. 154 **Growth, libido, semen quality, and reproductive organ weights of hair sheep rams rendered short-scrotum at birth or weaning**

Stephan Wildeus<sup>1</sup>, Dahlia O'Brien<sup>1</sup>  
<sup>1</sup>Virginia State University

8:30 a.m. 155 **Rams enrolled in the National Sheep Improvement Program have improved performance and value in ram test program**

Andrew R. Weaver<sup>1</sup>, Donald L. Wright<sup>2</sup>, Scott P. Greiner<sup>3</sup>  
<sup>1</sup>Department of Animal Science, North Carolina State University, <sup>2</sup>Virginia Tech, Southwest Virginia Agricultural Research and Extension Center, <sup>3</sup>Virginia Tech

8:45 a.m. 156 **The impact of sire parasite resistance on offspring gastrointestinal nematode indicators, and relative impact of lamb breeding values on sale value of ram lambs**

Joan M. Burke<sup>1</sup>, Michael P. Popp<sup>2</sup>, John D. Anderson<sup>2</sup>, Jim E. Miller<sup>3</sup>, David R. Notter<sup>4</sup>  
<sup>1</sup>USDA ARS Dale Bumpers Small Farms Research Center, <sup>2</sup>University of Arkansas, <sup>3</sup>Louisiana State University, <sup>4</sup>Virginia Tech

9:00 a.m. 157 **Effect of sheep breed on neutrophil chemotaxis to Haemonchus contortus larval antigen**

Hannah G. Teddleton<sup>1</sup>, Javier J. Garza<sup>1</sup>, Scott P. Greiner<sup>2</sup>, Scott A. Bowdridge<sup>1</sup>  
<sup>1</sup>West Virginia University, <sup>2</sup>Virginia Tech

9:15 a.m. 158 **Evaluating lipopolysaccharide-induced behavioral and immune response differences in sheep divergently bred for parasite resistance**

Kelsey Bentley<sup>1</sup>, Donald L. Wright<sup>2</sup>, Scott P. Greiner<sup>3</sup>, Scott A. Bowdridge<sup>1</sup>

<sup>1</sup>West Virginia University, <sup>2</sup>Virginia Tech, Southwest Virginia Agricultural Research and Extension Center, <sup>3</sup>Virginia Tech

### **Physiology III**

Chair: Nicholas Dias, Virginia Tech - School of Animal Sciences; Khim Ale, Department of Agricultural and Environmental Sciences, College of Agriculture, Environment, and Nutrition Sciences, Tuskegee University, Tuskegee, AL 36088, USA

8:00 AM - 12:15 PM

Salon G

8:00 a.m. 165 **Randel Lecture: Androgen Excess Domestic Livestock Models—What can they tell us about the mechanisms underlying anovulation?**

Andrea S. Cupp<sup>1</sup>, Mohamed Abedal-Majed<sup>2</sup>, Adam F. Summers<sup>3</sup>, Brooke Bell<sup>1</sup>, Renee M. McFee<sup>1</sup>, Scott Kurz<sup>1</sup>, Mariah Hart<sup>1</sup>, John Davis<sup>4</sup>, Jennifer Wood<sup>1</sup>

<sup>1</sup>University of Nebraska-Lincoln, <sup>2</sup>University of Jordan, <sup>3</sup>New Mexico State University,

<sup>4</sup>University of Nebraska Medical Center

9:00 a.m. 166 **Maternal versus environmental contributions to the piglet pioneer microbiome**

Landon Eldridge<sup>1</sup>, Kyle J. Hickman-Brown<sup>1</sup>, Brooke E. McAnally<sup>1</sup>, Molly S. Smith<sup>1</sup>, Rebecca K. Poole<sup>1</sup>, Jeffrey G. Wiegert<sup>1</sup>

<sup>1</sup>Texas A&M University

9:15 a.m. 167 **Modulation of the innate immune response to lipopolysaccharide through ghrelin administration in weaned pigs**

Nicole C. Burdick Sanchez<sup>1</sup>, Jeffery W. Dailey<sup>1</sup>, Paul R. Broadway<sup>1</sup>, Emily M. Davis<sup>2</sup>, Brooke M. Bowen<sup>3</sup>, Amy L. Petry<sup>4</sup>, Michael A. Ballou<sup>5</sup>, Kristin E. Hales<sup>5</sup>, Jeffery A. Carroll<sup>1</sup>

<sup>1</sup>USDA-ARS, Livestock Issues Research Unit, <sup>2</sup>Texas Tech University, Department of Veterinary Sciences, <sup>3</sup>Texas Tech University, Department of Animal and Food Sciences,

<sup>4</sup>Division of Animal Sciences, University of Missouri, <sup>5</sup>Texas Tech University

9:30 a.m. 168 **The microbiome of reproductive tissues and amniotic and allantoic fluid of pregnant gilts during mid- and late gestation**

Kyle J. Hickman-Brown<sup>1</sup>, Molly S. Smith<sup>1</sup>, Brooke E. McAnally<sup>1</sup>, Joe Cain<sup>1</sup>, Heewon Seo<sup>1</sup>, Fuller W. Bazer<sup>1</sup>, Greg Johnson<sup>1</sup>, Jeffrey G. Wiegert<sup>1</sup>, Rebecca K. Poole<sup>1</sup>

<sup>1</sup>Texas A&M University

9:45 a.m. 169 **Adrenomedullin: A novel peptide hormone for uterine receptivity and conceptus elongation in pigs?**

Sudikshya Paudel<sup>1</sup>, Bangmin Liu<sup>1</sup>, Magdalena J. Cummings<sup>1</sup>, Xiaohu Wang<sup>1</sup>

<sup>1</sup>North Carolina State University

10:00 a.m. **Physiology III Break**

10:15 a.m. 170 **Relationship between progesterone and reproductive tract microbiota in pregnant gilts**

Erin Stockland<sup>1</sup>, Kyle J. Hickman-Brown<sup>1</sup>, Molly S. Smith<sup>1</sup>, Brooke E. McAnally<sup>1</sup>, Joe Cain<sup>1</sup>, Heewon Seo<sup>1</sup>, Fuller W. Bazer<sup>1</sup>, Greg Johnson<sup>1</sup>, Jeffrey G. Wiegert<sup>1</sup>, Rebecca K. Poole<sup>1</sup>  
<sup>1</sup>Texas A&M University

10:30 a.m. 171 **Effects of a dietary immuno-modulator on growth performance in nursery pigs**

Kayla A. Bonelli<sup>1</sup>, Richard T. Niblett<sup>1</sup>, Kimberly A. Williams<sup>1</sup>, Mark J. Estienne<sup>1</sup>  
<sup>1</sup>Virginia Tech

10:45 a.m. 172 **Metabolomic analysis of uterine luminal fluid during the peri-implantation period of pregnancy in pigs**

Bangmin Liu<sup>1</sup>, Likun Duan<sup>1</sup>, Xiaojing Liu<sup>1</sup>, Xiaoqiu Wang<sup>1</sup>  
<sup>1</sup>North Carolina State University

11:00 a.m. 173 **Adrenomedullin stimulates proliferation, migration and adhesion of porcine trophectoderm cells via CALCRL-AKT-TSC2-MTORC1 cell signaling pathway**

Bangmin Liu<sup>1</sup>, Sudikshya Paudel<sup>1</sup>, William L. Flowers<sup>1</sup>, Jorge A. Piedrahita<sup>1</sup>  
<sup>1</sup>North Carolina State University

11:15 a.m. 174 **Successive bouts of exercise influences the inflammatory cytokine response in Thoroughbred horses regardless of recovery aid supplementation**

Madison R. Barshick<sup>1</sup>, Julia Riley<sup>1</sup>, Megan Pelletier<sup>1</sup>, Madison Gonzalez<sup>1</sup>, Sally Johnson<sup>1</sup>  
<sup>1</sup>Virginia Polytechnic and State Institution

11:30 a.m. 175 **Preliminary effect of cottonseed as a source of gossypol on hepatic portal blood flow as an indicator of metabolism in meat does artificially infected with *Haemonchus contortus***

Emily Callender<sup>1</sup>, Nicolas Marchant<sup>1</sup>, Lindsey Dearborn<sup>1</sup>, Zully E. Contreras-Correa<sup>1</sup>, Caleb O. Lemley<sup>1</sup>, Michael Pesato<sup>2</sup>, Leyla Rios<sup>1</sup>  
<sup>1</sup>Mississippi State University, <sup>2</sup>College of Veterinary Medicine. Mississippi State University

11:45 a.m. 176 **Evaluation of meloxicam plasma concentrations using a microneedle patch for drug delivery**

Kirsten A. Midkiff<sup>1</sup>, Katherine Miranda-Munoz<sup>2</sup>, Wyatt E. Weber<sup>3</sup>, Robin A. Cheek<sup>1</sup>, Jana L. Reynolds<sup>1</sup>, Tsungcheng Cheng Tsai<sup>3</sup>, Misty Bear<sup>4</sup>, Johann F. Coetzee<sup>4</sup>, Beth B. Kegley<sup>5</sup>, Jorge Almodovar<sup>6</sup>, Jeremy G. Powell<sup>1</sup>  
<sup>1</sup>University of Arkansas System Division of Agriculture, <sup>2</sup>Department of Biomedical Engineering, University of Arkansas, Fayetteville, AR, <sup>3</sup>University of Arkansas, <sup>4</sup>Kansas State University College of Veterinary Medicine, Department of Anatomy and Physiology, Manhattan, KS, <sup>5</sup>University of Arkansas Division of Agriculture, <sup>6</sup>Department of Chemical Engineering, University of Arkansas, Fayetteville, AR

12:00 p.m. 177 **Supplement type influenced the immune response of nursing ewes to the natural challenge of gastrointestinal parasites while grazing in woodlands**

Santoshi Chaudhary<sup>1</sup>, Uma Karki<sup>1</sup>, Bhuwan Shrestha<sup>1</sup>, Sadikshya Lamsal<sup>1</sup>  
<sup>1</sup>Tuskegee University

## **Ruminant Animal Production III: Nutrition II**

Chair: Matt Hersom, Clemson University; S. Maggie Justice, Auburn University

8:00 AM - 11:30 PM

Salon C

8:00 a.m. 128 **Effects of cottonseed meal supplementation strategy to stocker calves grazing late season summer forage**

Connor R. Kern<sup>1</sup>, Whitney L. Crossland<sup>1</sup>, Ryan R. Rathmann<sup>1</sup>, Aaron B. Norris<sup>1</sup>

<sup>1</sup>Texas Tech University

8:15 a.m. 129 **Case study: Passage dynamics of whole cottonseed in beef cattle**

Anna G. Underwood<sup>1</sup>, Steve Martin<sup>2</sup>, Wayne Greene<sup>1</sup>, Brandon B. Smith<sup>1</sup>

<sup>1</sup>Auburn University, <sup>2</sup>Dairy Nutrition and Management Consulting

8:30 a.m. 130 **Comparison of whole cottonseed to a traditional supplement (20% breeder cubes) in commercial beef cows: impacts on animal performance, metabolites, and methane emissions**

Avianna A. Liuzzo<sup>1</sup>, Ryan R. Reuter<sup>1</sup>, Blake K. Wilson<sup>1</sup>

<sup>1</sup>Oklahoma State University

8:45 a.m. 131 **Evaluating supplementation programs for growing calves grazing bermudagrass pastures**

Addie Wommack<sup>1</sup>, Paul A. Beck<sup>1</sup>, Beth B. Kegley<sup>2</sup>, Tom Hess<sup>3</sup>, Don S. Hubbell<sup>4</sup>, Shane Gadberry<sup>3</sup>

<sup>1</sup>Oklahoma State University, <sup>2</sup>University of Arkansas Division of Agriculture, <sup>3</sup>UA Livestock and Forestry Station, <sup>4</sup>UA Livestock and Forestry Station, retired

9:00 a.m. 132 **Weight and reproduction response to a peanut skins plus corn supplement offered to heifers grazing spring wheat pasture during artificial insemination breeding**

Shane Gadberry<sup>1</sup>, Nate T. Moss<sup>1</sup>, Tom Hess<sup>1</sup>, Don S. Hubbell<sup>2</sup>, Charles R. Looney<sup>3</sup>, Wyatt E. Weber<sup>3</sup>, Daniel Rivera<sup>4</sup>

<sup>1</sup>UA Livestock and Forestry Station, <sup>2</sup>UA Livestock and Forestry Station, retired, <sup>3</sup>University of Arkansas, <sup>4</sup>University of Arkansas Southwest Research and Extension Center

9:15 a.m. 133 **Feeding behavior of high-risk steers newly received for backgrounding**

Logan W. Rahmel<sup>1</sup>, Genevieve M. D'Souza<sup>2</sup>, Juan C. Cordero<sup>1</sup>, Libby S. Durst<sup>1</sup>, Brandi B. Karisch<sup>1</sup>, Courtney L. Daigle<sup>2</sup>, Jason R. Russell<sup>3</sup>, Kelsey M. Harvey<sup>1</sup>

<sup>1</sup>Mississippi State University, <sup>2</sup>Texas A&M University, <sup>3</sup>Zinpro Corporation

9:30 a.m. 134 **Effect of rumen degradable protein intake on performance, carcass quality, and methane emissions of yearling finishing steers**

Jarret A. Proctor<sup>1</sup>, Matthew R. Beck<sup>2</sup>, Nathan S. Long<sup>1</sup>, Zachery A. Kasuske<sup>2</sup>, Ryan C. Foster<sup>1</sup>, Bobbie L. Castleberry<sup>2</sup>, Bridgette D. Hiltbrunner<sup>2</sup>, Vinicius N. Gouvea<sup>3</sup>, Jason K. Smith<sup>4</sup>

<sup>1</sup>Texas A&M University, <sup>2</sup>USDA-ARS, <sup>3</sup>Texas A&M AgriLife Research, <sup>4</sup>Texas A&M AgriLife Extension

9:45 a.m. **Ruminant Animal Production III: Nutrition II Break**



10:00 a.m. 135 **Growth performance, carcass characteristics, and methane emissions of feedlot young bulls**

Barbara Rodrigues<sup>1</sup>, Jhones O. Sarturi<sup>1</sup>, Leandro Samia<sup>2</sup>, Ramon C. Alvarenga<sup>3</sup>, Alexandre Berndt<sup>4</sup>, Fernando Souza<sup>2</sup>, Beatriz Q. Queiroz dos Reis<sup>1</sup>, Kalii G. Silva<sup>1</sup>

<sup>1</sup>Texas Tech University, <sup>2</sup>Federal University of Minas Gerais, <sup>3</sup>Brazilian Agricultural Research Corporation Maize & Sorghum, <sup>4</sup>Embrapa

10:15 a.m. 136 **Relationship of mature beef cows on an unprocessed hay diet to residual intake and greenhouse gas exchange during gestation and lactation**

Mikayla F. Moore<sup>1</sup>, Emma A. Briggs<sup>1</sup>, Kade Horton<sup>1</sup>, David Lalman<sup>1</sup>

<sup>1</sup>Oklahoma State University

10:30 a.m. 137 **Replacement heifer gain, feed intake and efficiency while consuming an unprocessed hay diet followed by a mixed concentrate/forage diet**

Emma A. Briggs<sup>1</sup>, David Lalman<sup>1</sup>, Kade Horton<sup>1</sup>, Mikayla F. Moore<sup>1</sup>

<sup>1</sup>Oklahoma State University

10:45 a.m. 138 **Investigation of supplementation rates for extruded 100% DDGS cube on native range in Northwest Oklahoma**

Zane N. Grigsby<sup>1</sup>, Paul A. Beck<sup>1</sup>, Stacey A. Gunter<sup>2</sup>

<sup>1</sup>Oklahoma State University, <sup>2</sup>USDA-ARS, Oklahoma and Central Plains Agricultural Research Center

11:00 a.m. 139 **Productive and physiological responses of feedlot cattle receiving different sources of Ca salts of fatty acids in the finishing diet**

Eduardo Colombo<sup>1</sup>, Reinaldo F. Cooke<sup>1</sup>, Shea Mackey<sup>1</sup>, Autumn Pickett<sup>1</sup>, Luiz Fernando Dias Batista<sup>1</sup>, Ky Pohler<sup>1</sup>, Osvaldo Sousa<sup>2</sup>, Bruno I. Cappelozza<sup>3</sup>, Alice P. Brandão<sup>1</sup>

<sup>1</sup>Texas A&M University, <sup>2</sup>Nutricorp, <sup>3</sup>Chr. Hansen A/S

11:15 a.m. 140 **Effect of dietary hempseed meal on growth performance and dry matter intake in yearling rough-stock bulls**

Samantha L. McGovern<sup>1</sup>, Jeff A. Brady<sup>2</sup>, Kimberly A. Guay<sup>1</sup>, Cheyenne L. Runyan<sup>3</sup>, Thomas W. Schwertner<sup>4</sup>, Lane A. Smith<sup>4</sup>, Ryon W. Springer<sup>1</sup>, Kimberly B. Wellmann<sup>1</sup>

<sup>1</sup>Department of Animal Science, Tarleton State University, <sup>2</sup>Texas A&M AgriLife Research,

<sup>3</sup>Tarleton State University, <sup>4</sup>Department of Wildlife and Natural Resources, Tarleton State University

**Ruminant Animal Production IV: Management and Physiology**

Chair: Darren Henry, University of Georgia; Kendall Whatley, University of Georgia

8:15 AM - 11:45 AM

Salon F

8:15 a.m. 141 **Awardee Talk: Impacts of pre- and postpartum heat stress abatement on physiology and performance of grazing *Bos indicus*-influenced cow-calf pairs**

Vinicius Izquierdo<sup>1</sup>, Joao Silva<sup>1</sup>, Hiran Silva<sup>1</sup>, Juliana Ranches<sup>2</sup>, Jeffery A. Carroll<sup>3</sup>, Nicole C. Burdick Sanchez<sup>3</sup>, Joao Bittar<sup>1</sup>, Joao Vendramini<sup>1</sup>, Philippe Moriel<sup>1</sup>

<sup>1</sup>University of Florida, <sup>2</sup>Oregon State University; EOARC, <sup>3</sup>USDA-ARS, Livestock Issues Research Unit

8:45 a.m. 142 **Influence of Comfort on growth, intramuscular fat accretion, and ultrasound ribeye area in Akaushi steers and heifers at time of weaning**

Taylor C. Husz<sup>1</sup>, J. W. Holloway<sup>2</sup>, Jordan R. Beeman<sup>3</sup>, W. J. Hill<sup>2</sup>, Tommy L. Perkins<sup>1</sup>  
<sup>1</sup>West Texas A&M University, <sup>2</sup>Ralco Agriculture, <sup>3</sup>Heartbrand Cattle

9:00 a.m. 143 **Retrospective look at cow-calf performance in spring-calving Dexter cattle scored for winter hair shedding level**

Richard Browning<sup>1</sup>, Kaylee Hurt<sup>1</sup>, Emily G. Hayes<sup>1</sup>, Maria L. Leite-Browning<sup>1</sup>  
<sup>1</sup>Tennessee State University

9:15 a.m. 144 **Assessment of backgrounding management on growth performance and health in Southeastern beef calves**

S. Maggie Justice<sup>1</sup>, Kim K. Mullenix<sup>1</sup>, Daniel A. Tigue<sup>1</sup>, Peyton Zessin<sup>1</sup>, Leanne L. Dillard<sup>1</sup>, Soren P. Rodning<sup>1</sup>, Manuel Chamorro<sup>1</sup>  
<sup>1</sup>Auburn University

9:30 a.m. 145 **Specific gravity as an assessment of embryonic viability to improve implantation rates for in vitro produced and in vivo derived bovine embryos**

Katylyn J. Richardson<sup>1</sup>, Tommy L. Perkins<sup>1</sup>, David G. Lust<sup>1</sup>, Russell Killingsworth<sup>2</sup>, Cara W. Wessells Wells<sup>3</sup>  
<sup>1</sup>West Texas A&M University, <sup>2</sup>Shamrock Veterinary Hospital Inc., <sup>3</sup>EMGenisys, Inc.

9:45 a.m. 146 **Development of a mathematical model for cost calculation and sustainability analysis of beef cattle grazing systems**

Beatriz Q. Queiroz dos Reis<sup>1</sup>, Elaine Benardes<sup>2</sup>, Barbara Rodrigues<sup>1</sup>, Augusto Gameiro<sup>3</sup>, Jhones O. Sarturi<sup>1</sup>  
<sup>1</sup>Texas Tech University, <sup>2</sup>UNESP, <sup>3</sup>USP

10:00 a.m. **Ruminant Animal Production IV: Management and Physiology Break**

10:15 a.m. 147 **Effect of elasticity analysis on beef cattle production costs**

Beatriz Q. Queiroz dos Reis<sup>1</sup>, Elaine Benardes<sup>2</sup>, Augusto Gameiro<sup>3</sup>, Kaliiu G. Silva<sup>1</sup>, Jhones O. Sarturi<sup>1</sup>  
<sup>1</sup>Texas Tech University, <sup>2</sup>UNESP, <sup>3</sup>USP

10:30 a.m. 148 **Economic assessment of beef cattle backgrounding in Brazil at pre and during the COVID-19 pandemic**

Beatriz Q. Queiroz dos Reis<sup>1</sup>, Edmar Silva<sup>2</sup>, Elaine Benardes<sup>2</sup>, Jhones O. Sarturi<sup>1</sup>  
<sup>1</sup>Texas Tech University, <sup>2</sup>UNESP

10:45 a.m. 149 **Case study: The impact of a fogging system on dairy cow comfort in cows housed in a barn with tunnel ventilation and an automatic milking system**

Guadalupe Ceja<sup>1</sup>, Sushil Paudyal<sup>1</sup>, Jennifer A. Spencer<sup>2</sup>, Juan M. Piñeiro<sup>3</sup>, Courtney L. Daigle<sup>1</sup>  
<sup>1</sup>Texas A&M University, <sup>2</sup>Texas A&M AgriLife Research and Extension Center, <sup>3</sup>Texas A&M AgriLife Extension

11:00 a.m. **Break**

11:15 a.m. 151 **Effect of Neogen Igenity Beef Index scores on performance of steers during finishing**

Jacee k. De Vries<sup>1</sup>, Garrett Farran<sup>1</sup>, Paul A. Beck<sup>1</sup>, Emma A. Briggs<sup>1</sup>, Mikayla F. Moore<sup>1</sup>, Mike Major<sup>1</sup>, David Lalman<sup>1</sup>

<sup>1</sup>Oklahoma State University

11:30 a.m. 152 **Impact of early life nutrition and supplementation of a yeast derived product in beef calves' growth and development**

Stefania Pancini<sup>1</sup>, Guillermo Goncherenko<sup>1</sup>, Hannah Craun<sup>1</sup>, Nicholas W. Dias<sup>1</sup>, Trinity Vidlund<sup>1</sup>, Zachary Klonicke<sup>1</sup>, Vitor R G. Mercadante<sup>2</sup>

<sup>1</sup>Virginia Tech, <sup>2</sup>Virginia Tech - School of Animal Sciences, Large Animal Clinical Sciences

1:00 a.m. 150 **Effect of finishing system on growth, efficiency, and carcass Quality of dairy x beef hybrids**

Ally J. Grote<sup>1</sup>, Addie Wommack<sup>1</sup>, Garrett Farran<sup>1</sup>, Colton A. Robison<sup>1</sup>, Paul A. Beck<sup>1</sup>, Blake K. Wilson<sup>1</sup>, Troy Wistuba<sup>2</sup>, Olivia N. Genter Schroeder<sup>2</sup>

<sup>1</sup>Oklahoma State University, <sup>2</sup>Purina Animal Nutrition

### **Nonruminant Symposium: Advancing Swine Research in the Southern Section**

Chair: Daniel Poole, North Carolina State University

8:30 AM - 11:30 AM

Salon D

8:30 a.m. **Nonruminant Symposium Introduction**

8:35 a.m. **Microbial Information at the Crossroad of Livestock Production**

Christian Maltecca<sup>1</sup>

<sup>1</sup>Department of Animal Science, North Carolina State University, Raleigh, USA

9:20 a.m. **Intestinal barrier function: physiological regulation, injury, and age-dependent repair in swine**

Anthony T. Blikslager<sup>1</sup>

<sup>1</sup>North Carolina State University College of Veterinary Medicine

10:05 a.m. **Nonruminant Symposium Break**

10:20 a.m. 184 **Bacterial community diversity in fresh extended boar semen**

Brooke E. McAnally<sup>1</sup>, Molly S. Smith<sup>1</sup>, Jeffrey G. Wiegert<sup>1</sup>, Vignesh Palanisamy<sup>1</sup>, Sapna Chitlapilly Dass<sup>1</sup>, Rebecca K. Poole<sup>1</sup>

<sup>1</sup>Texas A&M University

10:35 a.m. 185 **Comparison of ammonia concentrations between flush and pull-plug waste management systems in wean-finish swine barns**

Olivia J. Kittle<sup>1</sup>, Suzanne M. Leonard<sup>1</sup>, Mark Knauer<sup>1</sup>, Glen Almond<sup>1</sup>

<sup>1</sup>North Carolina State University

10:50 a.m. 186 **Effects of dietary supplementation with an immuno-modulator on feed intake and reproductive performance in sows**

Richard T. Niblett<sup>1</sup>, Kimberly A. Williams<sup>1</sup>, Marguerite B. Cross<sup>1</sup>, Alexis L. Clapp<sup>1</sup>, Mark J. Estienne<sup>1</sup>

<sup>1</sup>Virginia Tech

11:05 a.m. 188 **An in-vitro model of the equine fecal microbiome to assess how horse population affects fermentation following a starch challenge**

Cassandra R. Gluck<sup>1</sup>, Vivek Fellner<sup>1</sup>, Sarah McLeod<sup>1</sup>, Sue Stuska<sup>2</sup>, Shannon E. Pratt-Phillips<sup>1</sup>

<sup>1</sup>North Carolina State University, <sup>2</sup>Cape Lookout National Seashore

### **Small Ruminant Production III**

Chair: Scott Bowdridge, West Virginia University; Santoshi Chaudhary, Tuskegee University

9:45 AM - 11:15 AM

Salon E

9:45 a.m. 159 **Evaluation of supplemental feeding behavior and growth performance in Katahdin lambs divergently selected for fecal egg count estimated breeding value**

Nicole K. Valliere<sup>1</sup>, Donald L. Wright<sup>2</sup>, Scott P. Greiner<sup>3</sup>, Scott A. Bowdridge<sup>4</sup>, Andrew R. Weaver<sup>5</sup>

<sup>1</sup>North Carolina State University, <sup>2</sup>Virginia Tech, Southwest Virginia Agricultural Research and Extension Center, <sup>3</sup>Virginia Tech, <sup>4</sup>West Virginia University, <sup>5</sup>Department of Animal Science, North Carolina State University

10:00 a.m. 160 **The effect of postweaning fecal egg count EBV on colostrum IgG concentration in Katahdin dams**

Kelsey Bentley<sup>1</sup>, Andrew R. Weaver<sup>2</sup>, Donald L. Wright<sup>3</sup>, Scott P. Greiner<sup>4</sup>, Scott A. Bowdridge<sup>1</sup>

<sup>1</sup>West Virginia University, <sup>2</sup>Department of Animal Science, North Carolina State University, <sup>3</sup>Virginia Tech, Southwest Virginia Agricultural Research and Extension Center, <sup>4</sup>Virginia Tech

10:15 a.m. 161 **Evaluation of feeding behavior of Katahdin lambs during *Haemonchus contortus* infection**

Camren Maierle<sup>1</sup>, Andrew R. Weaver<sup>2</sup>, Scott P. Greiner<sup>3</sup>, Eugene Felton<sup>1</sup>, Scott L. Bowdridge<sup>1</sup>

<sup>1</sup>West Virginia University, <sup>2</sup>Department of Animal Science, North Carolina State University, <sup>3</sup>Virginia Tech

10:30 a.m. 162 **The effect of innate immune receptor activation on differential breed responses to *Haemonchus contortus* in sheep**

Samantha R. Johnson<sup>1</sup>, Denzel D. Middleton<sup>1</sup>, Scott L. Bowdridge<sup>1</sup>, Scott P. Greiner<sup>2</sup>

<sup>1</sup>West Virginia University, <sup>2</sup>Virginia Tech

10:45 a.m. 163 **The efficacy of copper oxide wire particles alone or in combination with moxidecton to reduce parasite loads in meat goat kids**

Dahlia O'Brien<sup>1</sup>, Kwame Matthews<sup>2</sup>, Stephan Wildeus<sup>1</sup>, Niki C. Whitley<sup>3</sup>, Susan Schoenian<sup>4</sup>

<sup>1</sup>Virginia State University, <sup>2</sup>Delaware State University, <sup>3</sup>Fort Valley State University, <sup>4</sup>University of Maryland

11:00 a.m. 164 **Impact of a Cache Valley Fever outbreak on lambing performance in a landrace hair sheep flock: A case study**

MacKenzie Robertson<sup>1</sup>, Stephan Wildeus<sup>1</sup>, Dahlia O'Brien<sup>1</sup>, Kevin Pelzer<sup>2</sup>

<sup>1</sup>Virginia State University, <sup>2</sup>Virginia Tech