

INTERNATIONAL POULTRY SCIENTIFIC FORUM

2017

JANUARY 30 – 31

2017 INTERNATIONAL POULTRY SCIENTIFIC FORUM

Concurrent Meeting of

The Southern Poultry Science Society 38th Annual Meeting

The Southern Conference on Avian Diseases 58th Annual Meeting

January 30-31, 2017

Registration:

You may register on site on Monday, Jan. 30, 7:30 a.m. – 4 p.m., and Tuesday, Jan. 31, 7:30 – 11 a.m., in Registration Lobby - Building B, Georgia World Congress Center.

Program Summary

MONDAY SESSIONS JANUARY 30	ROOM NUMBER	TIME	PAGE
Physiology	B-311	8:00 a.m. – 10:15 a.m. (Dr. Jessica Starkey)	1
Processing & Products	B-311	10:30 a.m. – 3:15 p.m. (Dr. Amit Morey)	2
Pathology	B-312	8:00 a.m. – 11:15 a.m. (Dr. Prafulla Regmi)	4
SCAD I	B-312	11:30 a.m. – 3:30 p.m. (Dr. Kenneth Macklin)	6
Environment Management I	B-313	8:00 a.m. – Noon (Dr. Lisa Bielke)	8
Environment Management II	B-313	1:00 p.m. – 3:30 p.m. (Dr. Mike Smith)	10
Metabolism & Nutrition I	B-314	8:00 a.m. – Noon (Dr. Woo Kyun Kim)	11
Metabolism & Nutrition II	B-314	1:00 p.m. – 3:30 p.m. (Dr. Jeff Firman)	13
Metabolism & Nutrition III	B-315	8:00 a.m. – Noon (Dr. Chris Bailey)	14
Metabolism & Nutrition IV	B-315	1:00 p.m. – 3:30 p.m. (Dr. Haitham Yakout)	16
Student Luncheon	B-310	Noon – 1:00 p.m.	
USPOULTRY Presentation	B-313	3:30 p.m. – 4:00 p.m. (Dr. John Glisson)	38
Posters Displayed	B-313 Foyer	1:00 p.m. – 6:00 p.m. (Dr. Lizza Macalintal, Dr. Kelley Wamsley)	27-37
Poster Reception	B-313	4:00 p.m. – 6:00 p.m.	
TUESDAY SESSIONS JANUARY 31	ROOM NUMBER	TIME	PAGE
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Metabolism & Nutrition V	B-311	7:30 a.m. – 11:00 a.m. (Dr. Chasity Pender)	17
SCAD II	B-312	7:30 a.m. – 9:15 a.m. (Dr. Chris Stephens)	19
SCAD III	B-312	9:30 a.m. – 11:00 a.m. (Dr. Susan Williams)	20
Metabolism & Nutrition VI	B-313	7:30 a.m. – 11:00 a.m. (Dr. Luke Barnard)	21
Metabolism & Nutrition VII	B-314	7:45 a.m. – 11:00 a.m. (Dr. Aaron Kiess)	23
Metabolism & Nutrition VIII	B-315	7:30 a.m. – 11:00 a.m. (Dr. Terri Parr)	25
Milton L. Dendy Keynote Lecture	B-313	11:00 a.m. – Noon	43
SCAD Business Meeting	B-312	Noon	38
SPSS Business Meeting	B-313	Noon	38

Officers of the SPSS 2016-2017

President:	Dr. Omar Gutierrez, Huvepharma
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Second VP	Dr April Levy, DSM
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Executive Secretary	Dr. Mary Beck Poultry Science Department Mississippi State University Mail Stop 9665 Mississippi State, MS 39762
Phone:	662.325.3416
Email:	m.beck@msstate.edu

Officers of the SCAD 2016-2017

President:	Dr. Ken Macklin, Auburn University
Directors:	Dr. John El Attrache, CEVA Dr. Alejandro Banda, MS State Dr. Lisa Bielke, U Ark. Dr. John Donahoe Dr. Olivia Faulkner, CEVA Dr. Monique Franca, UGA Dr. Maricarmen Garcia, UGA Dr. Joe Giambrone, Auburn University Dr. Brian Jordan, UGA Dr. Blanca Lupiani, Texas A&M Dr. Patti Miller, SEPRL, USDA/ARS Dr. Mary Pantin-Jackwood, SEPRL, USDA/ARS Dr. Holly Sellers, UGA Dr. John Smith, Fieldale Dr. Dennis Wages, NCSU Dr. Susan Williams, UGA
Secretary / Treasurer	Dr. Mark W. Jackwood, UGA Department of Population Health University of Georgia 953 College Station Road Athens, Georgia 30602-4875
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Physiology

Chair: Dr. Jessica Starkey, Auburn University

Room Number: B311

Monday, January 30, 2017

8:00 a.m. M1

The mRNA expression of the kappa opioid receptor in the pituitary and ovary of broiler breeder hens.

Ashley Stephens*^{GS}, Martha Freeman, Adam Davis *University of Georgia*

8:15 a.m. M2

The impact of a dietary yeast fermentation product derived from *Saccharomyces cerevisiae* on semen quality and semen microbiota of aged White Leghorn roosters

Midian Nascimento dos Santos*^{GS}, Reshma Ramachandran, Kelley Wamsley, Aaron Kiess, Christopher McDaniel *Mississippi State University*

8:30 a.m. M3

Relationship between sperm-egg penetration and the duration of fertility in Chinese painted quail hens (*Coturnix chinensis*)

Reshma Ramachandran*^{GS}, Midian Nascimento Dos Santos, Christopher McDaniel *Mississippi State University*

8:45 a.m. M4

Evaluation of the role of maternally derived antibodies on the immunomodulatory capacity of Original XPCTM in broilers

Juan Suarez Martinez*^{GS1}, Wen Chou¹, Rachel Blount¹, Luc Berghman¹, Donald McIntyre², Hilary Pavlidis², John Carey¹ *1Texas A&M University; 2Diamond V*

9:00 a.m. M5

Relationship between 4 day percentage breast yield and incidence of woody breast and white striping muscle myopathies

Sara Orłowski*^{GS}, Joseph Hiltz, Barbara Mallman, Nicholas Anthony *University of Arkansas*

9:15 a.m. M6

Broiler live performance and carcass yield is improved by dietary potassium and available phosphorus without an increased incidence of wooden breast.

Matthew Livingston*^{GS}, John Brake *North Carolina State University*

9:30 a.m. M7

Noni (*Morinda citrifolia*) modulates the expression of hepatic lipogenic genes in chronic heat stressed broilers

Joshua Flees*^{UG}, Elizabeth Greene, Walter Bottje, Sami Dridi *University of Arkansas*

9:45 a.m. M8

Evaluation of objective digital methods for determination of Pectoralis major muscle cross-sectional area for use in estimation of skeletal muscle fiber number

Austin Lock*^{UG}, Kathryn Meloche, Jessica Starkey *Auburn University*

10:00 a.m. M9

Protein expression for zona pellucida protein B2 in two genetic lines of turkey hens that differ in fertility

Josh Steed*^{GS}, Andrew Benson, Adam Davis *University of Georgia*

10:15 a.m. Break

Processing & Products I

Chair: Dr. Amit Morey, Auburn University

Room Number: B311

Monday, January 30, 2017

10:30 a.m. M10

Effects of divergently selected broiler lines on meat color and aerobic microbial growth under simulated retail display

Famous Yang*^{GS}, Sara Orlowski, Fred Pohlman, Nicholas Anthony *University of Arkansas*

10:45 a.m. M11

Higher stocking densities decrease turkey performance without altering meat quality

Carol Wu*^{GS}, Matthew Livingston, Hernan Cordova-Noboa, Albaraa Sarsour, Brooke Bartz, Ken Anderson, Edgar Oviedo-Rondon, Jesse Grimes, Kimberly Livingston *North Carolina State University*

11:00 a.m. M12

Impact of scalding duration and scalding water temperature on broiler processing wastewater loadings

Caitlin Harris*^{GS1}, Kevin Gottilla¹, Dianna Bourassa², Jeff Buhr³, Brian Kiepper¹ ¹*University of Georgia*; ²*Auburn University*; ³*USDA-ARS US National Poultry Research Center*

11:15 a.m. M13

Identification and characterization of antimicrobial resistance of *Campylobacter* from shell eggs from different commercial laying hen housing systems

Estefanía Novoa Rama*^{GS1}, Matthew Bailey¹, Deana Jones², Richard Gast², Kenneth Anderson³, Jagpinder Brar¹, Rhonda Taylor¹, Manpreet Singh¹ ¹*Purdue University*; ²*USDA-ARS*; ³*North Carolina State University*

11:30 a.m. M14

Assessment of *Campylobacter* populations in broiler carcasses from a facility using organic and conventional processing methods

Matthew Bailey*^{GS}, Rhonda Taylor, Jagpinder Brar, Carmen Velásquez, Estefania Novoa Rama, Manpreet Singh *Purdue University*

11:45 a.m. M15

Homologous stress adaptation, antibiotic resistance, and biofilm formation of *Salmonella* Heidelberg on different food-contact surfaces following exposure to sub-lethal chlorine concentrations

Tomi Obe*^{GS}, Rama Nannapaneni, Chander Sharma *Mississippi State University*

12:00 p.m. Lunch

1:00 p.m. M16

Using image measurements of broiler carcass to identify severity of woody breast online

Xiao Sun*^{GS1}, Barbara Mallmann², Dawn Koltcs², Karen Christensen², Casey Owens² ¹*Nanjing Agricultural University*; ²*University of Arkansas*

1:15 p.m. M17

Evaluating a novel bioelectric impedance analysis technology for the rapid detection of Wooden Breast myopathy in broiler breast filets

Avery Kennedy-Smith*^{UG1}, Laura Bauermeister¹, Meredith Johnson¹, M. Keith Cox², Amit Morey¹ ¹*Auburn University*; ²*Seafood Analytics*

1:30 p.m. M18

Effect of extended deboning time and subsequent storage on the breast meat quality of fast-growing big broilers

Meredith Johnson*, Avery Kennedy-Smith, Laura Bauermeister, Amit Morey *Auburn University*

1:45 p.m. M19

Utilization of ultrasonography as a tool to detect the wooden breast myopathy in live broilers

Sergio Vieira*, Sergio Vieira, Liris Kindlein, Tamara Ferreira, Catarina Stefanello, Silvana Caldas, Gabriela Santiago, Natália Serafini *UFRRGS*

2:00 p.m. M20

Wooden Breast myopathy development in broilers subjected to feed restriction: growth performance, serologic profile, and meat quality

Liris Kindlein*, Liris Kindlein, Sergio Vieira, Catarina Stefanello, Tamara Ferreira, Stella Valle, Cristina Simões, Vinícius Nickel *UFRGS*

2:15 p.m. Break

2:30 p.m. M21

Poultry industry and cultural tour of Spain: international experience through an embedded course in the college of agricultural sciences.

Nuket Acar*, Paul Patterson, Michael Hulet, Jaime Prudencio *The Pennsylvania State University*

2:45 p.m. M22

MSU Poultry Science takes New Zealand!

Mary Beck*, G. Tabler, Kelley Wamsley, Aaron Kiess *Mississippi State University*

3:00 p.m. M23

Mexico Broiler Production Study Abroad: Development of Cultural and Educational Critical Thinking Opportunities

C.Z. Alvarado*, C.A. Bailey *Texas A&M University*

3:30 p.m.

USPoultry Presentation - Room Number B-313

4:00-6:00

Poster Reception - Room Number B-313 Foyer

Pathology

Chair: Dr. Prafulla Regmi

Room Number: B312

Monday, January 30, 2017

8:00 a.m. M24

Survey of *Mycoplasma synoviae* prevalence and economic impact in the Middle East and North Africa area

Husam Bakri*¹, Entisar Al-Hallaq² ¹*MSD-Animal Health-Middle East*; ²*MSD-Animal Health-Regional Service Lab*

8:15 a.m. M25

Serological monitoring of broiler breeders in Tehran province against avian influenza

A. Rahimi*¹, Saeed Charkhar¹, Alireza Bahonar², Shaban Rahimi³, Hossein Ebrahimi³ ¹*Science and Research Branch of Islamic Azad University*; ²*Tehran*; ³*Tarbiat Modares University*

8:30 a.m. M26

Effects of new bacterial multistrain probiotic as antibiotics on growth performance of broiler chicken challenge with *E.coli*(O78)

Nagwa Shalaby*¹, Abeer Abd El-Baky² ¹*Animal Health Research Institute, Provincial Laboratory*; ²*Faculty Veterinary Medicine*.

8:45 a.m. M27

Detection of *Gallibacterium* and *Avibacterium paragallinarum* serovar C-1 isolates from layers in México.

Nancy Christy*¹, Sergio Carrasco², Vladimir Morales³, Edgardo Soriano⁴ ¹*Boehringer Ingelheim*; ²*Avicampo*; ³*Solutions in Immunology and microbiology SIM*; ⁴*Universidad Autónoma del Estado de México*

9:00 a.m. M28

Frequency and persistence of fecal shedding of *Salmonella* Enteritidis by experimentally infected laying hens housed in enriched colony cages at different stocking densities

Richard Gast*¹, Rupa Guraya¹, Deana Jones¹, Kenneth Anderson², Darrin Karcher³ ¹*USDA-ARS*; ²*North Carolina State University*; ³*Purdue University*

9:15 a.m. M29

Influence of chlorine induced sub-lethal oxidative stress on homologous stress adaptation and biofilm formation in *Listeria monocytogenes*

Mohit Bansal*^{GS}, Rama Nannapaneni, Chris McDaniel, Chander Sharma *Mississippi State University*

9:30 a.m. Break

9:45 a.m. M30

Effect of age, strain, sex, and incubation temperature on severity of chicken breast myopathy ("woody breast") in broiler chickens

Laura Chen*^{GS1}, Luke Borst¹, Edgar Oviedo-Rondon¹, Albaraa Sarsour¹, Alejandro Cordova-Noboa¹, Michael Wineland², John Barnes¹ ¹*North Carolina State University*; ²*Private consultant*

10:00 a.m. M33

Defining the progressive manifestation of wooden breast in the Pectoralis major of commercial broilers from 21 through 46 days of age to objectively correlate stage/severity of WB with growth parameters.

Jacqueline Griffin*^{GS}, Macdonald Wick *The Ohio State University*

10:15 a.m. M34

Prevalence and severity of osteochondrosis in the free thoracic vertebra is independent of body weight in broiler chickens

Laura Chen*^{GS}, Albaraa Sarsour, Alejandro Cordova-Novoa, Mitsu Suyemoto, Edgar Oviedo-Rondon, John Barnes, Luke Borst *North Carolina State University*

10:30 a.m. M35

Occurrence of dorsal cranial myopathy in broiler chickens in seasons and its impact on public health

Fernanda do Prado*^{UG}, Sergio Vieira, Liris Kindlein *UFRGS*

10:45 a.m. M36

Effects of Eimeria challenge and feed outage on growth performance and gut health of broilers
Juxing Chen*, Frances Yan, Vivek Kuttappan, Mercedes Vazquez-Anon *Novus International Inc.*

11:00 a.m. M37

Differential necrotic enteritis models for evaluation of candidate interventions

Juan Latorre^{*1}, Whitney Briggs², John Barta³, Guillermo Tellez¹, Billy Hargis¹, Lisa Bielke²

¹University of Arkansas; ²Ohio State University; ³University of Guelph

11:15 a.m. Break

SCAD I

Chair: Dr. Kenneth Macklin, Auburn University

Room Number: B312

Monday, January 30, 2017

11:30 a.m. M38

Looking for alternative to breast injections in broiler breeder pullets? An evaluation of local reactions of a killed vaccine applied to the thighs and drums.

Jessica Hockaday^{*GS1}, Phil Stayer², David French², Erin Riley², Buddy Clark³, Martha Pulido¹, Chance Brett², Mickey Gault² ¹Mississippi State University College of Veterinary Medicine; ²Sanderson Farms, Inc.; ³Ceva Animal Health

11:45 a.m. M39

Experimental infection of egg laying chickens with Clostridium perfringens strains isolated from Focal Duodenal Necrosis lesions.

Ana Villegas^{*GS1}, Francisco Uza², Robert Moore³, Charles Hofacre¹, Margie Lee¹, Monique Franca¹ ¹University of Georgia; ²University of California; ³RMIT University

12:00 p.m. Lunch

1:00 p.m. M40

Comparison of vaccination for coccidiosis and the use of dietary Salinomycin on broilers

Jarred Oxford^{*GS1}, Ivan Alvarado², Manuel Da Costa¹, Gene Pesti¹ ¹University of Georgia; ²Merck Animal Health

1:15 p.m. M41

Effect of salinomycin inclusion on performance and coccidiosis control in vaccinated broilers

Ivan Alvarado^{*1}, Gene Pesti², Manuel Costa² ¹Merck Animal Health; ²University of Georgia

1:30 p.m. M42

Anticoccidial Efficacy of All Natural Feed and Water Additives administered to turkeys infected with a mixture of Eimeria meleagritidis, E. gallopavonis, and Eimeria adenoids.

Greg Mathis^{*1}, Brett Lumpkins¹, John Schleifer², Troy Lohrmann² ¹Southern Poultry Research, Inc.; ²Quality Technology International, Inc.

1:45 p.m. M43

Effects of various anticoccidials as bio-shuttle alternatives for broilers under a necrotic enteritis challenge

Manuel Da Costa^{*1}, Kalen Cookson¹, Steve Davis², Sam Hendrix², Jon Schaeffer¹, John Dickson¹ ¹Zoetis, U.S. Poultry; ²Colorado Quality Research

2:00 p.m. M44

Effectiveness of a yeast cell wall in commercial layers against intestinal and ovary colonization of S. enteritidis

Charles Hofacre^{*1}, Glycon Santos², Melina Bonato², Greg Mathis³, Roy Berghaus¹ ¹The University of Georgia; ²ICC; ³Southern Poultry Research Group

2:15 p.m. Break

2:30 p.m. M45

A highly stable, effective, and safe form of fenbendazole (Safe-Guard® AquaSol) for the treatment of gastro-intestinal nematodes

Blayne Mozisek* Merck Animal Health

2:45 p.m. M46

Repeated isolation of virulent Newcastle disease viruses among poultry and captive non-poultry avian species in Pakistan from 2011 to 2016

Kiril Dimitrov^{*1}, Abdul Wajid², Shafqat Rehmani², Muhammad Wasim², Asma Basharat², Tasra Bibi², Saima Arif², Mustafa Ababneh³, Patti Miller¹, Claudio Afonso¹ ¹Southeast Poultry Research Laboratory, US National Poultry Research Center, US Dept. of Agriculture; ²University of Veterinary and Animal Sciences; ³Jordan University of Science and Technology

3:00 p.m. M47

Experimental evaluation of killed and live Newcastle disease virus vaccines heterologous to the virulent genotype XII challenge strain from the Peru/2008 outbreak

Patti Miller^{*1}, Stivalis Cardenas Garcia², Kiril Dimitrov¹, Iryna Goraichuk¹, Tonya Taylor¹, Arnulfo Toscano Contreras³, Victor Madrigal Sanchez³, Claudio Afonso¹ ¹USDA/ARS/U.S. National Poultry Research Center/SEPRL; ²UGA; ³Investigacion Aplicada, S.A. de C.V. (IASA)

3:15 p.m. M48

Use of Sequence-Independent-Single-Primer-Amplification (SISPA) for whole genome sequencing using Illumina MiSeq Platform for avian influenza virus, Newcastle disease virus, and infectious bronchitis virus.

Klaudia Chrzastek*, Dong-hun Lee, Diane Smith, Poonam Sharma, David Suarez, Mary Pantin-Jackwood, Darrell Kapczynski *United States Department of Agriculture, Agricultural Research Service, U.S. National Poultry Research Center*

3:30 p.m.

USPoultry Presentation - Room Number B-313

4:00-6:00

Poster Reception - Room Number B-313 Foyer

Environment Management I

Chair: Dr. Lisa Bielke, The Ohio State University

Room Number: B313

Monday, January 30, 2017

8:00 a.m. M49

Detection of microsatellite loci linked to QTL for growth in warm-region chickens under natural prolonged heating conditions

Doaa Higazy*^{UG}, Al-Amira El-Kashef, Essam El-Gendy *Faculty of Agriculture, Cairo University*

8:15 a.m. M50

Thermal Manipulation during pre and post hatch on Long bone development of Male broiler chickens exposed to Chronic heat stress

Gholamreza Zaboli*^{GS1}, Shaban Rahimi¹, Farid Shariatmadari¹, Mohammad Amir Karimi Torshizi¹, Ali Baghbazadeh², Mohammad Kameli¹ *¹Department of Poultry Science, Faculty of Agriculture, Tarbiat Modares University; ²Section of Physiology, Department of Basic Sciences, Faculty of Veterinary Medicine, University of Tehran*

8:30 a.m. M51

Environmental influences of Salmonella Heidelberg colonization in commercial broilers

Elle Chadwick*^{GS}, James Krehling, Laci MacKay, Bradley Schrader, Kenneth Macklin *Auburn University*

8:45 a.m. M52

The effects of physically modified switchgrass bedding on broiler production

Amy Barkley*^{GS}, Paul Patterson, Jude Liu, R. Hulet *The Pennsylvania State University*

9:00 a.m. M53

Hen manure nutrients and production in the Chesapeake Bay Watershed

Erica Rogers*^{GS}, Paul Patterson, R. Hulet, Amy Barkley *The Pennsylvania State University*

9:15 a.m. M54

Time series forecast model selection & exchange rate index for wholesale chicken parts prices

Chris Sims*^{GS}, H.L Goodwin, Andrew McKenzie *University of Arkansas*

9:30 a.m. M55

Wire-flooring induced lameness in broilers from hens fed a *Bacillus subtilis*

Ashley Owen*^{GS}, Jeanna Wilson, Charles Hofacre *University of Georgia*

9:45 a.m. M56

Evaluating the effect of corn and/or rye based diets on gut health, bone strength and body weight in modern broiler chickens

Mikayla Baxter*^{GS1}, Billy Hargis¹, Juan David Latorre¹, Steve Ricke¹, Si Hong Park¹, Sami Dridi¹, Liz Greene¹, Steve Bickler², Ruben Merino³, Memo Tellez¹ *¹University of Arkansas; ²University of California, San Diego; ³Universidad Nacional Autónoma de México*

10:00 a.m. Break

10:15 a.m. M57

Infrared thermography (IRT) as a non-invasive indicator of leg lesions associated with bacterial chondronecrosis with osteomyelitis (BCO) in broilers

Shawna Weimer*^{GS}, Andronikos Mauromoustakos, Robert Wideman, Dawn Koltes, Karen Christensen, Yvonne Vizzier-Thaxton *University of Arkansas*

10:30 a.m. M58

Carcass and parts yield of broiler chickens incubated with a photoperiod and reared in different day lengths

Janessa Henry*^{UG}, Kayla Graham, Xuijie Li, Janice MacIsaac, Bruce Rathgeber *Dalhousie University*

10:45 a.m. M59

Air cell size profile and its relationship to eggshell temperature and water loss in broiler hatching eggs through day 12 of incubation

Oluwaseun Durojaye*^{GS}, Katie Elliot, Edgar Peebles *Mississippi State University*

11:00 a.m. M60

Effect of in ovo LAB and Gram-negative bacterial inoculation on microbial profiles of broiler chicks

Kim Wilson^{*GS1}, Whitney Briggs¹, Audrey Duff¹, Kendal Searer¹, Kyle Teague², Lucas Graham², Lisa Bielke¹ ¹*The Ohio State University*; ²*University of Arkansas*

11:15 a.m. M61

Post-hatch performance of pullets provided light during incubation

Nilakshi Abeysinghe^{*GS1}, William Hannah¹, Janice MacIsaac¹, Karen Schwean-Lardner², Bruce Rathgeber¹ ¹*Dalhousie University*; ²*University of Saskatchewan*

11:30 a.m. M62

Providing a photoperiod during incubation on broiler 6 hour post placement and final body weight

Kayla Graham^{*GS}, Xujie Li, Janice MacIsaac, Bruce Rathgeber *Dalhousie University*

11:45 a.m. M63

The impact of photoperiod spectrums during incubation on chick yolk free body weight

William Hannah^{*GS}, Xujie Li, Kayla Graham, Bruce Rathgeber *Dalhousie University*

12:00 p.m. Lunch

Environment Management II

Chair: Dr. Mike Smith, University of Tennessee

Room Number: B313

Monday, January 30, 2017

1:00 p.m. M64

Growth performance and carcass comparison between commercial and alternative broiler strains.

Joshua Deines*^{GS1}, Doug Yoho¹, Laura Chick¹, Richard Bramwell¹, Tom Whiting² ¹*University of Arkansas*; ²*Whiting Farms Inc.*

1:15 p.m. M65

Effect of beak shape of IRBT hens on welfare and productivity

Cara Hughes*^{UG1}, Jenna Griffin², Karen Schwean-Lardner¹ ¹*University of Saskatchewan*; ²*Egg Farmers of Alberta*

1:30 p.m. M66

Effects of incubation temperature profiles on carcass and cut up yields of four genetic lines at 57d of age

Albaraa Sarsour*¹, Edgar Oviedo-Rondón¹, Beatriz Saldaña², Luis Bernal-Arango³, Mariana Mesquita⁴, Hernan Cordova¹, Ricardo Fasanaro⁵ ¹*North Carolina State University*; ²*Universidad Politécnica de Madrid*; ³*Politécnico Colombiano Jaime Isaza Cadavid*; ⁴*Universidade Federal de Goiás*; ⁵*Universidade Estadual Paulista*

1:45 p.m. M67

Performance of Commercial layers at different Cage Tier and housing zones

Athar Mahmud*, Shahid Mehmood, Muhammad Irfan, Arshad Javid, Jibrán Hussain, Sohail Ahmad, Muhammad Usman, Mian Saleem *University of Veterinary and Animal Sciences, Lahore-Pakistan*

2:00 p.m. M68

The potential impact of replacing broilers with slower growing strains on industry resources and infrastructure

Anthony Pescatore*, Tatijana Fisher, Jacqueline Jacob, Michael Ford *University of Kentucky*

2:15 p.m. M69

Using biochar (Pro-C©) as litter amendment for heat-stressed broilers

Michael Smith*¹, Ronique Beckford¹, Bryan Biss² ¹*The University of Tennessee*; ²*Proton Power, Inc.*

2:30 p.m. M70

The impact of antibiotic-free production on broiler health

Matthew Salois*¹, Kevin Watkins¹, Kristi Baker¹, Joanna Karavolia² ¹*Elanco*; ²*University of Florida*

2:45 p.m. M71

Avian basophilia and basophilosis as indications of stress

Paul Cotter*, Kathleen Cotter *Cotter Laboratory*

3:00 p.m. M72

Effect of fan induced photoperiod on live performance and yield of male broiler chickens

J.L. Purswell*, H.A. Olanrewaju *ARS - USDA*

3:15 p.m. M73

Effect of light intensity adjusted for species specific spectral sensitivity on live performance in broiler chickens

J.L. Purswell*, H.A. Olanrewaju *ARS - USDA*

3:30 p.m.

USPoultry Presentation - Room Number B-313

4:00-6:00

Poster Reception - Room Number B-313 Foyer

Metabolism & Nutrition I

Chair: Dr. Woo Kyun Kim, University of Georgia

Room Number: B314

Monday, January 30, 2017

8:00 a.m. M74

Impact of increased dietary threonine on egg quality and component yield in older laying hens.

John Padgett^{*UG}, Rachel Blount, Micky Clary, John Carey *Texas A&M University*

8:15 a.m. M75

Evaluating the effect of yeast cell wall supplementation on ideal threonine to lysine ratios in broilers as measured by performance, intestinal mucin secretion, morphology, and goblet cell number

Raghad Abdaljaleel^{*GS1}, Thomas Gaydos², Morouj Al-Ajeeli¹, Hector Leyva-Jimenez¹, Yansoon AL-Jumaa¹, Christopher Bailey¹ *Texas A&M University*; ²*Phileo-Lesaffre Animal Care*

8:30 a.m. M76

Effects of various levels of synthetic arginine supplementation on growth response and fat deposition in broilers

Fernanda Castro^{*GS1}, Paula Sedlacek¹, Jung-un Kim², Eunji Koo², Hojun Choi², Woo Kyun Kim¹ *University of Georgia*; ²*CJ CheilJedang Corporation*

8:45 a.m. M77

Effects of guanidinoacetic acid supplementation on carcass, cut up yields, and meat quality of broilers fed corn and sorghum-based diets

Hernan Cordova^{*GS1}, Edgar Oviedo-Rondón¹, Albaraa Sarsour¹, Pedro Ferzola² *North Carolina State University*; ²*Universidade Federal do Rio Grande do Sul*

9:00 a.m. M78

Effects of feeding reduced crude protein diets to broilers on growth performance and carcass characteristics from 15 to 35 d of age

Ruben Kriseldi^{*GS1}, Paul Tillman², Zhirong Jiang³, William Dozier¹ *Auburn University*; ²*Poultry Technical Nutrition Service LLC*; ³*Ajinomoto Heartland Inc.*

9:15 a.m. M79

Bioavailability of non-phytate phosphorus in diets formulated with various animal protein blends or meat and bone meal sources fed to Ross × Ross 708 male broilers from 8 to 21 d of age

Klinton McCafferty^{*GS1}, Curran Gehring², William Dozier¹ *Auburn University*; ²*Tucker Milling LLC*

9:30 a.m. Break

9:45 a.m. M80

Effects of dietary protein source, digestible threonine to lysine ratio, and coccidiosis vaccination on the growth performance and processing characteristics of broiler chickens at 33 d of age

Kate Meloche^{*GS1}, Paul Tillman², Zhirong Jiang³, William Dozier, III¹ *Auburn University*; ²*Poultry Technical Nutrition Services LLC*; ³*Ajinomoto Heartland, Inc.*

10:00 a.m. M81

Measuring whole body CO₂ production using an intragastrically and intravenously administered bolus dose of [1-13C] sodium bicarbonate as validated by indirect calorimetry

Michael Schlumbohm^{*GS1}, Katie Hilton¹, Garrett Mullenix¹, Pramir Maharjan¹, Maria Mayorga¹, Judy England¹, Behnam Saremi², Craig Coon¹ *University of Arkansas*; ²*Evonik Nutrition and Care GmbH*

10:15 a.m. M82

Comparison of two net energy calculations of two broiler strains fed varying levels of amino acids and varying levels of metabolizable energy

Katie Hilton^{*GS1}, Garrett Mullenix¹, Michael Schlumbohm¹, Justina Caldas¹, Pramir Maharjan¹, Maria Mayorga¹, Judy England¹, Victor Naranjo², Antonio Kawlinowski², Craig Coon¹ *University of Arkansas*; ²*Evonik Nutrition and Care GmbH*

10:30 a.m. M83

Varying dietary amino acids, metabolizable energy levels and seasonal effects on modern broiler growth performance and processing yields

Garrett Mullenix^{*GS1}, Katie Hilton¹, Michael Schlumbohm¹, Justina Caldas¹, Judith England¹, Antonio Kalinowski², Victor Naranjo², Craig Coon¹ ¹*University of Arkansas*; ²*Evonik*

10:45 a.m. M84

Effects of feed form during the starter period on productive and processing performance of broilers

Andrea Rubio^{*GS1}, William Dozier¹, Endhier Lezcano² ¹*Auburn University*; ²*Zamorano*

11:00 a.m. M85

Diet formulation and feed processing effects on 18-d broiler performance

Ariel Bergeron^{*GS}, John Boney, Brian Glover, Victoria Homan, Joseph Moritz *West Virginia University*

11:15 a.m. M86

Effects of environment, feed form, and caloric density on energy partitioned to performance and immune response

Brian Glover^{*GS}, Jessalyn Hadfield, John Boney, Ariel Bergeron, Joseph Moritz *West Virginia University*

11:30 a.m. M87

The effect of diets varying in commercial phytase product subjected to increasing steam conditioning temperature on broiler performance and tibia mineralization

Victoria Homan^{*GS}, John Boney, Joseph Moritz *West Virginia University*

11:45 a.m. M88

Effect of corn particle size on nutrient utilization and growth performance of commercial broilers and pullets

Lisa Kitto^{*GS}, Paul Patterson, R. Michael Hulet *Pennsylvania State University*

12:00 p.m. Lunch

Metabolism & Nutrition II

Chair: Dr. Jeff Firman, University of Missouri

Room Number: B314

Monday, January 30, 2017

1:00 p.m. M89

Effect of oil source and peroxidation status on broiler performance and oxidative stress

Stephanie Lindblom^{*GS1}, Elizabeth Bobeck¹, Brian Kerr² ¹*Iowa State University*; ²*USDA-ARS*

1:15 p.m. M90

Effect of fat oxidation on male broiler performance, yield, and muscle quality

Cody Flores^{*GS1}, Hunter Walters¹, Danny Portillo¹, Rob Shirley², M. Briens³, Christine Alvarado¹, Jason Lee¹ ¹*Department of Poultry Science, Texas A&M AgriLife Research*; ²*Adisseo USA*; ³*Adisseo France SAS (CERN)*

1:30 p.m. M91

The effect on performance of turkey poults fed various levels of yellow grease in pre-starter rations

Corey Johnson^{*GS}, Jeffre Firman *University of Missouri*

1:45 p.m. M92

Effect of different feed form and function on the performance of turkey poults to 3 weeks using Alphastart (AS) mini pellet and standard crumbled diets.

Karlinton Flores^{*GS1}, Jesse Grimes¹, Steven Clark², Adam Fahrenholz¹ ¹*North Carolina State University*; ²*Devenish nutrition*

2:00 p.m. M93

Effect of potassium and available phosphorus in broiler breeder diets on fecal and egg characteristics at the onset of lay.

Dinabandhu Joardar^{*GS}, Coltin Caraway, John Brake *North Carolina State University*

2:15 p.m. M94

Effects of dietary copper removal on Ross 708 male broiler growth performance

K. Brown^{*GS1}, C. Eagleson¹, T. Parr², J. Lee¹ ¹*Texas A&M University*; ²*Micronutrients USA - LLC*

2:30 p.m. M95

Effects of manganese and zinc sources and increasing late supplementation on egg production and quality in corn-soy diets fed to White Leghorn hens

Austin Jasek^{*GS1}, Kyle Smith¹, Terri Parr², Jason Lee¹ ¹*Texas A&M*; ²*Micronutrients USA LLC*

2:45 p.m. M96

Effects of combination of phytase and Multi-Carbohydrase enzymes on growth performance and bone mineralization in broilers

Jinquan Wang^{*GS1}, Rob Patterson², Woo Kyun Kim¹ ¹*University of Georgia*; ²*Canadian Bio-Systems*

3:00 p.m. M97

Effect of poult hatch weight on their subsequent growth response to dietary energy, phosphorus, calcium and Azomite®.

Samantha Black^{*GS1}, Marissa Herchler¹, Vinicius Schramm², Rafael Crivellari¹, Ramon Malheiros¹, Peter Ferket¹ ¹*North Carolina State University*; ²*Universidade Federal do Paraná*

3:15 p.m. M98

The effects of Hostazym® and Optiphos® super dosing in combination with Azomite® on growth performance in market turkey hens

Marissa Herchler^{*GS1}, Samantha Black¹, Vinicius Schramm², Rafael Crivellari¹, Ramon Malheiros¹, Peter Ferket¹ ¹*North Carolina State University*; ²*Federal University of Parana*

3:30 p.m.

USPoultry Presentation - Room Number B-313

4:00-6:00

Poster Reception - Room Number B-313 Foyer

Metabolism & Nutrition III

Chair: Dr. Christopher Bailey, Texas A&M University

Room Number: B315

Monday, January 30, 2017

8:00 a.m. M99

The effect of Original XPC on egg production, component yield and composition in laying hens

Rachel Blount*^{GS1}, Juan Suarez¹, Jungwoo Park¹, Don McIntyre², Hilary Pavlidis², John Carey¹

¹Texas A&M University; ²Diamond V

8:15 a.m. M100

Effect of lignosulfonate on pellet durability under marginal pelleting conditions

Jeffrey Pope*^{GS1}, Adam Fahrenholz¹, Thomas Winowski² ¹North Carolina State University;

²LignoTech

8:30 a.m. M101

The effect of refined functional carbohydrates (RFCs) from enzymatically hydrolyzed yeast on the transmission of Salmonella spp. between broilers and proliferation in broiler housing.

Grayson Walker*^{GS1}, Sangita Jalukar², John Brake¹ ¹North Carolina State University; ²Arm and Hammer Animal Nutrition

8:45 a.m. M102

Coarse corn improves feed efficiency in both coccidiosis-vaccinated and salinomycin-fed broilers

Coltin Caraway*^{GS}, John Brake *North Carolina State University*

9:00 a.m. M103

Computed tomographic precision rate-of-passage assay without a fasting period in broilers: more precise foundation for targeting the releasing time of encapsulated products

Jundi Liu*^{GS1}, Scott Secrest², Justin Fowler¹ ¹Department of Poultry Science, University of Georgia; ²Department of Veterinary Biosciences and Diagnostic Imaging, University of Georgia

9:15 a.m. M104

Effects of lysophospholipid product (Lipidol Ultra™) on growth performance and carcass characteristics in broilers

Chongxiao Chen*^{GS1}, Byoungyun Jung², Woo Kyun Kim¹ ¹University of Georgia; ²EasyBio Inc.

9:30 a.m. Break

9:45 a.m. M105

Evaluation of Direct Fed Microorganism and enzyme blend co-administration on the gastrointestinal microbiota of broilers fed US commercial type diets, with or without antibiotic growth promoters.

Tyler Askelson*^{GS1}, Cody Flores¹, Sadie Dunn-Horrocks¹, Yueming Dersjant-Li², Kirsty Gibbs², Ajay Awati², Jason Lee¹, Tri Duong¹ ¹Texas A&M University; ²Danisco Animal Nutrition, DuPont Industrial Biosciences

10:00 a.m. M106

Effects of lactic acid bacteria and organic acids on the concentration of an antibiotic resistant strain of Salmonella Heidelberg, in vitro

Dana Dittoe*^{GS}, Chris McDaniel, Aaron Kiess *Mississippi State University*

10:15 a.m. M107

Effects of VANNIX™ C on the performance of broilers raised on dirty litter.

James Lewis*^{GS1}, Rachel Tonda², Jon Rubach², Mitch Poss², Michael Persia¹ ¹Virginia Tech; ²Kemin Industries, Inc.

10:30 a.m. M108

Evaluation of Safmannan on full term broiler performance with coccidiosis vaccinated broilers on used litter

Morouj Al-Ajeeli*^{GS1}, Thomas Gaydos², Raghad Abdaljaleel¹, Hector Leyva-Jimenez¹, Jimmie Corley², Christopher Bailey¹ ¹Texas A&M University; ²Phileo Lesaffre Animal Care

10:45 a.m. M109

In vitro evaluation of seven commercially available Bacillus spp based probiotic supplements and one Saccharomyces cerevisiae based prebiotic supplement and their effects on an antibiotic resistant strain of Salmonella Heidelberg

Claudia Castaneda*^{GS1}, Omar Gutierrez², Christopher McDaniel¹, Aaron Kiess¹ ¹Mississippi State University; ²Huvepharma

11:00 a.m. M110

Effects of probiotics and zinc supplement on gut development and microflora of male broilers with *Eimeria* challenge

Xi Wang*^{GS1}, Timothy Johnson², Wei Zhai¹ ¹*Mississippi State University*; ²*University of Minnesota*

11:15 a.m. M111

Effects of replacing antibiotics and anticoccidials with probiotics in broiler diets on growth performance

Kacey O'Donnell*^{GS}, Xi Wang, Kelley Wamsly, Aaron Kiess, E. Peebles, Wei Zhai *Mississippi State University*

11:30 a.m. M112

Effects of probiotics on performance of broilers fed corn or sorghum-based diets

Albaraa Sarsour*^{GS1}, Edgar Oviedo-Rondón¹, Hernan Cordova¹, Beatriz Saldaña², Luis Bernal-Arango³, Mariana Mesquita⁴, Ricardo Fasanaro⁵, Rose Whelan⁶, Kiran Doranalli⁶
¹*North Carolina State University*; ²*Universidad Politécnica de Madrid*; ³*Politécnico Colombiano Jaime Isaza Cadavid*; ⁴*Universidade Federal de Goiás*; ⁵*Universidade Estadual Paulista*; ⁶*Evonik Nutrition & Care GmbH*

11:45 a.m. M113

Effects of sodium butyrate, essential oils, and medium chain fatty acids to control *Clostridium perfringens* induced Necrotic Enteritis

Cristiano Bortoluzzi*^{GS1}, Juan Mallo², Monica Puyalto², Maria Villamide³, Charles Hofacre⁴, Todd Applegate¹ ¹*University of Georgia*; ²*Norel*; ³*Universidad Politecnica de Madrid*; ⁴*Southern Poultry Research*

12:00 p.m. Lunch

Metabolism & Nutrition IV

Chair: Dr. Haitham Yakout, Nutriad Inc

Room Number: B315

Monday, January 30, 2017

1:00 p.m. M114

Effects of Mannan Oligosaccharide on lean tissue, fat tissue, and bone mineral composition in broiler ducks

Micky Clary*^{UG}, Jungwoo Park, John Carey *Texas A&M University*

1:15 p.m. M115

Proving the concept that commercial in ovo delivery of a prebiotic and probiotics can positively impact broiler performance

Chrysta Beck*^{UG1}, Pedro Mota², Kelley Wamsley¹, Christopher McDaniel¹, Aaron Kiess¹

¹Mississippi State University; ²University of Sao Paulo

1:30 p.m. M116

Effect of antibiotics, Diamond V Original XPCTM and Lactobacillus plantarum on broiler performance

Samane Rasulzade*¹, Shaban Rahimi¹, Kambiz Akbari² ¹Tarbiat Modares University; ²Molecular Genetics, National Institute of Genetic Engineering and Biotechnology (NIGEB), Tehran, Iran

1:45 p.m. M117

Effect of Different Levels of Yeast Based Mannan Oligosaccharide (Actigen™) on Blood Biochemistry and Immune Response of Broilers

Muhammad Waqas*, Athar Mahmud, Shahid Mehmood, Saima Naveed *University of Veterinary and Animal Sciences, Lahore-Pakistan*

2:00 p.m. M118

Effect of different rearing system on carcass characteristics in sexed broilers supplemented with different levels of Mannan Oligosaccharides (MOS)

Muhammad Talha Altaf*, Athar Mahmud, Shahid Mehmood, Saima Naveed *University of Veterinary and Animal Sciences, Lahore-Pakistan*

2:15 p.m. M119

Effect of essential: total nitrogen dietary ratios using a mixture with alanine, glycine and glutamic acid on performance and blood parameters for broilers

Rosana Maia*, Horacio Rostagno, Luiz Albino *Federal University of Viçosa*

2:30 p.m. M120

Ileal digestibility coefficient of some high-protein feedstuffs for broilers

Bruno Carvalho*, Helvio Ferreira Júnior, Raully Silva, Bruna Kreuz, Melissa Hannas, Luiz Fernando Albino, Horacio Rostagno *Universidade Federal de Viçosa*

2:45 p.m. M121

Effects of supplementation of guanidinoacetic acid in corn and sorghum diets on broiler live performance until 50 days of age.

Hernan Cordova*¹, Edgar Oviedo-Rondón¹, Albaraa Sarsour¹, Pedro Ferzola² ¹North Carolina State University; ²Universidade Federal do Rio Grande do Sul

3:00 p.m. M122

Response of broilers to varying dietary levels of lysine, methionine, threonine, isoleucine and valine in pre-starter age

Zafar Hayat*¹, Shehzad Ahmed¹, Muhammad Arif¹, Abd Rehman¹, Zafar Ullah¹, Muhammad Akhtar² ¹University of Sargodha; ²CVSD Remount Depot Sargodha

3:15 p.m. M123

Influence of reducing dietary protein concentration in the starter phase via two formulation methods on subsequent performance and processing characteristics of male Cobb 500 broilers

Samuel Rochell* *University of Arkansas*

3:30 p.m.

USPoultry Presentation - Room Number B-313

4:00-6:00

Poster Reception - Room Number B-313 Foyer

Metabolism & Nutrition V

Chair: Dr. Chasity Pender, Biomin USA

Room Number: B311

Tuesday, January 31, 2017

7:30 a.m. T124

Discovery and advanced in vitro profiling of the unique probiotic strain *Bacillus subtilis* DSM 32315.

Stefan Pelzer^{*1}, Jessica Schneider¹, Stella Molck¹, Maike Kipker¹, Daniel Petri¹, Claudia Borgmeier², Guido Meurer² ¹*Evonik Nutrition & Care GmbH*; ²*BRAIN AG*

7:45 a.m. T125

Feeding *Bacillus subtilis* DSM 32315 consistently improves performance of broilers reared in various feeding conditions.

Kiran Doranalli^{*1}, Rose Whelan¹, Daniel Petri¹, Saksit Srinongkote², Savaram Rama Rao³ ¹*Evonik Nutrition & Care GmbH*; ²*Animal Research and Consultant Co. Ltd.*; ³*Sri Ramadhootha Poultry Research Farm*

8:00 a.m. T126

Impact of *Bacillus subtilis* DSM 32315 on pathology and performance of broiler chickens in a subclinical Necrotic Enteritis challenge.

Rose Whelan^{*1}, Kiran Doranalli¹, Kirsi Vienola², Teemu Rinttilä², Juha Apajalahti² ¹*Evonik Nutrition & Care GmbH*; ²*Alimetrix Ltd.*

8:15 a.m. T127

Bacillus subtilis 29784 improves growth performances and gut microbiota parameters of broilers

Amir Ghane^{*1}, V. Jacquier², A. Nelson³, L. Rhayat², P.A. Gereart², K. Brinch⁴, E. Devillard² ¹*Adisseo*; ²*Adisseo France, SAS, Centre of Expertise and Research in Nutrition*; ³*Novozymes Biological Inc.*; ⁴*Novozymes Animal Health & Nutrition*

8:30 a.m. T128

Effect of a three strain blend of *Bacillus subtilis* on ileal and caecal microbiota dynamics of broilers challenged with *Salmonella* Heidelberg isolated in the south of Brazil

Ricardo Gonzalez-Esquerre^{*1}, Ricardo Mitsuo Hayashi², Raquel Bighetti Araujo¹, Marcelo Falzarella Carazolle³, Eduardo Leonardez⁴, Anderson Ferreira da Cunha⁴, Paulo Monzani⁴, Juliana Costa de Azevedo², César Gonçalves de Lima⁵, Elizabeth Santin² ¹*Novus International Inc.*; ²*Universidade Federal do Paraná*; ³*UNICAMP*; ⁴*Universidade Federal de São Carlos*; ⁵*Universidade de São Paulo*

8:45 a.m. T129

Evaluation of *Clostridium perfringens* challenged broilers fed *Bacillus licheniformis* (GalliPro® Tect), *Bacillus licheniformis* plus *Bacillus subtilis* (GalliPro® MS) and three other commercial DFMs in a 6-week floor pen study

Frank Jin^{*1}, Herb Kling¹, Michael Sims², Alfred Blanch³ ¹*Chr. Hansen, Inc.*; ²*Virginia Diversified Research, Corp.*; ³*Chr. Hansen A/S*

9:00 a.m. T130

Assessment of the effect of a *Bacillus licheniformis* DFM and a *Lactobacillus animalis* DFM, alone or together, on the performance of broiler chickens under *Eimeria* and *Clostridium perfringens* challenge conditions

Alfred Blanch^{*1}, Frank Jin², Herb Kling², Mickäel Rouault¹, Steve Lerner², James McNaughton³, Michael Roberts³ ¹*Christian Hansen A/S*; ²*Chr. Hansen, Inc.*; ³*AH Pharma*

9:15 a.m. Break

9:30 a.m. T131

In vitro assessment of immunomodulatory properties of *Bacillus*-based probiotics

Amir Ghane^{*1}, L. Rhayat², M. Maresca³, V. Jacquier², P.A. Gereart², E. Devillard² ¹*Adisseo USA*; ²*Adisseo France SAS, Centre of Expertise and Research in Nutrition*; ³*Aix Marseille University, CNRS*

9:45 a.m. T132

Effects of dietary bee venom on growth performance, meat quality, immune response and gut health in broiler chicks

Kyung Lee*¹, DaHye Kim¹, SangMi Han², YongSuk Lee³, YounGeun Joung³, MOUNGCHEUL Keum¹, Sang Lee¹, ByoungKi An¹ ¹*konkuk university*; ²*Rural Development Administration*; ³*Eagle Vet Tech Co., Ltd*

10:00 a.m. T133

Protease, essential oil, and organic acid improve growth performance and gut health of broilers subject to *Eimeria* challenge

Fenglan Yan*, Juxing Chen, Vivek Kuttappan, Mercedes Vazquez Anon *Novus International Inc.*

10:15 a.m. T134

Efficacy of an oregano-based phytogetic on bird performance during coccidial challenge

David Harrington*¹, Aikaterini Konstanti¹, Greg Mathis², Brett Lumpkins², Leon Broom¹
¹*Anpario plc*; ²*Southern Poultry Research, Inc*

10:30 a.m. T135

Amelioration of performance losses from necrotic enteritis by bacitracin, avilamycin, and Avilution® in broiler chickens.

Lucas Krueger*¹, David Spangler¹, Michael Sims² ¹*Agri-King, Inc.*; ²*Virginia Diversified Research Corporation*

10:45 a.m. T136

Effect of synbiotic supplementation on intestinal integrity of broilers

Chasity Pender*¹, Ganapathi Murugesan¹, Dawn Koltes² ¹*Biomim America Inc.*; ²*University of Arkansas*

11:00 a.m. Milton L. Dendy Keynote Address

An optimist's view on how we will maintain broiler gut health and performance in today's NAE, food safety and FDA regulatory climate

Charles Hofacre *University of Georgia*

12:00 p.m. SCAD Business Meeting - B312**12:00 p.m. SPSS Business Meeting - B313**

SCAD II

Chair: Dr. Chris Stephens, USDA, ARS, SEPRL

Room Number: B312

Tuesday, January 31, 2017

7:30 a.m. T137

Analysis of five clinical cases of runting-stunting syndrome in broiler chickens caused by avian astrovirus and avian Reovirus

Martha Pulido -Landinez*, Alejandro Banda *Mississippi State University*

7:45 a.m. T138

A comparison of mid-lay serology and IBV Arkansas protection in flocks receiving different commercial Salmonella enteridis (SE) bacterins

Kalen Cookson*¹, Andrew Barker¹, Savannah Featherson¹, John Brown¹, Dan Wilson² ¹*Zoetis*; ²*Rose Acre Farms*

8:00 a.m. T139

Replication of chicken embryonic kidney cell culture-adapted Ark DPI infectious bronchitis virus vaccine strain in chickens

Saiada Farjana*^{GS}, Ramon Zegpi, Haroldo Toro, Vicky Santen *Auburn University*

8:15 a.m. T140

Kidney cell-adapted Infectious Bronchitis ArkDPI vaccine is stable and protective

Ramon Alejandro Zegpi Lagos*^{GS}, Cassandra Breedlove, Vicky van Santen, Haroldo Toro *Auburn University*

8:30 a.m. T141

Development of a potential IBV Arkansas serotype vaccine candidate: Arkansas GA

Grace Albanese*^{GS}, Deborah Hilt, Mark Jackwood, Brian Jordan *University of Georgia*

8:45 a.m. T142

Rapid and specific identification of infectious bronchitis virus (IBV) by real time reverse transcriptase-polymerase chain reaction (RT-PCR) with synthetic DNA templates and clinical specimens

Jongseo Mo*^{GS1}, Michael Angelichio², Lisa Gow², Valerie Leathers², Mark Jackwood¹ ¹*Poultry Diagnostic and Research Center, University of Georgia*; ²*IDEXX Laboratories*

9:00 a.m. T143

Improved protection by including infectious bronchitis virus S2 ectodomain

Fatma Eldemery*^{GS}, Kellye Joiner, Haroldo Toro, Vicky van Santen *Department of Pathobiology, College of Veterinary Medicine, Auburn University*

9:15 a.m. Break

SCAD III

Chair: Dr. Susan Williams, University of Georgia

Room Number: B312

Tuesday, January 31, 2017

9:30 a.m. T144

Effect of pullet vaccination on development and longevity of immunity

Emily Aston^{*GS}, Brian Jordan, Maricarmen Garcia, Mark Jackwood *University of Georgia*

9:45 a.m. T145

Cytokine expression patterns in conjunctiva, Harderian gland and trachea after ocular or oral inoculation with a virulent strain of infectious laryngotracheitis virus (ILTV)

Gabriela Beltrán^{*GS1}, Sylva M. Riblet¹, Wanderley Moreno Quinteiro², Leah Read², Shayan Sharif², Maricarmen Garcia¹ *¹The University of Georgia; ²University of Guelph*

10:00 a.m. T146

The role of litter beetles, water, and rodents in avian influenza virus transmission

Isabelle Kallenberg^{*GS}, Joe Giambone, Ken Macklin, Teresa Dormitorio *Auburn University*

10:15 a.m. T147

Progress of passive immunity in broilers and efficacy of rNDV-AI vector vaccine against highly pathogenic avian influenza virus

Kateri Bertran^{*}, Charles Balzli, Dong-Hun Lee, Lindsay Killmaster, David Swayne *SEPRL, USDA*

10:30 a.m. T148

Pathogenicity of the 2016 Indiana H7N8 highly pathogenic and low pathogenicity avian influenza viruses in chickens, turkeys and mallards

Mary Pantin-Jackwood^{*}, Erica Spackman, Chris Stephens, David Suarez, David Swayne *Exotic and Emerging Avian Viral Diseases Unit, Southeast Poultry Research Laboratory, U.S. National Poultry Research Center, U.S. Dept. of Agriculture, Agricultural Research Service*

10:45 a.m. T149

Heat inactivation of avian influenza virus in chicken litter as a potential means to decontaminate poultry houses

Christopher Stephens^{*}, Erica Spackman *Southeast Poultry Research Laboratory, US National Poultry Research Center, US Dept. of Agriculture-Agricultural Research Service*

11:00 a.m. Milton L. Dendy Keynote Address

An optimist's view on how we will maintain broiler gut health and performance in today's NAE, food safety and FDA regulatory climate

Charles Hofacre *University of Georgia*

12:00 p.m. SCAD Business Meeting - B312

12:00 p.m. SPSS Business Meeting - B313

Metabolism & Nutrition VI

Chair: Luke Barnard, DuPont Industrial Biosciences - Danisco Animal Nutrition

Room Number: B313

Tuesday, January 31, 2017

7:30 a.m. T150

Organic acid based product reduces BCO lameness in broilers

Leon Broom^{*1}, Aikaterini Konstanti¹, David Harrington¹, Adnan Ali Khalaf Al-Rubaye², Douglas Rhoads², Young Min Kwon² ¹Anpario PLC; ²University of Arkansas

7:45 a.m. T151

Confirmation of the presence of *Enterococcus faecium* M74 in the gastrointestinal tract of young chicks from eggs inoculated with GalliPro Hatch

Alfred Blanch^{*1}, Line Skjoet-Rasmussen¹, Elke Brockmann¹, Jannie Schnabl¹, Mickael Rouault¹, Dorthe Sandvang¹, Frank Jin², Aaron Kiess³ ¹Christian Hansen A/S; ²Chr. Hansen, Inc; ³Mississippi State University

8:00 a.m. T152

Pre-hydrolysis of inositol hexakisphosphate (IP6) in the gizzard-proventriculus step reduced Ca-phytate precipitation in the small intestine: An in-vitro study

Luis Romero^{*1}, Rie Mejlidal², Trine Christensen², Yueming Dersjant-Li¹, Luis Romero¹ ¹Danisco Animal Nutrition, DuPont Industrial Biosciences; ²DuPont Nutrition Biosciences ApS, DuPont Industrial Biosciences

8:15 a.m. T153

The effect of Sangrovit® WS on production parameters in broiler chickens.

Jocelyn Romano^{*} *Phytobiotics NA, LLC*

8:30 a.m. T154

Corn varieties as well as carbohydrases supplementation affects digestibility for broilers

Catarina Stefanello^{*1}, Heitor Rios¹, Sergio Vieira¹, Patrícia Soster¹, Catarina Stefanello¹, Cristina Simões¹, José Sorbara² ¹UFRGS; ²DSM Nutritional Products

8:45 a.m. T155

Effects of an exogenous Amylase and a composite enzyme on broiler performance and body composition

Maria Mayorga^{*}, Katie Hilton, Garret Mullenix, Michael Schlumbohm, Pramir Maharjan, Judith England, Craig Coon *University of Arkansas*

9:00 a.m. T156

Protease provides additive effects on protein digestibility beyond carbohydrases in simple and complex corn/soy based diets in 21d old broiler chicks

Luke Barnard^{*1}, Peter Plumstead², Luis Romero¹, Velmurugu Ravindran³ ¹DuPont Industrial Biosciences - Danisco Animal Nutrition; ²Chemunique; ³Massey University

9:15 a.m. Break

9:30 a.m. T157

Effects of a commercial xylanase supplemented to reduced-energy, corn-soy-based diets on live performance of broilers raised in SE Asia

Basheer Nusairat^{*1}, Takawan Sooksridang², James Tyus¹, Jeng-jie Wang¹ ¹BioResource International Inc.; ²Bangkok Animal Research Center Co., Ltd.

9:45 a.m. T158

Evaluation of xylanase and glucanase, alone or in combination, on performance and caecal fermentation of broiler chickens fed wheat or corn based diets

Gemma González-Ortiz^{*1}, Kirsi Vienola², Juha Apajalahti², Michael R. Bedford¹ ¹AB Vista; ²Alimetrics

10:00 a.m. T159

Debranching enzymes in Victus® act in synergy with xylanases to degrade corn arabinoxylan in vitro

Miriam Sluis^{*1}, Ryan Saller¹, Ninfa Pedersen², Nelson Ward³ ¹Novozymes North America, Inc.; ²Novozymes A/S; ³DSM Nutritional Products, Inc.

10:15 a.m. T160

Effects of feeding corn-expressed phytase in four 42-day broiler feeding trials.

Jonathan Broomhead*¹, Philip Lessard¹, R. Michael Raab¹, Mike Lanahan¹, Dan Moore²

¹*Agrivida*; ²*Colorado Quality Research, Inc*

10:30 a.m. T161

Dose-response comparison of two phytase products on broiler performance, bone parameters and nutrient digestibility

Roger Davin*^{1,2}, Megharaja Manangi², Fenglan Yan², Mercedes Vázquez-Añón² ¹*University of Missouri*; ²*Novus International Inc*

10:45 a.m. T162

Effect of a new 6-phytase on broiler performance, phosphorus ileal digestibility, bone mineralization and phosphorus excretion

Mike Coelho*¹, Maria Franceschi², Peter Ader³ ¹*BASF Corp*; ²*IRTA Monogastric Nutrition*; ³*BASF SE*

11:00 a.m. Milton L. Dendy Keynote Address

An optimist's view on how we will maintain broiler gut health and performance in today's NAE, food safety and FDA regulatory climate

Charles Hofacre *University of Georgia*

12:00 p.m. SCAD Business Meeting - B312**12:00 p.m. SPSS Business Meeting - B313**

Metabolism & Nutrition VII

Chair: Dr. Aaron Kiess, Mississippi State University

Room Number: B314

Tuesday, January 31, 2017

7:30 a.m. T163

Quality and Proximate Analysis of Eggs from different Chicken Genotypes in Pakistan
Athar Mahmud*, Sumera Musarrat, Jibran Hussain, Faisal Hussain, Khalid Javed *University of Veterinary and Animal Sciences, Lahore-Pakistan*

7:45 a.m. T164

The prevalence of Salmonella Heidelberg in broiler chickens is influenced by isoquinoline alkaloids

Anja Pastor*¹, Greg Mathis², Charles Hofacre³ ¹*Phytobiotics Futterzusatzstoffe GmbH*; ²*Southern Poultry Research, Inc.*; ³*The University of Georgia, PDRC*

8:00 a.m. T165

Nutritive value of pigeon pea (*Cajanus cajan*) seeds soaked in wood ash extract in broilers diet.
Stanley Omoikhoje*, Dick Obasoyo, Sylvester Okosun *Ambrose Alli University*

8:15 a.m. T166

Effect of enzyme addition in the beer well on the metabolizable energy of distiller's dried grains and solubles

E. Ernest Pierson*, Sebastian Wiesen, Marco Krämer, Albrecht Läufer *Direvo Industrial Biotechnology GmbH*

8:30 a.m. T167

Synthetic antioxidant improves oxidative stability of breast meat and reduces incidence of Wooden breast myopathy in broilers fed diets containing oxidized fat

Megharaja Manangi*¹, Juxing Chen¹, Chelsie Foran¹, Mercedes Vazquez-Anon¹, Kim Walter², Sandro Cerrate², Alex Corzo², John Halley², Bryan Fancher² ¹*Novus International, Inc.*; ²*Aviagen Group*

8:45 a.m. T168

Variation in the hardness of soybean cultivars

John Brake* *North Carolina State University*

9:00 a.m. T169

Occurrence of masked and emerging mycotoxins in US feed and corn samples from 2014 to 2016

G. Raj Murugesan*¹, Erika Hendel¹, Chasity Pender¹, Eduardo Vicuna¹, Timothy Jenkins² ¹*BIOMIN America, Inc.*; ²*BIOMIN Holding GmbH*

9:15 a.m. Break

9:30 a.m. T170

Field observation: in contrast to soybean meal, in commercial full-fat soybeans (FFSB) there is no correlation between urease activity (delta pH) and trypsin inhibitors.

Nelson Ruiz*¹, Fabiola de Belalcazar² ¹*Nelson Ruiz Nutrition, LLC*; ²*Nutritionalis*

9:45 a.m. T171

Mycotoxin Prevalence in the 2016 Corn Crop

Eduardo Vicuña*, Erika Hendel, Timothy Jenkins, Ganapathi Murugesan *Biomim*

10:00 a.m. T172

Live performance and footpad health in broilers fed an additive composed of secondary plant compounds (SPC) and vaccinated for coccidiosis

Wilmer Pacheco*¹, Wallace Berry¹, Joseph Hess¹, Rafael Cabrera², Mark Richards² ¹*Auburn University*; ²*EW Nutrition USA, INC*

10:15 a.m. T173

The effect of a specific mixture of MCFA's on reproductive traits in laying hens

Manu De Laet*, Renato Costa, Rob Goedegebuure *Nuscience*

10:30 a.m. T174

Impact of PrimaLac® on production, quality and composition of eggs from free-range hens in late cycle 90 to 110 wks of age

Ramon Malheiros*, Rafael Crivellari, Kenneth Anderson *Prestage Poultry Science Department, NC State University*

10:45 a.m. T175

Efficacy of a specific fumonisin esterase to alleviate the detrimental effect of fumonisins on laying hens

Verena Starkl*, Sabine Masching, Roger Berrios, Ursula Hofstetter *Biomin Holding GmbH*

11:00 a.m. Milton L. Dendy Keynote Address

An optimist's view on how we will maintain broiler gut health and performance in today's NAE, food safety and FDA regulatory climate

Charles Hofacre *University of Georgia*

12:00 p.m. SCAD Business Meeting - B312

12:00 p.m. SPSS Business Meeting - B313

Metabolism & Nutrition VIII

Chair: Dr. Terri Parr, Micronutrients Inc

Room Number: B315

Tuesday, January 31, 2017

7:30 a.m. T176

Evaluation of different growth promoters fed continuously or alternately in broiler chickens

Sergio Gomez*¹, Maria Angeles¹, Raul Cortes² ¹INIFAP; ²NUTRIAD

7:45 a.m. T177

Including copper sulphate or dicopper oxide in the diet up to 300 mg/Kg of feed affects performance and Cu accumulation in broiler chickens

Stephane Durosoy*¹, Manel Hamdi², David Sola-Oriol², Rosa Franco-Rossello², Jose Francisco Perez² ¹Animine; ²Animal Nutrition and Welfare Service (SNIWA). Departament de Ciència Animal i dels Aliments. Universitat Autònoma de Barcelona

8:00 a.m. T178

The effect of zinc oxide nano particles on mucosal enzyme activity and jejunum morphology traits on 14 and 28 days of age in Japanese quail

Farhad Ahmadi*¹, Farhad Ahmadi¹, Afshin Rashidi², Jamshid Ghaleh Kandi³, Foad Zand karimi² ¹Department of Animal Science, Faculty of Agriculture, Sanandaj Branch, Islamic Azad University, Sanandaj, Kurdistan, Iran; ²Department of Animal Science, Faculty of Agriculture, Sanandaj Branch, Islamic Azad University, Sanandaj, Iran; ³Department of Animal Science, Faculty of Agriculture, Shabestar Branch, Islamic Azad University, Shabestar, Iran

8:15 a.m. T179

Bioavailability of zinc oxide sources in broilers

Stephane Durosoy*¹, Agnès Narcy², Agathe Roméo¹, Yves Nys² ¹Animine; ²INRA

8:30 a.m. T180

The effect of encapsulated butyric acid and zinc on performance and gut integrity in heat stressed male broiler chickens

Karen Vignale*¹, Dawn Koltes², Jordan Weil², Skyler West², Shawna Weimer², Vanessa Iseri¹, Karen Christensen² ¹Kemin Industries; ²University of Arkansas

8:45 a.m. T181

The effect of chromium propionate on performance responses in heat stressed male broiler chickens

Karen Vignale*¹, Dawn Koltes², Jordan Weil², Skyler West², Shawna Weimer², Vanessa Iseri¹, Karen Christensen² ¹Kemin Industries; ²University of Arkansas

9:00 a.m. T182

The use of Presan-FY as an alternative to antibiotic growth promoters in broiler production.

Kellie Hogan*¹, Scott Webster¹, Greg Page² ¹Trouw Nutrition USA, Highland IL; ²Trouw Nutrition Agresearch, Guelph, ON, Canada

9:15 a.m. Break

9:30 a.m. T183

Effects of Ration Plus TM applied to feed or drinking water on performance of broiler chickens fed diets with or without antibiotics in two heat stress trials

D. Hall*¹, B. Prakash², P. Wiatnak¹, E. Wozniak¹, J. McNaughton³ ¹Cytozyme Laboratories, Inc.; ²CAR — Directorate of Poultry Research; ³AhPharma, Inc.

9:45 a.m. T184

1. Effects of Ration Plus® on Broiler Chickens Fed Antibiotic-Free Diets Added Pre- or Post-Pelleting in Heat Stress Environments.

D. Hall*¹, E. Wozniak¹, M. Sims² ¹Cytozyme Laboratories, Inc.; ²Virginia Diversified Research Corp

10:00 a.m. T185

Effects of feeding different sources of basic copper chloride on the growth performance and intestinal lesion scores of broilers exposed to a sub-clinical challenge from 0 to 21 days of age

Kurt Perryman*¹, Terri Parr¹, James Usry¹, Nickki Sriperum², Jeff Cohen¹ ¹Micronutrients USA LLC; ²Nutritional Statistics LLC

10:15 a.m. T186

Feeding high concentrations of a hydroxy copper and zinc source improved performance and reduced mortality of broilers subjected to a necrotic enteritis challenge

Terri Parr*, Kurt Perryman, James Usry, Jeff Cohen *Micronutrients USA LLC*

10:30 a.m. T187

Effect of feeding Zn Methionine-Hydroxy-Analogue Chelate to broilers and its differential effects compared to feeding ZnSO₄

Ricardo Gonzalez-Esquerre*¹, Raquel Bighetti Araujo¹, Danilo Cavalcante², Fernando Perazzo², Eneas Lavosier Cavalcante², Bruno Vieira Lobato², Leonilson da Silva Dantas², Marcia das Neves Soares² ¹*Novus International Inc.*; ²*Universidade Federal da Paraíba*

10:45 a.m. T188

Differential Performance Response of Broilers when Fed Cu from Cu - Methionine-Hydroxy-Analogue Chelate vs Sulfate Sources

Ricardo Gonzalez-Esquerre*¹, Raquel Araujo Bighetti¹, Cesar Gonçalves de Lima², Jose Manocal Arce³, Carlos Lopez-Coello⁴, Ernesto Ávila-González⁴ ¹*Novus International Inc.*; ²*Universidade de São Paulo*; ³*Facultad de Medicina Veterinaria y Zootecnia, Universidad Michoacana de San Nicolás de Hidalgo*; ⁴*Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México*

11:00 a.m. Milton L. Dendy Keynote Address

An optimist's view on how we will maintain broiler gut health and performance in today's NAE, food safety and FDA regulatory climate

Charles Hofacre *University of Georgia*

12:00 p.m. SCAD Business Meeting - B312**12:00 p.m. SPSS Business Meeting - B313**

Poster Session

Co-Chairs: Dr. Lizza Macalintal, University of Kentucky and Dr. Kelley Wamsley, Mississippi State University

Processing & Products

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The effects of replacing corn with sorghum processed at increasing temperatures on growth performance of broilers and TME digestibility in roosters.

Guilherme Hosotani*^{GS}, Monty Kerley, Marcia Shannon *University of Missouri*

P190

Using foodborne outbreak strains of Salmonella Heidelberg to investigate Salmonella colonization in muscle, bone and skin of experimentally infected turkeys

Claire-Sophie Rimet*^{GS}, John Maurer, Roy Berghaus, Ana Villegas, Lisa Stabler, Kasey Johnson, Monique França *University of Georgia*

P191

Cell Concentration of Campylobacter coli/jejuni in 24 Hour Broth Culture

Katia DaCosta*^{UG}, Mark Berrang, Richard Meinersmann, Nelson Cox, Steven Knapp *USDA-ARS*

P192

Isolation of Campylobacter in a commercial quail processing plant

Nelson Cox*¹, Douglas Cosby¹, Harsha Thippareddi², Casey Ritz², Mark Berrang¹, Jeromey Jackson², Sanjay Kumar², Amanda Howard², Angela Rincon², Mayuri Ukidwe², Melissa Landrum², Charlene Jackson¹, Jonathan Frye¹, Kimberly Cook¹, Arthur Hinton, Jr.¹ ¹*USDA, ARS, U.S. National Poultry Research Center*; ²*University of Georgia*

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Presence of Salmonella in a commercial quail processing plant

Douglas Cosby*¹, Nelson Cox¹, Harsha Thippareddi², Casey Ritz², Mark Berrang¹, Jeromey Jackson², Sanjay Kumar², Amanda Howard², Angela Rincom², Mayuri Ukidwe², Melissa Landrum², Charlene Jackson¹, Jonathan Frye¹, Kimberly Cook¹, Arthur Hinton, Jr.¹ ¹*USDA, ARS, U.S. National Poultry Research Center*; ²*University of Georgia*

P194

Nutrient content of thigh meat from broilers and alternative breeds finished on the floor or on pasture

Jacqueline Jacob*¹, Anthony Pescatore¹, Michael Ford¹, Tatijana Fisher¹, Sunday Adedokun¹, Tuoying Ao² ¹*University of Kentucky*; ²*Alltech*

P195

Self-contained chlorine dioxide generation and delivery pods for controlling Listeria monocytogenes in model floor drains.

Mark Berrang*¹, Mark Harrison², Richard Meinersmann¹, Gary Gamble¹ ¹*USDA-ARS*; ²*University of Georgia*

P196

Antimicrobial Interventions for Improving Microbiological Quality of Quail

Angela Rincon*¹, Sanjay Kumar¹, Amanda Howard¹, Mayuri Ukidwe¹, Melissa Landrum¹, Nelson Cox², Douglas Cosby², Harshavardhan Thippareddi¹, Casey Ritz¹, Mark Berrang², Jeromey Jackson², Charlene Jackson², Jonathan Frye², Kim Cook², Arthur Hinton, Jr.² ¹*University of Georgia*; ²*US National Poultry Research Center, USDA-ARS*

P197

Nutrient content of meat from broilers finished on the floor or on pasture

Jacqueline Jacob*¹, Anthony Pescatore¹, Michael Ford¹, Tatijana Fisher¹, Sunday Adedokun¹, Tuoying Ao² ¹*University of Kentucky*; ²*Alltech*

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Nutrient content of breast meat from broilers and alternative breeds finished on the floor or on pasture

Jacqueline Jacob*¹, Anthony Pescatore¹, Michael Ford¹, Tatijana Fisher¹, Sunday Adedokun¹, Tuoying Ao² ¹*University of Kentucky*; ²*Alltech*

P199

Panorama of Aviculture: Brazilian and International trade balance

Rodrigo Garcia*, Marli Aranda, Carla Heloisa Domingues, Sarah Sgavioli, Rodrigo Borille, Irenilza Naas, Fabiana Caldara *Universidade Federal da Grande Dourados*

P200

Effects of sanitizers use in poultry carcasses for meat quality

Juliana Nicolau*¹, Priscila Dalmagro², Thiago Grassi¹, Helenice Pires¹, Thainá Barros¹, Gustavo Polycarpo¹, Marcos Pinto¹, Elisa Ponsano¹ ¹*Universidade Estadual Paulista "Júlio de Mesquita Filho" - Unesp*; ²*FACULDADE DE ENSINO SUPERIOR E FORMAÇÃO INTEGRAL - FAEF*

P201

Isolation and identification of amylase-producing, endospore-forming bacteria from the alimentary tract of commercially processed broilers

Arthur Hinton Jr*, Kimberly Ingram *United States National Poultry Research Center*

P202

Trade barriers analysis to the export of poultry meat in the west central region of Brazil

Marli Aranda*, Rodrigo Garcia, Carla Heloisa Domingues, Sarah Sgavioli *Universidade Federal da Grande Dourados*

Pathology

P203

Evaluation of lymphocytes population in gut on Salmonella Enteritidis challenged broilers

Larissa Pickler*, Elizabeth Santin *Universidade Federal do Paraná*

P204

Evaluation of transference of aflatoxin B1 and biotransference to aflatoxin M1 in chicken breast by UHPLC-FLD.

Victor Manuel Munoz Cazares*, Juan Carlos Medina Bravo, Jose Antonio Fierro Huesca, Oliver Montalvo Estrada *NUTEK SA de CV*

P205

Effect of 2- nitroethanol and 2- nitropropanol on the colonization and ileal immune gene expression in White Leghorns after challenge with Salmonella Enteritidis

Pratima Adhikari*^{GS1}, Douglas Cosby², Nelson Cox², Woo Kyun Kim³ ¹*Department of Poultry Science, University of Georgia*; ²*USDA, ARS, The U.S. National Poultry Research Center*; ³*University of Georgia, Department of Poultry Science*

P206

A survey of Enterococcus cecorum isolates from a kinky-back affected broiler farm

Evan Hutchison*, Xandra Smith, Tom Rehberger *Agro BioSciences, Inc.*

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Effect of Sal CURB® ASF liquid antimicrobial on Salmonella contamination in feed

Dillon Mellick*, Mark Bienhoff, Sally Moore *Kemin Industries*

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Effect of Sal CURB® ASF liquid antimicrobial on PEDV transmission through feed

Dillon Mellick*¹, Mark Bienhoff¹, Scott Dee² ¹*Kemin Industries*; ²*Pipestone Applied Research, Pipestone Veterinary Clinic*

SCAD

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Presence of *Gallibacterium anatis* in respiratory tract of chicken flocks in Jordan
Saad Gharaibeh*, Mohammad Al-Natour, Nasr Jalboush *Jordan University of Science and Technology*

P210

The antibody-guided vaccine delivery method provides full protection against H5N1 challenge.
Christine Vuong*¹, Wen-Ko Chou¹, Whitney Briggs², Amanda Wolfenden³, Olivia Faulkner³, Melina Jonas⁴, Darrell Kapczynski⁵, Billy Hargis³, Lisa Bielke², Luc Berghman¹ ¹*Texas A&M University*; ²*Ohio State University*; ³*University of Arkansas*; ⁴*Medion Vaccine Company*; ⁵*United States Department of Agriculture*

P211

Comparison of the application of coccidia vaccines by gel and spray
Laura Tensa*^{GS}, Grace Albanese, Brian Jordan *University of Georgia*

P212

Examination of binding properties of Arkansas-type spike proteins to chicken tissues
Christina Leyson*, Mark Jackwood, Brian Jordan *University of Georgia*

P213

Characterization of an IBV-like Coronavirus causing RSS in broiler chickens
Sabrina Ramos*, Rudiger Hauck, H.L. Shivaprasad, Rodrigo Gallardo *University of California, Davis*

Physiology, Reproduction and Endocrinology

P214

Lipid production and adipogenic gene expression between 18 day embryo livers of ACRB and COBB

Haein Kim*¹, Chongxiao Chen², Paula Sedlacek², Woo Kyun Kim² ¹*North Oconee High School*; ²*University of Georgia*

P215

Variation in growth and efficiency among Pekin Duck strains

Chelsea Phillips*¹, Zachary Lowman¹, Gavin Hitchener² ¹*North Carolina State University*; ²*Cornell University Duck Research Laboratory*

P216

Effect of autophagy on feed efficiency in two avian species

Alissa Piekarski-Welsher*, Elizabeth Greene, Kentu Lassiter, Alex Gilley, Nicholas Anthony, Byung-Whi Kong, Sami Dridi, Walter Bottje *University of Arkansas*

Environment Management

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Gait score and latency to lie correlation in broilers supplemented with organic and inorganic minerals

Iane Almeida*¹, Ibiara Almeida Paz¹, Jose Roberto Sartori¹, Grace Baldo¹, Alba Fireman², Edivaldo Garcia¹, Andrea Molino³, Caio Ouros¹, Jessica Cruvinel¹, Marcel Contin⁴ ¹*UNESP - FMVZ*; ²*Zinpro Animal Nutrition*; ³*USP*; ⁴*FATEC*

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Gait score in broilers fed with different nutritional plans

Grace Baldo*, Ibiara Almeida Paz, Iane Almeida, Edivaldo Garcia, Andrea Molino, Tatiane Vincunas, Andressa Montenegro, Jessica Cruvinel, Ricardo Santos *UNESP - FMVZ*

P219

Metabolic disorders and organs weight correlations in broilers

Grace Baldo*¹, Ibiara Almeida Paz¹, Iane Almeida¹, Edivaldo Garcia¹, Andrea Molino¹, Caio Ouros¹, Marcel Contin², Bruno Gilli¹, Ana Carolina Rocha¹ ¹*UNESP - FMVZ*; ²*FATEC*

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Performance of commercial broilers strain subjected to different nutritional plans

Ibiara Almeida Paz*¹, Grace Baldo¹, Iane Almeida¹, Edivaldo Garcia¹, Andrea Molino², Caio Ouros¹, Marcel Contin³, Jessica Cruvinel¹, Tatiane Vincunas¹, Bruno Gilli¹ ¹*UNESP - FMVZ*; ²*USP*; ³*FATEC*

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Metabolic disorders of two commercial broilers strains subjected to three nutritional plans
 Ibiara Almeida Paz*¹, Grace Baldo¹, Iane Almeida¹, Edivaldo Garcia¹, Andrea Molino¹, Caio Ouros¹, Jessica Cruvinel¹, Marcel Contin², Andressa Montenegro¹ ¹UNESP - FMVZ; ²FATEC

P222

Chamomile as feed additive on behavior and temperature of laying Japanese quails
 Rodrigo Garcia*, Karine Tenório, Sarah Sgavioli, Carla Heloísa Domingues, Rodrigo Borille, Fabiana Caldara, Irenilza Naas *Universidade Federal da Grande Dourados*

P223

Correlation analysis of core body temperature of broilers and heat index during transport in the Southeast United States

Kaushik Luthra*^{GS}, Yi Liang *University of Arkansas*

P224

Bacterial litter amendments to control ammonia

Brittany Singh*^{GS}, James Krehling, Elle Chadwick, Bradley Schrader, Kenneth Macklin *Auburn University*

P225

Economic Assessment of a Highly Pathogenic Avian Influenza Outbreak in Washington and Benton Counties in Arkansas

Antonio Beitia*^{GS}, Karen Christensen, Lawton Nalley, Grant West, Jordan Weil, Christopher Sims, Fred Clark, Harold Goodwin *University of Arkansas*

P226

Water Quality Laboratory: Providing the poultry industry with assistance for evaluating drinking water

Samantha Cox*^{GS}, Susan Watkins *University of Arkansas*

P227

Incidence estimation of foot pad dermatitis in broiler chickens reared in two different systems
 Nilsa Lima*³, Rodrigo Garcia², Beatriz Roriz², Irenilza Nääs¹, Cristina Ayala², Sarah Sgavioli², Flavia Jacob¹, Marta Baracho² ¹University of Campinas; ²Federal University of Grande Dourados; ³Universidade Estadual de Campinas

P228

Factors associated with incidence of myopathy in broiler pectoralis major muscle of different production systems

Nilsa Lima*¹, Francieli Montagna², Rodrigo Garcia², Fabiana Caldara², Irenilza Nääs³, Marta Baracho³, Flavia Jacob³, Thayla Curi³ ¹Universidade Estadual de Campinas; ²Federal University of Grande Dourados; ³University of Campinas

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Carbon footprint of Brazilian broiler meat consumers

Raquel Silva*¹, Nilsa Lima¹, Thayla Carvalho², Irenilza Nääs¹ ¹State University of Campinas; ²Anhanguera University

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Carbon footprint of intensive broiler production in Brazil

Nilsa Lima*¹, Irenilza Nääs¹, Rodrigo Garcia², Flavia Jacob¹, Marta Baracho¹ ¹University of Campinas; ²Federal University of Grande Dourados

P231

Enrichment by Access to Swimming Water and Resultant Impact on Performance and Well Being of Meat Type Pekin Ducks

Mitchell Hoysock*^{UG1}, Zachary Lowman², James Jurgielewicz², Phillip Clauer¹ ¹The Pennsylvania State University; ²Joe Jurgielewicz & Son

P232

Trailer thermal environment during commercial broiler transportation

Yi Liang*, Douglas Aldridge, Kaushik Luthra, Susan Watkins, Karen Christensen, Yvonne Thaxton *University of Arkansas*

P233

Dealing with an inherent weakness in laboratory methods to detect Salmonella in feed
Nelson Cox*¹, Douglas Cosby¹, Mark Berrang¹, Kurt Richardson² ¹USDA, ARS, U.S. National Poultry Research Center; ²Anitox, Incorporated

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Acid tolerance of dry-stressed Salmonella

Kurt Richardson*¹, Nelson Cox², Douglas Cosby², Mark Berrang², Leslie DeRome¹ ¹Anitox Corp; ²USDA-ARS

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Comparing the environmental impact of broiler and fish production

Irenilza Nääs*¹, Silvia Bonilla¹, Nilsa Lima² ¹Paulista University; ²State University f Campinas

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Environmental impact of broiler meat and beef consumers

Irenilza Nääs*¹, Raquel Silva¹, Nilsa Lima¹, Thayla Carvalho² ¹State University of Campinas; ²Anhanguera University

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Types of poultry farms on percentage of condemnation broiler carcass at slaughter

Rodrigo Garcia*, Rafael Belintani, Rodrigo Borille, Carla Heloisa Domingues, Irenilza Naas, Rodolpho Marques, João Paulo Bueno, Tassia Maria Bevilaqua, Rosana Bicas, Sarah Sgavioli, Fabiana Caldara *Universidade Federal da Grande Dourados*

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Influence of seasons on percentage of condemnation broiler carcass at slaughter

Rodrigo Garcia*¹, Rafael Belintani¹, Rodolpho Marques¹, João Bueno¹, Carla Domingues¹, Tassia Bevilaqua¹, Rosana Bicas¹, Irenilza Naas¹, Rodrigo Borille² ¹Universidade Federal da Grande Dourados; ²Universidade Federal de Santa Maria

P239

A survey of the housing and physical conditions of backyard flocks

Richard Blatchford*, Margaret De Luz *University of California, Davis*

P240

Microbial population analysis of broilers in different flock and embryonic ages from GI, yolk and egg wash via Illumina Miseq and QIIME pipeline

Steven Ricke*¹, Sang In Lee¹, Si Hong Park¹, Kelli Hiett², Holly Sellers³, Michael Rothrock² ¹University of Arkansas; ²USDA-ARS US National Poultry Research Center; ³UGA Poultry Diagnostic & Research Center

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Evaluation of light intensity on Pharaoh quail growth performance

Casey Ritz*, Brian Fairchild, Michael Czarick *The University of Georgia*

P242

Multi-mycotoxin analysis in 829 feed and raw material samples in 2016

Verena Starkl*¹, Paula Kovalsky¹, Timothy Jenkins¹, Michael Sulyok² ¹Biomim Holding GmbH; ²Department IFA-Tulln, University of Natural Resources and Life Sciences, Vienna, Austria

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Relationships of eggshell thickness to thermal gradients across the shell at the large and equatorial regions of embryonated broiler hatching eggs

Oluwaseun Durojaye*, Edgar Peebles *Mississippi State University*

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Effects of incubation with a photoperiod on tibia breaking strength in three strains of hens

Cassandra Stupart*^{UG}, William Hannah, Janice MacIsaac, Bruce Rathgeber *Dalhousie University*

P245

Assessing navel closure in newly hatched broiler chicks using thermal imaging

Valene MacNeil*^{UG}, Kayla Graham, Xujie Li, Bruce Rathgeber *Dalhousie University*

P246

Non-invasive methods for measuring stress and lesions attributed to bacterial chondronecrosis with osteomyelitis (BCO) in four and five week old broilers

Shawna Weimer*, Andronikos Mauromoustakos, Robert Wideman, Dawn Koltes, Karen Christensen, Yvonne Vizzier-Thaxton *University of Arkansas*

P247

Infrared thermography (IRT) as a non-invasive method for measuring stress in one week old broiler chicks

Shawna Weimer*, Andronikos Mauromoustakos, Robert Wideman, Dawn Koltos, Karen Christensen, Yvonne Vizzier-Thaxton *University of Arkansas*

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Influence of fan induced photoperiod on selected blood plasma biochemistry, enzyme activities and electrolyte levels of male broilers reared to 63 day of age.

Hammed Olanrewaju*, Joseph Purswell, Stephanie Collier, Scott Branton *USDA-ARS, Poultry Research Unit*

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Dietary supplementation of Original XPC to reduce stress in heat stressed and non-heat stressed broilers.

Paul Price*^{GS1}, Hilary Pavlidis², Don McIntyre², Gregory Archer¹ ¹*Texas A&M University;* ²*Diamond V*

P250

Dietary supplementation of Original XPC or AviCare to reduce stress in broilers.

Jill Nelson*¹, Hilary Pavlidis², Don McIntyre², Gregory Archer¹ ¹*Texas A&M University;* ²*DiamondV*

P251

The acidification of litter and its effect on the broilers meat quality.

Rodrigo Garcia*¹, Claudia Komiyama², Rodrigo Garcia², Nariane Gonçalves¹, Ana Claudia Andrade¹, Ednaldo Andrade¹, Willian Maba¹, Diandra Bet¹, Carlos Junior¹ ¹*Universidade Federal de Mato Grosso;* ²*Universidade Federal da Grande Dourados*

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Ammonia volatilization in broiler litter submitted on acidification

Rodrigo Garcia*¹, Cláudia Komiyama², Rodrigo Garcia², Nariane Gonçalves¹, Juliana Lima¹, Ednaldo Andrade¹, Diandra Bet¹, Fátima Savegnago¹ ¹*Universidade Federal de Mato Grosso;* ²*Universidade Federal da Grande Dourados*

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The influence of reused litter and its effect on the broilers meat quality.

Rodrigo Garcia*¹, Claudia Komiyama², Rodrigo Garcia², Ana Andrade¹, Nariane Gonçalves¹, Ednaldo Andrade¹, Willian Maba¹, Carlos Junior¹, Diandra Bet¹ ¹*Universidade Federal do Mato Grosso;* ²*Universidade Federal da Grande Dourados*

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The growth pattern of warm-region chickens under natural prolonged heating conditions

Al-Amira El-Kashef*^{UG}, Doaa Higazy, Essam El-Gendy *Faculty of Agriculture, Cairo University*

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Effects of post-hatch holding time before placement on broiler body temperature during grow-out

Edgar Peebles*¹, Tiago Oliveira², Antonio Bertechini², Elizabeth Kim³, Opeyemi Olojede¹, Sharon Womack¹, Patrick Gerard⁴ ¹*Mississippi State University;* ²*Department of Animal Science, Federal University of Lavras;* ³*USDA-ARS;* ⁴*Clemson University*

P256

Cytology of H/L ratio - the calculus of stress

Paul Cotter*, Kathleen Cotter *Cotter Laboratory*

Metabolism & Nutrition**P257**

Performance and meat quality of Cobb MX x 500 male and female broilers as affected by amino acid density

Barbara de Almeida Mallmann*^{GS1}, Xiao Sun², Casey Owens¹, Samuel Rochell¹, Justina Caldas³, Michael Kidd¹ ¹*University of Arkansas;* ²*Nanjing Agricultural University;* ³*Cobb-Vantress*

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Arginine requirement for male turkeys from seven to twenty-one days old.

Joao Ferreira*^{GS}, Jeff Firman *University of Missouri*

P259

Effects of herbal Methiorep on growth performance, egg production and egg quality in laying hens

Fernanda Castro*¹, Paula Sedlacek¹, Shivi Maini², Mohan Ji Saxena², Ravikanth Kotagiri², Woo Kyun Kim¹ ¹*University of Georgia*; ²*Ayurvet Limited*

P260

Methionine maintenance requirement estimations for 8 to 16 day old broilers

Joel Montgomery*^{UG}, Katie Hilton, Michael Schlumbohm, Garrett Mullenix, Justina Caldas, Judith England, Craig Coon *University of Arkansas*

P261

What are the best lysine and methionine + cystine levels to improve breast meat quality of broilers at 21 days old?

Carla Heloisa Domingues*¹, Karina Duarte², Elaine Santos², Thays Quadros², Diana Castiblanco², Sarah Sgavioli², Rodrigo Garcia¹, Otto Junqueira² ¹*Universidade Federal da Grande Dourados*; ²*Universidade Estadual Paulista*

P262

Effect of pullulanase present in sorghum grains on nutrients digestibility

Bernardo Iglesias*¹, Jorge Azcona¹, María Charrière¹, Pedro Pardo² ¹*INTA - EEA Pergamino*; ²*Advanta Semillas S.A.I.C., Investigación Sorgo*

P263

Dose response of commercial phytases in broilers fed corn-SBM-animal byproducts based diets low in non-phytate phosphorus

Sandra Rodrigues*¹, Ricardo Gonzalez-Esquerria¹, Raquel Araujo¹, Rafael Nascimento², Cristiane Araujo², Lúcio Araujo² ¹*Novus International Inc.*; ²*Universidade de São Paulo*

P264

Measurement of uronic acid content in non-starch polysaccharide assays using microtiter plate reader spectrophotometer

Pramir Maharjan*, Maria Cortes, Katie Hilton, Craig Coon *University of Arkansas*

P265

Effectiveness of feed additives to improve shell quality in older laying hens.

Josephine Foley*^{GS}, Kathryn Hanford, Sheila Purdum *University of Nebraska - Lincoln*

P266

Effects of a mannan oligosaccharide product on live performance and small intestine morphology in pekin ducks

Jungwoo Park*^{GS}, Muhammad Hashim, Hector Leyva-Jimenez, Micky Clary, John Carey *Texas A&M University*

P267

Evaluation of a Bacillus based DFM on male broiler growth performance as compared to antibiotic growth promotor

Christopher Eagleson*^{GS1}, Rocky Latham¹, Cody Flores¹, Omar Gutierrez², Jason Lee¹ ¹*Texas A&M University*; ²*Huvepharma Inc.*

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Evaluation of a direct fed microbial (DFM) compared to antibiotic growth promoters in male broiler growth parameters

Kyle Smith*^{GS1}, Rocky Latham¹, Kyle Brown¹, Nathan Augspurger², Blyn Brown², Mike King³, Sona Son³, Jason Lee¹ ¹*Texas A&M University*; ²*JBS United, Inc.*; ³*Microbial Discovery Group*

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Evaluation of Direct-Fed Microorganism and functional feed ingredient co-administration on the gastrointestinal microbiota of broiler chickens

Timothy Broderick*^{GS1}, Jason Lee¹, Omar Gutierrez² ¹*Texas A&M University*; ²*Huvepharma, Inc*

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Comparison the effect of antibiotic, probiotic, prebiotic, phytobiotic and Bacillus subtilis on broiler performance

Monese Hamidi*¹, Shaban Rahimi¹, Nahid Mojangi² ¹*Tarbiat Modares University*; ²*Razavi vaccine and serum Production Research Institute*

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Intestinal mucosal development and meat quality in broiler chicks fed diets containing Ginkgo biloba leaves or fermented garlic, singly or in combination

Sang Lee*¹, Hashemi Mahmood¹, Yu Thaw¹, Da Hye Kim¹, Moungh Cheul Keum¹, Byoung Ki An¹, Kyung Woo Lee¹, Yong Suk Lee², Youn Geun Joung² ¹*Konkuk University*; ²*eaglevet inc.*

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Dietary calcium-butyrate versus citri Dietary calcium-butyrate versus citric acid improves eggshell quality of laying hens in the late stage of production c acid improves eggshell quality of laying hens in the late stage of production

Moung Keum*, Da Kim, Sang Lee, Kyoung Lee, Byoung an *Konkuk university*

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Effect of Amasil NA on growth performance and Salmonella Typhimurium colonization in broilers

Pratima Acharya Adhikari*¹, Joshua Jendza², Douglas Cosby³, Nelson Cox³, Woo Kyun Kim⁴ ¹*University of Georgia*; ²*BASF Corporation*; ³*United States Department of Agriculture, U.S. National Poultry Research Center*; ⁴*Department of Poultry Science, University of Georgia*

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Effects of prebiotics and probiotics on the performance and bacterial colonization of broiler chickens

Alaeldein Abudabos*, Hamad Al-Batshan *King Saud University*

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The effect of phytogetic feed additives to substitute in-feedantibiotics on growth traits and blood biochemical parameters in broiler chicks challenged with Salmonella typhimurium

Alaeldein Abudabos* *King Saud University*

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Study by flow cytometry of the bacteriostatic effect of a commercial blend of essential oils at sub-inhibitory concentrations against E. coli

Sylvain Kerros*¹, Claire Girard², Karine Fayolle², Françoise Leriche², Thibaut Chabrilat¹ ¹*Phytosynthese*; ²*VetAgro Sup*

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Using nutritional strategies to improve egg shell and bone quality of layers for a single lay cycle

Tuoying Ao*, Aidan Connolly, Marquisha Paul, Anthony Pescatore, Lizza Macalintal, Mike Ford, Karl Dawson *Alltech-University of Kentucky Nutrition Research Alliance*

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Spores from the probiotic strain Bacillus subtilis DSM 32315 remain viable after pelleting and long term storage and are able to germinate in poultry intestinal conditions.

Rose Whelan*¹, Kiran Doranalli¹, Ines Ochrombel¹, Judith Ringel¹, Markus Wiltafsky¹, Kirsi Vienola², Teemu Rinttilä², Juha Apajalahti² ¹*Evonik Nutrition & Care GmbH*; ²*Alimetrics Ltd.*

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The effect of Bacillus sp. in broilers to control Clostridium perfringens induced necrotic enteritis

Sean Griffin*¹, Greg Mathis³, Charles Hofacre², Brett Lumpkins³ ¹*Osprey Biotechnics*; ²*The University of Georgia, Poultry Diagnostic Center*; ³*Southern Poultry Research, Inc.*

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Effects of the dietary supplementation with a Schizochytrium sp algae on laying hen performance and egg yolk fatty acid composition

Liliana Betancourt Betancourt López*, Gonzalo Díaz Gonzalez, Amparo Cortés Sierra *Universidad Nacional de Colombia*

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Effect of Herb Mate inclusion in broilers' diet on carcass yield and chemical composition of breast and thigh meat

Rodrigo García*¹, Sarah Sgavioli¹, Carla Domingues¹, Gabriela Andrela¹, Irenilza Naas¹, Beatriz Roriz¹, Bruna Barreto¹, Claudia Cardoso², Paulo Rodrigues³, Tassia Bevilaqua¹, Rosana Bicas¹, Rodrigo Borille⁴ ¹*Universidade Federal da Grande Dourados*; ²*Universidade Estadual de Mato Grosso do Sul*; ³*Universidade de São Paulo*; ⁴*Universidade Federal de Santa Maria*

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Inclusion of Herb Mate in diet change fatty acid profile of broiler meat

Rodrigo Garcia*¹, Sarah Sgavioli¹, Carla Domingues¹, Gabriela Andrela¹, Irenilza Naas¹, Beatriz Roriz¹, Bruna Barreto¹, Claudia Cardoso², Paulo Rodrigues³, Tassia Bavilaqua¹, Rosana Bicas¹, Rodrigo Borille⁴ ¹*Universidade Federal da Grande Dourados*; ²*Universidade Estadual do Mato Grosso do Sul*; ³*Universidade de São Paulo*; ⁴*Universidade Federal de Santa Maria*

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Inhibition of *Campylobacter jejuni* by Original XPC™ in an anaerobic mixed fecal in vitro culture system.

Peter Rubinelli*¹, Si Hong Park¹, Hillary Pavlidis², Donald McIntyre², Steven Ricke¹ ¹*University of Arkansas*; ²*Diamond V*

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Study on effects of Probiotic with herbal oil in growth performance and carcass traits of Japanese Quail

sagar Paudel*, Bhesh Bhandari, Damodar Neupane, Ajit Jha, Mukesh karki, Niraj Baskota, Deepak Adhikari *Nepal Agricultural Research Council*

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Effects of lysophospholipid product (Lipidol™) on growth performance in broilers fed with a commercial or re-formulated energy diet

Byoungyun Jung*¹, Ernesto González², Carlos Coello², José Menocal² ¹*EasyBio Inc*; ²*Carval Group*

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Commercial organic acid blend improves broiler gut health and performance

David Harrington*¹, Leon Broom¹, Augustine Owusu-Asiedu¹, Aikaterini Konstanti¹, Ilias Giannenas² ¹*Anpario PLC*; ²*Aristotle University of Thessaloniki*

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Impact of incubation time and addition of original-XPC on the microbiota in an in vitro broiler cecal bioassay

Steven Ricke*¹, Sang In Lee¹, Si Hong Park¹, Stephanie Roto¹, Peter Rubinelli¹, Hilary Pavlidis², Don McIntyre² ¹*University of Arkansas*; ²*Diamond V*

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Evaluation of medium chain fatty acids alone or in combination with plant extracts and prebiotics on tom turkey performance.

Nicholas Evans*¹, T Karnezos¹, Ron Dvorak¹, Michael Sims² ¹*PMI Nutritional Additives*; ²*Virginia Diversified Research Corporation*

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Performance of broilers fed diets supplemented with lysophospholipids (Lipidol™) versus an antibiotic growth promotant program in a 42d performance trial.

Theodore Karnezos*¹, Ronald Dvorak¹, Curtis Novak², Mahmoud Masadeh², Michael Sims³, Byoungyun Jung⁴ ¹*PMI Nutritional Additives*; ²*Purina Animal Nutrition*; ³*Virginia Diversified Research*; ⁴*Easybio*

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Grape pomace flour influence yolk pigmentation of quail eggs

Hébron Fróes*¹, Ianglio Jácome¹, Rafael Tavares¹, Mateus Martinelli¹, Rodrigo Garcia², Carla Heloisa Domingues², Rodrigo Borille², Tassia Bevilaqua², Rosana Bicas² ¹*Universidade Federal de Santa Maria*; ²*Universidade Federal da Grande Dourados*

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Effect of multi-strain *Bacillus* probiotic on performance parameters of broiler chickens.

Bradley Schrader*^{GS}, Elle Chadwick, Laci Mackay, James Krehling, Ken Macklin *Auburn University*

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Effects of dietary microalgae and zinc source on the bone characteristics and uniformity of broiler breeder pullets

Marquisha Paul*^{GS}, Anthony Pescatore, Tuoying Ao, Michael Ford, Karl Dawson *Alltech-University of Kentucky Nutrition Research Alliance*

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Impacts of dietary vitamin D on immune-related activities of *Salmonella enteritidis* vaccinated-laying hens

Matthew Warren^{*1}, Jinlei Wen², Kimberly Livingston¹, Michael Persia² ¹*North Carolina State University*; ²*Virginia Tech*

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Does pelleting affect transfer of DHA to eggs when heterotrophically-grown microalgae are added to layer diets?

Colm Moran^{*1}, Douglas Currie², Anne Knox² ¹*Alltech Inc*; ²*Roslin Nutrition Ltd*

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Changes in egg DHA content over 24 weeks in layers fed diets containing 0, 0.25, 0.5 or 1% heterotrophically-grown algae

Colm Moran^{*1}, Douglas Currie², Anne Knox² ¹*Alltech Inc*; ²*Roslin Nutrition Ltd*

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Effects of various levels of low-fat distiller's dried grains with solubles on intestinal developments of broilers from 28 to 54 days of age

Na Dong^{*}, Na Dong, Xi Wang, Wei Zhai *Mississippi State University*

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Optimization modeling with spreadsheets: Finding simplicity in complexity

Manoel Garcia-Neto^{*}, Rodrigo Terra Celidonio, Roberto Carlos Freitas, Thainá Landim Barros, Rodrigo Pereira Cassiano *UNESP - Univ Estadual Paulista, FMVA, DAPSA*

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A workbook to estimate parameters for models

Manoel Garcia-Neto^{*}, Sílvia Helena Perri, Thainá Landim Barros, Rodrigo Pereira Cassiano, Max José Faria-Junior *UNESP - Univ Estadual Paulista, FMVA, DAPSA*

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Intra-amnion delivery of mannose or mannose-based oligosaccharides in fertile broiler eggs at 18d of incubation

Lizza Macalintal^{*}, Anthony Pescatore, Tuoying Ao, Rijin Xiao, Mike Ford, Ronan Power, Karl Dawson *Alltech-University of Kentucky Poultry Nutrition Research Alliance*

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Exploring the novel approach of probiotic delivery into the gut of pre-hatch chicks

Lizza Macalintal^{*}, Anthony Pescatore, Tuoying Ao, Phyllis Glenney, Mike Ford, Karl Dawson *Alltech-University of Kentucky Poultry Nutrition Research Alliance*

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Evaluation of nutrient composition and correlations between nutrients and color characteristics of corn grains

Ahmet Pekel^{*1}, Ahmet Pekel¹, Ali Calik², Eren Kuter³, Özcan Cengiz³, Güvenç İnan⁴ ¹*Istanbul University, Faculty of Veterinary Medicine*; ²*Ankara University, Faculty of Veterinary Medicine*; ³*Adnan Menderes University, Faculty of Veterinary Medicine*; ⁴*Optima Nutritional Products Inc*

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Using Protease and Xylanase Enzymes as Single or Combined Supplementation to Corn-Soybean Meal Broiler Diets.

Nessrin Selim^{*}, Hemat Abdel Magied, Heba Habib, Amany Waly, Ahmed Fadl, Sayed Shalash *Animal Production Research Institute (APRI), Agricultural Research Center (ARC)*

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Evaluation of multiple copper supplements and concentrations on male broiler performance and bile antimicrobial activity

Hunter Walters^{*GS1}, Austin Jasek¹, Pat Welch², Craig Coufal¹, Jason Lee¹ ¹*Texas A&M University*; ²*Novus International*

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Broilers performance supplemented with organic or inorganic minerals

Iane Almeida^{*1}, Ibiara Almeida Paz¹, Jose Roberto Sartori¹, Grace Baldo¹, Alba Fireman², Edivaldo Garcia¹, Andrea Molino¹, Bruno Gilli¹, Ana Carolina Rocha¹, Ricardo Santos¹ ¹*UNESP - FMVZ*; ²*Zinpro Animal Nutrition*

USPOULTRY Presentation

B313

Monday, January 30

3:30 p.m.

Chair: Dr. John Glisson, *USPoultry*

Poster Reception

B313 Foyer

Monday, January 25

4:00 - 6:00 p.m.

Co-Chairs: Dr. Mary Beck, *Mississippi State*, and Dr. Mark Jackwood, *UGA*

Milton L. Dendy Keynote Address

B313

Tuesday, January 31

11:00 a.m.

Dr Charles Hofacre, *UGA*

Chair: Dr. Mark Jackwood, *University of Georgia, Athens, GA*

SCAD Business Meeting

B312

Tuesday, January 31

Noon

Chair: Dr. Ken Macklin, *Auburn University*

SPSS Business Meeting

B313

Tuesday, January 31

Noon

Chair: Dr. Omar Gutierrez, *Huvepharma*

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Cody Flores, Texas A&M
Marta Viguie, North Carolina State

Environment Management

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Matthew Livingston, North Carolina State
Manuel da Costa, UGA
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Processing and Products

Kathryn Meloche, Auburn

Physiology

Sara Orłowski, U of Arkansas

Pathology

Katy Tarrant, U of Arkansas

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Rocky Latham, Texas A&M
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Leticia Gross, Rio Grande do Sul
Ana Oliveira, MSSTATE, Honorable Mention

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Leticia Gross, Rio Grande do Sul
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Kathryn Lott, MSSTATE
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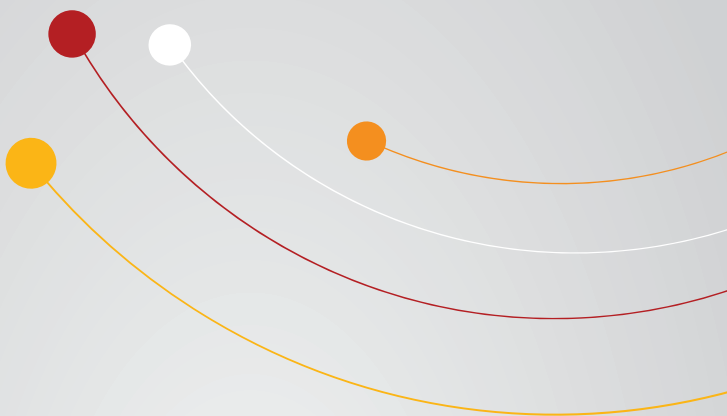
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