2016
INTERNATIONAL POULTRY SCIENTIFIC FORUM
JANUARY 25 – 26
**2016 INTERNATIONAL POULTRY SCIENTIFIC FORUM**

Concurrent Meeting of  
*The Southern Poultry Science Society 37th Annual Meeting*  
*The Southern Conference on Avian Diseases 57th Annual Meeting*  
January 25-26, 2016

**Registration:**
You may register on site on Monday, Jan. 25, 7:30 a.m. – 4 p.m., and Tuesday, Jan. 26, 7:30 – 11 a.m., in Registration Lobby - Building B, Georgia World Congress Center.

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### Program Summary

#### MONDAY SESSIONS  
**JANUARY 25**

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<td>B-311</td>
<td>8:00 a.m. – 10:30 a.m. (Dr. Drew Benson)</td>
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<td>B-311</td>
<td>10:45 a.m. – 4:00 p.m. (Dr. Dianna Bourassa)</td>
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<td>B-312</td>
<td>8:15 a.m. – Noon (Dr. Ken Bafundo)</td>
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<td>1:00 p.m. – 4:00 p.m. (Dr. Kelley Wamsley)</td>
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<td>B-314</td>
<td>8:00 a.m. – Noon (Dr. Kim Livingston)</td>
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<td>B-315</td>
<td>8:00 a.m. – Noon (Dr. Ariane Helmbrecht)</td>
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<td>B-315</td>
<td>1:00 p.m. – 4:00 p.m. (Dr. Justin Fowler)</td>
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<td>4:00 p.m. – 4:30 p.m. (Dr. John Glisson)</td>
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<td>B-313 Foyer</td>
<td>1:00 p.m. – 6:00 p.m. (Dr. Kurt Perryman)</td>
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#### TUESDAY SESSIONS  
**JANUARY 26**

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<td>B-311</td>
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<td>B-312</td>
<td>7:30 a.m. – 10:45 a.m. (Dr. Alejandro Banda and Dr. Eric DeJesus)</td>
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<td>7:45 a.m. – 11:00 a.m. (Dr. Maurice Pitesky)</td>
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Officers of the SPSS 2015-2016

President: Dr. David Caldwell, Texas A&M University
First VP Dr. Omar Gutierrez, Huvepharma
Second VP Dr. Edgar Oviedo-Rondon, North Carolina State University
Past President Dr. Stacey Roberts, Provimi
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

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Dr. Maricarmen Garcia, UGA
Dr. Joe Giambrone, Auburn University
Dr. Blanca Lupiani, Texas A&M
Dr. Ken Macklin, Auburn University
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
Phone: 706.542.5475
Email: mjackwoo@uga.edu
Physiology
Chair: Dr. Drew Benson, UGA
Room Number: B311
Monday, January 25, 2016

8:00 a.m. M1
Correcting bone morphometry values for body weight differences
Cristian Uculmana¹, Diego Martínez², Jorge Tay³, Carlos Vilchez¹ ¹Universidad Nacional Agraria La Molina; ²LIAN Development & Service

8:15 a.m. M2
The comparative efficacy of various feed additives on the resistance of broiler to experimentally induced exhal cocoidiosis
Atta Subhani¹, Kamran Ashra², Muhammad Umar Sohail³ ¹UVAS; ²University of Veterinary and Animal Sciences, Lahore; ³Government college University Faisalabad

8:30 a.m. M3
Comparison of hen comb and wing vein blood glucose via compact glucometer.
Brendan Gould² GS, Suzanne Oates, Wallace Berry Auburn University

8:45 a.m. M4
Influence of acute maternal lead exposure on F1 pigeon hatchlings
Robert Williams⁴ GS, Susan Williams⁵, Steven Holladay⁶, Lawrence Tannenbaum², Robert Gogal¹ ¹University of Georgia; ²U.S. Army Center for Health Promotion and Preventive Medicine

9:00 a.m. M5
Expression of the mRNA for zona pellucida protein A in the developing follicles of the broiler breeder hen
Joshua Steed² GS, Andrew Benson, Mia Malloy, Martha Freeman, Adam Davis University of Georgia

9:15 a.m. M6
The mRNA expression of preprodynorphin, gonadotrophin inhibitory hormone, and gonadotrophin inhibitory hormone receptor in the ovary of broiler breeder hens.
Ashley Stephens⁴ GS, Martha Freeman, Adam Davis University of Georgia

9:30 a.m. M7
Effect of chelated copper on gut health in broilers
Karen Wedekind, Terra Wineman, Mercedes Vazquez-Anon, Jeffery Escobar, Juxing Chen Novus International Inc.

9:45 a.m. M8
Genes involved in muscle development, muscle differentiation, and insulin signaling may play a role in the phenotypic expression of feed efficiency seen in a single genetic line of male broilers.
Kentu Lassiter⁴ GS, Byung-Whi Kong, Sami Dridi, Walter Bottje University of Arkansas

10:00 a.m. M9
Histological analysis of the pectoralis major muscle in broiler lines divergently selected for Percentage 4-day breast yield
Sara Orlowski⁵ GS, Cindy Coy², Sandra Velleman³, Nicholas Anthony⁴ ¹University of Arkansas; ²The Ohio State University

10:15 a.m. M10
Characteristics of woody breast and the effect of chelated trace minerals on woody breast in broilers
Karen Wedekind, Terra Wineman, Cindy Atwell, Mercedes Vazquez-Anon, Jeffery Escobar, Juxing Chen Novus International Inc.

10:30 a.m. Break
Processing & Products
Chair: Dr. Dianna Bourassa, USDA/ARS
Room Number: B311
Monday, January 25, 2016
10:45 a.m. M11
Evaluation of objective methods to detect woody breast and white striping myopathy
Bradley Schrader*GS, Elle Chadwick, Yilin Li, Ken Macklin, Amit Morey Auburn University

11:00 a.m. M12
Occurrence of white striping and wooden breast in broilers fed diets with increasing levels of
lysine in grower and finisher phases
Henrique Cemin*, Rafael Cruz, Sergio Vieira, Patrícia Carvalho, Silvana Rauber, Heitor Rios, Lizis Kindlein UFRGS

11:15 a.m. M13
Effects of qualitative nutrient allocation on myopathies of the Pectoralis major muscles in broiler
chickens at 48 d of age
Kathryn Meloche*GS, Bryan Fancher, Sarge Bilgili*, Derek Emmerson, William Dozier, lii
1Auburn University; 2Aviagen, Inc.

11:30 a.m. M14
The effect of pasture vs indoor rearing on the breast filet shelf-life of commercial-meat chickens
and alternative breeds
Mckenzie Bear*UG, Gregg Rentfrow, Jacqueline Jacob, Anthony Pescatore, Tatijana Fisher, Marquissha Paul, Michael Ford University of Kentucky

11:45 a.m. M15
Assessing the impact of egg sweating on Salmonella Enteritidis penetration into shell eggs
Janet Gradi*GS1, Pat Curtis1, Deana Jones1, Ken Anderson1 1Auburn University Food Systems Institute; 2USDA Agricultural Research Service, US National Poultry Research Center, Egg Safety and Quality Research Unit; 3Prestage Department of Poultry Science, North Carolina State University

12:00 p.m. Lunch

1:00 p.m. M16
Determination of the route of challenge and eventual colonization sites of Salmonella enterica
serovar Enteritidis when chicks are inoculated on day 0 Elle V. Chadwick, Kenneth Macklin, James Krehling, Laci Mackay, Anthony Frazier, Bradley Schrader Elle Chadwick*GS, Kenneth Macklin Auburn University

1:15 p.m. M17
Using RNA-Seq Next Generation Sequencing to understand the variability in gene expression in
Salmonella Heidelberg (SH) after exposure to disinfectants
Myrna Cadena1, Rodrigo Gallardo1, Huaqun Zhou2, Maurice Pitesky1 1UC Davis, School of Veterinary Medicine; 2University of California Davis

1:30 p.m. M18
Proteomic analysis on broiler breast myopathies
Vivek Kuttappan1, Ranjith Ramnathan2, Jeffery Esobar3, Steven Hartson2, Casey Owens3, Craig Coon1, Byung-Whi Kong1, Mercedes Vazquez-Añon1, Walter Bottje1, Billy Hargis1 1University of Arkansas; 2Oklahoma State University; 3Novus International Inc.

1:45 p.m. M19
Texture analyses of cooked wooden broiler breast fillets after fresh and frozen storage
Gabriela Sanchez Brambila1, Debolina Chatterjee1, Brian Bowker1, Hong Zhuang2 1ARS-USDA; 2USDA-ARS

2:00 p.m. M20
Wooden breast condition results in reduced thaw loss in frozen-thawed broiler breast fillets
Hong Zhuang2, Brian Bowker U.S. National Poultry Research Center

2:15 p.m. M21
Comparison of objective texture measurements in raw and cooked wooden breast meat
Brian Bowker1, Hong Zhuang, Debolina Chatterjee, Jordan Wiener USDA-ARS
Can acceptable quality angel food cakes be made using pasteurized shell eggs? The effects of processing factors on functional properties of angel food cakes.

Ajaypal Singh, David Geveke* United States Department of Agriculture

Recovery of consciousness in broilers following combined DC and AC stunning

Dianna Bourassa*, Brian Bowker*, R. Buhr1 USDA-ARS, U.S. National Poultry Research Center, Poultry Microbiological Safety and Processing Research Unit; 2USDA-ARS, U.S. National Poultry Research Center, Quality and Safety Assessment Research Unit

Novel pod for chlorine dioxide generation and delivery to control aerobic bacteria on the inner surface of floor drains

Mark Berrang*, Mark Harrison*, Richard Meinersmann1 USDA-Agricultural Research Service; 2University of Georgia

On-line pollution load control to lower chemical and energy costs of i-DAF as pre-treatment for slaughterhouse wastewater

Hendrik Menkveld*, Scott Christian*, Eddie Broeders1 Nijhuis Water Technology BV; 2Nijhuis Water Technology Inc.

Fat recovery from dissolved air flotation sludge for energy production

Hendrik Menkveld*, Nadine Boelee1, Scott Christian2 Nijhuis Water Technology BV; 2Nijhuis Industries Inc.

Poultry System Simulation Model to evaluate water consumption and wastewater contamination levels

Olga Kemenova*, Alexander Samoylov, Doug Britten Georgia Tech Research Institute

USPoultry Presentation - Room Number B-313

Poster Reception - Room Number B-313 Foyer
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<td>8:30 a.m.</td>
<td>M29</td>
<td>Evaluation of dietary EnteroBac™ in broilers challenged with Eimeria maxima and Clostridium perfringens</td>
<td>John Schleifer¹, T. Lohrmann¹, G. Mathis², B. Lumpkins²</td>
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<td>8:45 a.m.</td>
<td>M30</td>
<td>Necrotic enteritis: Important role of intestinal immunity to Clostridium perfringens in pathogenesis and antibiotic alternative strategies to reduce the gut damage.</td>
<td>Hyun S Lillehoj, Sungtae Oh</td>
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<td>9:00 a.m.</td>
<td>M31</td>
<td>Effects of dietary antibiotic growth promoters on various aspects of host responses to Necrotic enteritis in broiler chickens</td>
<td>Sungtae Oh¹, G Donald Ritter², Hyun S Lillehoj¹</td>
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<td>9:15 a.m.</td>
<td>M32</td>
<td>Performance and reduction of Necrotic Enteritis of broiler chickens fed Sangrovit®</td>
<td>Greg Mathis², Charles Hofacre², Brett Lumpkins²</td>
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<td>9:30 a.m.</td>
<td>M33</td>
<td>Salmonella Gallinarum and Gallibacterium anatis causing multibacterial disease in commercial laying hens</td>
<td>Martha Pulido-Landinez, Alejandro Banda</td>
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<td>9:45 a.m.</td>
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<td>The effect of oral administration of Salmonella enterica serovar Enteritidis on the immune response, growth, and feed utilization of immunoglobulin knockout chickens</td>
<td>Kevin Bolek⁴, Kirk Klasing</td>
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<td>10:00 a.m.</td>
<td>Break</td>
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<td>10:15 a.m.</td>
<td>M35</td>
<td>Effects of replacement antibiotics with botanical extracts and their oils in feed on laying hen performance and Salmonella, E. coli and total bacterial count in feces</td>
<td>Abdullah Tahir⁴, Abid Hasnain⁴, Shahid Waheed¹, Omer Tarar¹, Zahra Yaqeen², Tehmina Sohail²</td>
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<td>10:30 a.m.</td>
<td>M36</td>
<td>Predicting ascites incidence in simulated altitude-challenge using single nucleotide polymorphisms identified in multi-generational genome wide association studies</td>
<td>Katy Tarrant⁵, Alex Gilley¹, Ashlee Lund¹, Janet Fulton¹, Nicholas Anthony¹, Douglas Rhoads¹</td>
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<td>10:45 a.m.</td>
<td>M37</td>
<td>Effect of Aflatoxin B1 on gut permeability (leaky gut) in broiler chickens.</td>
<td>Rosario Galarza-Seeber⁴, Juan Latorre, Amanda Wollenden, Billy Hargis, Guillermo Tellez</td>
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<td>11:00 a.m.</td>
<td>M38</td>
<td>Reducing gram negative pathogen challenge in laying hens and turkeys</td>
<td>Ganapathi Raj Murugesan¹, Chastity Pender¹, Attila Kovacs², Luca Vandi², Paolo Massi³, Giovanni Tosi³</td>
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<td>11:15 a.m.</td>
<td>M39</td>
<td>Evaluation 3-Nitrophenylboranic acid and metal toxicity on Histomonas meleagridis in-vitro</td>
<td>Caitlin Harris⁵, Miguel Barrios, Anna Kenyon, Robert Bedstead</td>
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11:30 a.m. M40
Prevalence of white striping in broilers from difference genetics
Tamara Ferreira*, Felipe Schuck, Guiomar Bergmann, Sérgio Vieira, Vladimir Nascimento,
Liris Kindlein Federal University of Rio Grande do Sul

11:45 a.m. M41
Morphometric changes in the breast muscle of broilers with the wooden breast condition
Letícia Gross*, Renata Sesterhenn, Tamara Ferreira, Sérgio Vieira, Guiomar Bergmann, Liris
Kindlein Federal University of Rio Grande do Sul

12:00 p.m. Lunch
SCAD I
Chair: Dr. Brian Jordan, UGA
Room Number: B312
Monday, January 25, 2016

1:00 p.m. M42
Performance of an Automated Whole-House Vaccination System
Joseph Purswell*, Scott Branton USDA-ARS Poultry Research Unit

1:15 p.m. M43
Tissue and blood leukocyte responses to intradermal injection of bacterial cell wall products in chickens
Kristen Byrne*1, Gisela Erf University of Arkansas

1:30 p.m. M44
The effectiveness of SRP vaccine to control Fowl Cholera in broiler breeder hens and Salmonella in their broiler offspring
Charles Hofacre1, Jim Sandstrom2, Samuel Christenberry2, Mark Burleson3, Roy Berghaus3 The University of Georgia; 1Phibro Animal Health; 2Epitoxip, LLC; 3Wayne Farms LLC

1:45 p.m. M45
Connecting the dots: novel statistical approaches toward Salmonellla surveillance in live and processed poultry
Maurice Pitesky UC Davis School of Veterinary Medicine-Cooperative Extension

2:00 p.m. M46
Effects of feeding Diamond V Original XPC on the virulence, antibiotic resistance, intestinal colonization, and fecal shedding of multiple antibiotic-resistant Salmonella typhimurium in broilers
Steve Carlson1, Kristi Anderson1, Mark Scott2, Donald McIntyre2 Iowa State University; 1Diamond V

2:15 p.m. M47
Evaluation of spray application of the probiotic 1-GP on broiler performance following live coccidiosis oocyst vaccination
Victoria Golden1, Colton Hill1, Gil Dedrick2, Audrey Melroy1 Texas A&M University; 1Life Products

2:30 p.m. M48
Evaluation of Eimeria oocyst counts using a Hemocytometer and a McMaster counting chamber
Grace Ashby2, Emily Aston, Miguel Barrios, Brian Jordan The University of Georgia

2:45 p.m. M49
Cross-species transmission of two field isolates of turkey reovirus from clinical cases of tenosynovitis, in commercial broilers
Rafael Bampi1, Erich Linnemann, Vijay Durairaj, Susan Williams, Monique Franca, Holly Sellers University of Georgia

3:00 p.m. M50
Evaluation of protection elicited by Infectious Laryngotracheitis Virus (ILTV) chicken embryo origin (CEO) vaccine following ocular, oral, intranasal or intratracheal administration.
Gabriela Beltrán1, Maricarmen García The University of Georgia

3:15 p.m. M51
Safety of the tissue culture origin (TCO) commercial vaccine as compared to the gene deleted B∆ORFC strain when applied in ovo
Gustavo Schneiders1, Sylva Riblet, Maricarmen García Poultry Diagnostic and Research Center, The University of Georgia

3:30 p.m. M52
Polymorphisms in the spike protein of Arkansas DPI infectious bronchitis virus influence binding to the chorioallantoic membrane
Christina Leysón1, Monique Franca1, Brian Jordan1, Mark Jackwood1 The University of Georgia; 1University of Georgia;
Heterosubtypic immunity to low pathogenic Avian Influenza viruses in Mallard ducks
Karen Segovia*, David Stallknecht¹, Darrell Kapczynski², Neus Latorre-Margalef³, Lisa Stabler³, Alinde Fotjik³, Monique França¹
¹University of Georgia; ²United States Department of Agriculture

4:00 p.m.
US Poultry Presentation - Room Number B-313

4:30 p.m. - 6:30 p.m.
Poster Reception - Room Number B-313 Foyer
Growth performance and tibia measurements in starter broilers fed diets with increasing levels of calcium and available phosphorus and added with increasing amounts of a phytase

Alejandro Diaz Alonso1, Sergio Gomez Rosales2, Maria De Angeles2, Carlos Lopez Coello3, Ernesto Avila Gonzalez1

1Faculty of Higher Studies Cuautitlan-UNAM; 2National Center of Disciplinary Research in Animal Physiology. INIFAP; 3Poultry Science Department. Faculty of Veterinary Medicine and Zootechnics. University City. UNAM.

Lysine requirement of broiler chickens from 1 to 42 days of age using different statistical models

Henrique Cemin1*, Sergio Vieira, Lisir Kindlein, Silvana Rauber, Pedro Ferzola, Catarina Stefanello UFRGS

1University of Georgia; 2Texas A&M University

Modeling dietary protein level of grower diets of broilers raised under sex separated or straight run conditions

Manuel Da Costa1, T.J. Frost2, J. Halley2, Gene Pesti1

University of Georgia; 2Wayne Farms LLC

Does increased selenium supplementation alleviates breast myopathies in broilers?

Tamara Ferreira UFRGS, Henrique Cemin, Rafael Cruz, Sérgio Vieira, Vladimir Nascimento, Lisir Kindlein

Federal University of Rio Grande do Sul

Performance of broiler chickens fed diets with increasing levels of selenium from organic source

Henrique Cemin1, Sergio Vieira1, Rafael Cruz1, Catarina Stefanello1, Lisir Kindlein1, Patricia Carvalho1, Alba Fireman2, 1UFRGS; 2Zinpro Corporation

Effects of eggshell color and dietary iron sources for Cobb 500 breeder hens on progeny performance and blood parameters

Henrique Cemin1, Marco Ebbing1, Sergio Vieira1, Eveline Berwanger1, Cesar Pontin1, Silvana Rauber1, Alba Fireman2, 1UFRGS; 2Zinpro Corporation

Copper requirement for broiler breeder hens

Henrique Cemin1, Eveline Berwanger, Sergio Vieira, Marco Ebbing, André Mayer, Pedro Ferzola, Raissa Menezes

1UFRGS

Effects of variable zinc and copper inclusion and source on broiler growth performance

Austin Jasek1*, Hunter Walters1, Rocky Latham2, Terri Parr4, Jason Lee4, 1Texas A&M University; 2Micronutrients

Effect of dietary available phosphorous and phytase in broiler breeder and broiler progeny diets on the live performance of the broilers

Yun Mei Lin1*, Peter Plumstead2, John Brake1, 1North Carolina State University; 2Danisco Animal Nutrition, DuPont Industrial Biosciences

Phytate hydrolysis with regular and high levels of phytase and available phosphorus on growth performance and nutrient utilisation

Laura Beeson1*, Carrie Walk2, Peter Hastie6, Mike Bedford2, Oluyinka Olukosi 1SRUC; 2AB Vista; 3University of Glasgow
10:45 a.m. M65
Effects of varying phytase inclusion in conjunction with xylanase supplementation on 0-56 d male broiler performance
Rosana Hirai*, Omar Gutierrez, Kelley Wamsley, Ana Oliveira 1 Mississippi State University; 2 Huvepharma Inc.

11:00 a.m. M66
Evaluation of super-dosing phytase in combination with a xylanase on commercial broiler performance and processing parameters
Kyle Smith, Cody Flores, Craig Wyatt, Rex Bushong, Keith Stagg, Jason Lee 1 Texas A&M University; 2 AB Vista; 3 Texan Six Consulting; 4 Holmes Foods

11:15 a.m. M67
Effects of increasing phytase levels on broiler growth performance and nutrient digestibility through 14 days of age
Hunter Walters, Kyle Brown, Danny Portillo, Mike Coelho, Peter Ader, Jason Lee 1 Texas A&M University; 2 BASF Corporation

11:30 a.m. M68
Effects of phytase on phosphorus utilization in broiler chicks depend on dose rate and dietary formulation
Alyson Gautier*, Carrie Walk, Ryan Dilger 1 University of Illinois; 2 AB Vista

11:45 a.m. M69
Maintenance energy requirements in modern broilers fed exogenous enzymes
Justina Caldas Cueva*, Katie Hilton, Nirun Boonsinchai, Garrett Mullenix, Judith England, Craig Coon University of Arkansas

12:00 p.m. Lunch
The effect of exogenous tannase on dietary energy, nutrient availability, gastrointestinal tract development and performance when different field bean cultivars are fed to chicks
Jalil Abdulla¹, S Rose¹, A Mackenzie¹, M Mirza¹, S Llamas-Moya², V Pirgozliev¹ ¹Harper Adams University; ²Kerry Ingredients & Flavours

Phase one laying hens performance of Hy-line Brown laying fed soybean and soybean free diets using caged and cage free rearing system
Morouj Al-Ajeeli¹, Yasser Jameel, Mohammed Hashim, Hector Leyva-Jimenez, Christopher Bailey Texas A&M University

Comparison of three phytases in broiler chickens
Joshua Jendza¹, Peter Ader², Pengcheng Xue², Sunday Adedokun³, Olayiwola Adeola³ ¹BASF Corp.; ²BASF SE; ³Purdue University

Development of a new standard protocol for evaluating phytase potential in broiler chicks
Joshua Jendza¹, Dieter Feuerstein², Fengrui Zhang³, Olayiwola Adeola³ ¹BASF Corp.; ²BASF SE; ³Purdue University

Effect of exogenous xylanase, amylase and protease as single or combined activities on growth performance of broilers fed corn/soybean meal-based diets
Ahmed Amerah¹, Luis Romero¹, Ajay Awati¹, Velmurugu Ravindran² ¹Danisco Animal Nutrition, DuPont Industrial Biosciences; ²Massey University

Effect of commercial exogenous proteases and carbohydrates on nitrogen and standardized ileal amino acid digestibility of canola meal, sunflower meal, and meat and bone meal in broilers fed semi-purified diets
Ahmed Amerah¹, Luis Romero¹, Velmurugu Ravindran² ¹Danisco Animal Nutrition, DuPont Industrial Biosciences; ²Massey University

Effects of a novel xylanase enzyme on broiler performance and intestinal viscosity
Roger Davin¹, Fenglan Yan², Jonny Lyon³, Mercedes Vázquez-Anón³ ¹University of Missouri; ²Novus International Inc.; ³Verenium Corporation

Effects of functional oils on performance parameters of broiler chickens under two different ambient temperatures.
Joan Torrent¹, Ernesto Ávila González², Carlos López Coello², José Arce Menocal¹ ¹Oligo Basics USA LLC; ²Depato. de Medicina y Zootecnia de Aves, FMVZ-UNAM; ³Universidad Michoacana de San Nicolás de Hidalgo

Oregano essential oil improves nutrient absorption capacity in healthy broilers
Diego Martínez¹, Carlos Vilchez² ¹LIAN Development & Service; ²Universidad Nacional Agraria La Molina

Effects of four dietary oils on cholesterol and fatty acid composition of egg yolk in layers
Adebisi Agboola¹, Richard Omidiwura, Ademola Oyeyemi, Eustace Iyayi, Solomon Adelani University of Ibadan
4:00 p.m.
USPoultry Presentation - Room Number B-313
4:30 p.m. - 6:30 p.m.
Poster Reception - Room Number B-313 Foyer
Environment Management I
Chair: Dr. Kim Livingston, NCSU
Room Number: B314
Monday, January 25, 2016

8:00 a.m. M81
Performance of warm regions' laying chickens under prolonged natural heating conditions
Essam El-Gendy* Cairo University

8:15 a.m. M82
Evaluation of an alternative dry chlorine product as a poultry drinking water sanitizer
Samantha Cox*1, Tyler Clark1, Geetha Kumar-Phillips1, Antonio Beitia1, Alissa Robbins2, Callie Mason1, Susan Watkins1 1University of Arkansas; 2Missouri Southern State University

8:30 a.m. M83
Application of a commercially available cleaner and disinfectant via a compressed air foam system to decrease aerobic bacteria in pullet and layer houses
Dima White1, Aaron Kies, Tom Tabler, Chris McDaniel, Yuhua Farnell, Shailesh Gurung, Marcelo Moreira, Dan Zhao, Morgan Farnell Mississippi State University

8:45 a.m. M84
Evaluation of the potential influence of the disinfection cycle on the efficacy of F-strain Mycoplasma gallisepticum vaccine administered by in ovo injection to layer hatching eggs
Katie Collins*1, Scott Branton2, Jeff Evans2, E. David Peebles1 1Mississippi State University; 2Mississippi USDA-ARS

9:00 a.m. M85
Surface application of a lysozyme product to restrict Escherichia coli penetration through eggshells
Xujie Li* GS, Bruce Rathgeber, Derek Anderson Dalhousie University

9:15 a.m. M86
Effects of heat and crowding stress on commercial turkey hen performance supplemented with dietary XPC™ or combined with AviCare™ in water.
Brooke Bartz* GS, Jesse Grimes1, Samantha Black1, Ilana Barasch1, Don McIntyre2 1North Carolina State University; 2Diamond V

9:30 a.m. M87
Chopped miscanthus grass vs softwood shavings as bedding material for broiler grow-out
Amy Mayer* GS, Paul Patterson, R. Hulet, Michael Hile The Pennsylvania State University

9:45 a.m. Break

10:00 a.m. M88
White striping of broiler breast muscle is reduced by time-limited feeding
Matthew Livingston* GS, Chelsea Landon2, H. Barnes2, John Brake1 1North Carolina State University; 2NCSU College of Veterinary Medicine

10:15 a.m. M89
Time-course comparison of classical and non-invasive measurements of stress in broilers given corticosterone in drinking water
Shawna Weimer* GS, Robert Wideman, Dawn Koltes, Wayne Kuenzel, Charles Maxwell, Karen Christensen, Yvonne Vizzier-Thaxton University of Arkansas

10:30 a.m. M90
Feeder color preference of broilers and its effects on performance
J. Deines* GS, E. Lhamon, D. Yoho, L. Chick, R. Bramwell University of Arkansas

10:45 a.m. M91
Providing a photoperiod during incubation of broiler hatching eggs
Kayla Graham* GS, Bruce Rathgeber Dalhousie University, Faculty of Agriculture

11:00 a.m. M92
Live production parameters and carcass yield are affected by genetic line of broilers raised under sex separate or straight run conditions
Manuel Da Costa* GS, T.J. Frost1, J. Halley1, Gene Pesti1 1University of Georgia; 2Wayne Farms LLC; 3Aviagen, Inc.
11:15 a.m. M93
The hatch rate of three strains of laying hens provided a photoperiod at different times during incubation
William Hannah*GS, Tessema Astatkie, Bruce Rathgeber Dalhousie University’s Agricultural Campus

11:30 a.m. M94
Comparison of production, egg characteristic and quality between molted and non-molted hens from 73 through 109 wks of age
Rafael Crivellari*GS, Ramon Malheiros1, Kenneth Anderson1  North Carolina State University;

11:45 a.m. M95
Effects of the onset of a lighting program dark period on deep body temperature
Matthew Hicks*GS, Michael Czarick, Brian Fairchild University of Georgia

12:00 p.m. Lunch
Environment Management II
Chair: Dr Bruce Rathgeber, Dalhousie University
Room Number: B314
Monday, January 25, 2016

1:00 p.m. M96
The effect of different water pressures on broiler performance.
Cody Brown* GS, Brian Fairchild, Michael Czarick The University of Georgia

1:15 p.m. M97
Arkansas broiler enterprise assessment tool ... AR B.E.A.T.
Christopher Sims* GS, H.L. Goodwin University of Arkansas

1:30 p.m. M98
Evaluating the Poultry Science Summer Institute as a recruitment tool for high school students to enter the Poultry Science department.
Braxton Whitaker* GS, Lynn Worley-Davis, Sara Brierton NC State

1:45 p.m. M99
Interferon-gamma assay in commercial chicken on garlic meal feed-indusion
Adetolase Bakre*, Omolade Oladele, Oluwaseun Esan University of Ibadan

2:00 p.m. M100
Newcastle disease vaccine induced immune response and serum protein levels in commercial turkeys on garlic (Allium sativum) meal feed-additive.
Latifat Ogunfolabo*, Omolade Oladele, Adetolase Bakre University of Ibadan

2:15 p.m. M101
How water pressure affects water usage in a commercial broiler house.
Cody Brown*, Brian Fairchild, Michael Czarick The University of Georgia

2:30 p.m. M102
Poultry Carcass Ensiling for Biosecure Preservation and Virus Destruction
Paul Patterson*, R. Hulet, Patricia Dunn, Huaguang Lu, Subhashinie Kariyawasam, Lisa Kitto, Amy Mayer The Pennsylvania State University

2:45 p.m. M103
Mass mortality composting during an avian influenza outbreak. J.B. Payne
Josh Payne* Oklahoma State University

3:00 p.m. M104
The effect of lighting programs on diurnal variations in broiler deep body temperature during hot weather
Brian Fairchild*, Michael Czarick, Matthew Hicks, Cody Brown The University of Georgia

3:15 p.m. M105
Broiler perception of lighting program day length in tunnel-ventilated houses during hot weather
Brian Fairchild*, Michael Czarick, Matthew Hicks, Cody Brown The University of Georgia

3:30 p.m. M106
Effect of temperature fluctuation during storage on hatchability and embryonic mortality of broiler hatching eggs.
Serdar Özlu1, Okan Elibol1, John Brake2 1University of Ankara; 2North Carolina State University

4:00 p.m.
USPoultry Presentation - Room Number B-313

4:30 p.m. - 6:30 p.m.
Poster Reception - Room Number B-313 Foyer
8:00 a.m. M107
Boosting gut health and nutrient digestibility by feeding organic acid based products to broilers orally challenged with E. coli K88
Nima Khodambashi Emami*, Emma Graystone2, Ali Daneshmand1, Reza Akbari Moghadam Kakhki1, Leon Broom1 1Ferdowsi University of Mashhad; 2Anpario PLC

8:15 a.m. M108
Diverse response to dietary supplementation of arginine and guanidinoacetic acid in broilers reared under subnormal temperature
Nima Khodambashi Emami*GS, Abolghasem Golestan, Mohsen Danesh Mesgaran Ferdowsi University of Mashhad

8:30 a.m. M109
Effect of threonine deficiency on intestinal integrity and immune response to coccidiosis in broiler chicks
Qian Zhang*GS1, Xi Chen*, Susan Eicher1,2, Kolapo Ajuwon1, Todd Applegate1 1Purdue University; 1,2Purdue University and United States Department of Agriculture

8:45 a.m. M110
The effect of dietary amino acids on heat production on broiler strains
Katie Hilton*GS1, Craig Coon1, Garrett Mullenix1, Justina Caldas1, Judy England1, Antonio Kavinowski2 1University of Arkansas; 2Evonik

9:00 a.m. M111
Evaluation of varying dietary amino acid levels on modern broiler growth performance and processing yield
Garrett Mullenix*GS1, Katie Hilton1, Judith England1, Justina Caldas1, Antonio Kavinowski2, Craig Coon1 1University of Arkansas; 2Evonik

9:15 a.m. M112
Effects of feeding broilers reduced crude protein diets on growth performance, nitrogen excretion, and plasma uric acid from 1 to 18 d of age
Ruben Kriseldi*GS1, Paul Tillman2, Zhirong Jiang3, William Dozier Iii1 1Auburn University; 2Poultry Technical Nutrition Services, LLC; 3Ajinomoto Heartland Inc.

9:30 a.m. M113
Growth performance and meat yield responses of Ross × Ross 708 male broilers fed diets formulated with distiller’s dried grains with solubles varying in ether extract content and inclusion rate from 1 to 49 days of age
Klinton McCafferty*GS1, Joseph Hess, William Dozier, lli Auburn University

9:45 a.m. Break

10:00 a.m. M114
Effect of changing energy-protein ratio with different inert fillers on starting broilers
Jundi Liu*GS, Justin Fowler University of Georgia

10:15 a.m. M115
Effects of dietary protein, energy and β-mannanase on laying performance, egg quality, and ideal amino acid digestibility in laying hens.
Roshan Adhikari*GS1, Joe Lee2, Woo-Kyun Kim1 1University of Georgia; 2CTCBO Inc.

10:30 a.m. M116
Evaluating the efficacy of a Bacillus-based direct fed microbial in comparison to an antibiotic growth promoter on broiler growth performance and carcass yield
Cody Flores*GS1, Austin Jasek1, Danny Portillo1, Nathan Augspurger2, Jason Lee1 1Texas A&M University; 2JBS United, Inc.

10:45 a.m. M117
Investigation of the nutritional and immune benefits of feeding a microbial protein product to laying hens
Jinlei Wen*GS, Michael Persia Virginia Tech
11:00 a.m. M118
The effect of direct-fed microbial (PrimaLac) on performance and AMEn in turkey poults
Samantha Black*, Jesse Grimes¹, Vivek Fellner¹, Mark Young² ¹North Carolina State University; ²Star Labs/Forage Research, Inc

11:15 a.m. M119
Evaluation of a pronutrient feed additive (Alquernat Nebsui) as a replacement for BMD when fed in conjunction with salinomycin in broiler diets.
Coltin Caraway*, Carlos Domenech², N Martin², John Brake¹ ¹North Carolina State University; ²Biovet

11:30 a.m. M120
Evaluation of the impact of meat and bone meal nutritional variability on broiler performance
Christopher Eagleson*, Tyler Clark, Bryce Daniels, Ashley Eagleson, Park Waldroup, H. L. Goodwin Jr., Susan Watkins University of Arkansas

11:45 a.m. M121
The effect of refined functional carbohydrates (RFCs) from enzymatically hydrolyzed yeast on the presence of Salmonella spp. in the ceca of broiler breeder hens at 65 weeks of age
Grayson Walker*, Sangita Jalukar², John Brake¹ ¹North Carolina State University; ²Arm and Hammer Animal Nutrition

12:00 p.m. Lunch
Influence of feed form (FF) and diet phase effects on 0-46 d broiler performance
Mark Lemons*GS1, Christopher Madanian1, Joseph Moritz2, Kelley Wamsley1 1Mississippi State University; 2West Virginia University

Supplementation of glycosaminoglycans and vitamin C on incubation and feed on the bone mineral density in broiler
Elaine Santos*GS1, Diana Correa Castiblanco1, Liliana Borges1, Carla Domingues2, Thays Quadros1, Sarah Squiovil2, Tiago Petrolli2, Natália Fonseca1, Diogo Goulart1, Monique Carvalhal1, Eduardo Almeida1, Lizandra Amoroso1, Silvana Antoni1 1Sao Paulo State University; 2Federal University Grande Dourados

The sources of lipids partitioning to adipose tissue of chicks during first week posthatch
Nirun Boonsinchai*, Gerret Mullenix, Andrew Magnuson, Justina Cadas, Judy England, Craig Coon University of Arkansas

Effect of Broiler Breeder Maternal Age on Gene Expression in Liver and Abdominal Fat of the Hens as well as Liver and Yolk Sac of the Embryo
Nirun Boonsinchai*, Craig Coon University of Arkansas

Variability of corn distillers solubles oil quality and carotenoid content bioavailability as determined by skin pigmentation in broiler chickens.
Marta Viguie*GS, Kimberly Livingston, Ramon Malheiro, Peter Ferket North Carolina State University

A mixture of medium chain fatty acids will reduce antibiotic resistance
Manu De Laet1, Katrien Deschepper, Renato Costa, Rob Goedegebuure, Ellen Van Meenen Nuscience

The relationship between guanidino acetic acid and metabolize energy level of diets on performance of broiler chickens
Aloeldein Abudabos* King Saud University

Performance of Broilers Fed Diets Supplemented with Medium Chain Fatty Acids, or Medium Chain Fatty Acids plus a Prebiotic and Challenged with Clostridium perfringens. 
T.P. Karnezos*, R. Dvorak1, C. Novak2 1PMI Nutritional Additives; 2Purina Animal Nutrition

Comparative Efficacy of Biostrong Forte plus Biostrong 510 to the AGP Virginiamycin Administered in the Feed for the Control of Necrotic Enteritis caused by Clostridium perfringens in Broiler Chickens
C. Novak1*, S. Pusey2, T.P. Karnezos3 1Delacon USA; 2Purina Animal Nutrition; 3PMI Nutritional Additives

L- and DL-methionine in male Ross 708 broilers from 0 to 35 days of age
Ariane Helmbrrecht1, John Thomson2, Robert Payne2 1Evonik Nutrition & Care GmbH; 2Evonik Corporation
4:00 p.m.  
US Poultry Presentation - Room Number B-313

4:30 p.m. - 6:30 p.m.  
Poster Reception - Room Number B-313 Foyer
7:30 a.m. T133
Effect of feeding fermented cowpea husk on the performance of growing Japanese Quails
Rasheed Hamzat¹, Mustapha Sabo¹*, Abdulhamid Adewale², Olabisi Taiwo Hamzat¹ ¹Federal University, Dutsin-Ma, Nigeria; ²Crescent University
7:45 a.m. T134
Immunological and anti-eimeria activities of hot water and methanol extracts of Pleurotus sajor-caju in broiler
Muhammad Ullah¹, Masood Akhtar, Mian Awas Bahauddin Zakariya University Multan Pakistan
8:00 a.m. T135
Immunological and anti-eimeria activities of hot water and methanol extracts of Pleurotus sajor-caju in broiler
Muhammad Ullah¹, Masood Akhtar, Mian Awas Bahauddin Zakariya University Multan Pakistan
8:15 a.m. T136
Summer stress-role of herbal antistressor in poultry birds
Manju Gatne¹, Mohan Ji Saxena², Ravikanth Kotagiri², Adarsh Chaudhary², Shivi Maini² ¹Bombay Veterinary College; ²Ayurved Limited
8:30 a.m. T137
Feeding Varium™ improves feed conversion.
Fang Chi, San Ching¹, Sara Johnston, Ron Cravens Amlan International
8:45 a.m. T138
Organic acid based products enhance broiler immune responses
Leon Broom¹, Emma Graystone¹, Nima Khodambashi Emami² ¹Anpario PLC; ²Ferdowsi University of Mashhad
9:00 a.m. Break
9:15 a.m. T139
Effects of organic acids on broiler digesta pH and intestinal SCFA concentrations
Emma Graystone¹, Nima Khodambashi Emami², Leon Broom¹ ¹Anpario PLC; ²Ferdowsi University of Mashhad
9:30 a.m. T140
A single feces index (LIAN1.1) as indicator of intestinal health in broilers
Diego Martinez¹, Carlos Vilchez² ¹LIAN Development & Service; ²Universidad Nacional Agraria La Molina
9:45 a.m. T141
Effect of protected sodium butyrate and nutrients concentration on broilers performance
Monica Puyalto¹, Pilar Honrubia, Juan Mallo NOREL S.A.
10:00 a.m. T142
Effect of protected sodium butyrate and nutrients concentration on broilers gut health
Monica Puyalto, Pilar Honrubia, Cinta Sol, Juan Mallo* NOREL S.A.
10:15 a.m. T143
Dose response of organic Zn chelated with 2-hydroxy-4-methylthio butanoic acid (HMTBA) on the performance, carcass quality, gut health and immunology of male broilers
Ricardo Gonzalez-Esquerra¹, Raquel Araujo¹, Sérgio Vieira¹, Cesar Pontin¹, Lisir Kindlein², Cesar Lima¹, Ricardo Hayashi¹, Elizabeth Santin¹ ¹Novus International Inc.; ²Universidade Federal do Rio Grande do Sul; ³Universidade de Sao Paulo; ⁴LABMOR/MESSA - Universidade Federal do Paraná
10:30 a.m. T144
Effect of ration Plus™ for Poultry on broiler chickens fed antibiotic free diets in three 21 day dose-response trials, two with bacterial challenges and one with heat stress
David Hall¹, E. Wozniak¹, J. Menaughton² ¹Cytozyme Laboratories, Inc.; ²AHPPharma, Inc.
10:45 a.m. T145
II. Effect of Ration Plus™ for Poultry on broiler chickens fed antibiotic free diets during heat stress for 49 days.
David Hall¹, E. Wozniak¹, J. Mcnaughton² ¹Cytozyme Laboratories, Inc.; ²AHPharma, Inc.
11:00 a.m. Milton L. Dendy Keynote Address B-313
Antibiotic Usage in Poultry: Assessing the Effects on Antibiotic Resistance and Human Health
Randall Singer University of Minnesota, St. Paul, MN USA
12:00 p.m. SCAD Business Meeting - B312
12:00 p.m. SPSS Business Meeting - B313
Evaluation of the synergistic effect of the live attenuated infectious bursal disease vaccine 89/03 and a recombinant HVT-IBD against early infectious bursal disease challenge in commercial broilers.

Ivan Alvarado¹, Kelley Wamsley², Alejandro Banda²
¹ Merck Animal Health; ² Mississippi State University

Paired house trials comparing Bursaplex® to Vaxxitek® on bursal imaging, PCR and serological response (ELISA) to inactivated ND/IB vaccination

Kalen Cookson¹, Taylor Barbosa¹, Savannah Featherson¹, Andrew Barker¹, Chuck Hofacre²
¹ Zoetis, U.S. Poultry; ² Southern Poultry Research Group

Validation of a commercially-based infectious bronchitis virus enzyme-linked immunosorbent assay for serological detection of turkey coronavirus antibodies

Yuko Sato¹, Patricia Wakenell², Tsang Long Lin², George Moore², Roman Pogranichniy², Katrina Miller², Donna Schrader², Ramtin Sina², Ashley Ochs², Audrey Verkamp²
¹ Iowa State University; ² Purdue University

Evaluation of the effect of combining infectious bronchitis virus (IBV) and coccidia vaccines in hatchery spray vaccination

Brian Jordan¹, Grace Ashby, Lorraine Fuller, Deborah Hilt
The University of Georgia

The effect of infectious bursal disease virus induced immunosuppression on avian influenza virus vaccine efficacy

Christopher Stephens¹, Mary Pantin-Jackwood, Erica Spackman
Southeast Poultry Research Laboratory, U.S. National Poultry Research Center, U.S. Dept. of Agriculture, Agricultural Research Service

Use of antigen capture enzyme-linked immunoassays for the quantitation of hemagglutinin in H5 avian influenza vaccines and the impact of vaccine antigen content on protection of chickens against H5N8 highly pathogenic avian influenza

Eric Dejesus¹, Diane Smith¹, Mar Costa-Hurtado¹, Samir Nassif², Darrell Kapczynski¹, Erica Spackman¹, David Suarez³, Dong-Hun Lee¹, David Swayne¹, Mary Pantin-Jackwood¹
USDA ARS SEPRL; ² Central Laboratory for Evaluation of Veterinary Biologics
Pathogenicity and transmission of North American H5 clade 2.3.4.4 Highly Pathogenic Avian Influenza viruses in different gallinaceous poultry

9:30 a.m. T153
Pathogenicity of 2015 North American H5N2 highly pathogenic avian influenza poultry isolates in chickens and mallards

9:45 a.m. T154
Asian lineage H5N1 clade 2.3.4.4 highly pathogenic avian influenza virus evolution into subgroups with intercontinental spread and generation of novel reassortant viruses in the United States
Dong-Hun Lee¹, Justin Bahl², Mia Torchetti³, Mary Killian³, Hon Ip⁴, David Swayne ¹ ¹Southeast Poultry Research Laboratory, ARS-USDA; ²The University of Texas School of Public Health; ³National Veterinary Services Laboratories, APHIS-USDA; ⁴National Wildlife Health Center, USGS

10:00 a.m. T155
Virus-like particle vaccines expressing H5 hemagglutinin gene protects chicken from multiple clades of highly pathogenic avian influenza
Klaudia Chrzastek¹, Peter Pushko², Terry Tumpey³, Darrell Kapczynski¹ ¹USDA SEPRL; ²Medigen, Inc.; ³Influenza Division, Centers for Disease Control and Prevention

10:15 a.m. T156
H7 Chinese influenza virus transmission in poultry is directly related to the hemagglutinin gene
Marisela Rodriguez*, David Suarez USDA, ARS, United States National Poultry Research Center

10:30 a.m. T157
A Novel DNA-Immunostimulant for exploring Innate Immunity in Avian Health
Roy Jacob*, Barry Kelly Bayer

11:00 a.m. Milton L. Dendy Keynote Address B-313
Antibiotic Usage in Poultry: Assessing the Effects on Antibiotic Resistance and Human Health
Randall Singer University of Minnesota, St. Paul, MN USA

12:00 p.m. SCAD Business Meeting - B312
12:00 p.m. SPSS Business Meeting - B313
Metabolism & Nutrition VI
Chair: Dr. Sheena Fagan, Alltech
Room Number: B313
Tuesday, January 26, 2016
7:30 a.m. T158
Effect of L-Dopa on performance and growth hormone secretion in broiler chickens
Richard Omidiwura1, Adebisi Agboola, Eustace Iyayi University of Ibadan
7:45 a.m. T159
Chemistry curtailing bacterial enteritis in broilers and turkeys
Jeroen Baeyens1, Tina Rogge1, Jan Anné1, Wael Gad2, Francisco Dias2, Jeroen De Gussem3
1Proviran; 2Networks; 3Poulpharm
8:00 a.m. T160
Blood lipid content in relation to intramuscular fat in Chinese indigenous Wuhua chicken
Xingyong Chen1, Zhaoyu Geng, Juanjuan Niu Anhui Agricultural University
8:15 a.m. T161
Supplementation of a multi-strain probiotic on the intestinal health and performance of poultry
Ting-Yu Lee1, Hung-Hsi Hu2, San-Lan Young1, Jin-Seng Lin1, Chih-Yuan Chu2, Je-Ruei Liu2
1SynbioTech Inc.; 2National Penghu University
8:30 a.m. T162
Effect of protease and bacitracin methylene disalicylate on growth performance, gut morphology, and gut barrier function of broilers
F. Yan1, C. Foran, T. Wineman, C. Atwell, J. Chen, J. Escobar, M. Vazquez-Anon Novus International Inc.
8:45 a.m. T163
Novel Bacillus subtilis strain brings consistent growth improvement in broilers
Estelle Devillard1, Preben Nielsen2, Karoline Sidelmann Brinch2, Lamya Rhayati1, Vincent Jacquier1, Pierre-André Géraert1
1Adisseo SAS France; 2Novozymes
9:00 a.m. T164
Effect of Bacillus Subtilis (GalliPro) on energy conversion of broiler chickens fed with corn-soybean meal diets at varying energy levels.
Frank Jin1, Alfred Blanch2, Aneé Kehlet2
1Chr. Hansen, Inc.; 2Chr. Hansen A/S
9:15 a.m. T165
Examining the effect of dietary electrolyte balance, energy source, and length of feeding of nitrogen-free diets on ileal endogenous amino acid losses in broilers
Sunday Adedokun1, Anthony Pescatore1, Austin Cantor1, Jacqueline Jacob1, Michael Ford1, Tuoying Ao2, Ariane Helmreich3
1University of Kentucky; 2Alltech; 3Evonik
9:30 a.m. T166
Screening and characterization of novel Bacillus subtilis strain with consistent growth improvement in broiler
Preben Nielsen1, Estelle Devillard2, Lamya Rhayati2, Karoline Brinch2, Vincent Jacquier1, Pierre-André Géraert1
1Adisseo SAS France; 2Novozymes
9:45 a.m. T167
Performance of broilers fed diets supplemented with a natural growth promoter
Eduardo Vicuna1, Chasity Pender, Ganapathi Murugesan Biomin America Inc.
10:00 a.m. T168
The effects of fast and slow release encapsulated zinc and butyric acid on intestinal bioavailability and performance of broilers.
Jon Rubach1, Brett Lumpkins2, Greg Mathis2, Chris Rude1, Scott Greene1, Dave Sanders1, Thoai Pham1, Mitchell Poss1
1Kemin Industries; 2Southern Poultry Research
10:15 a.m. T169
Effect of a phytogenic feed additive on performance of broiler chickens during an Eimeria challenge
Chasity Pender1, Eduardo Vicuna, Ganapathi Murugesan Biomin America Inc.
10:30 a.m. T170
Qualitative analysis of selenium-enriched yeast products following in vitro digestion
Sheena Fagan1, Richard Murphy1, Rebecca Owens2
1Alltech; 2Maynooth University
Efficacy and safety of chromium propionate as a source of supplemental chromium in broiler diets
Jerry Spears¹, Karen Lloyd¹, Kristi Krafla², Arlene Lamptey², Jesse Grimes¹ ¹North Carolina State University; ²Kemin Agri Foods North America Inc.

Antibiotic Usage in Poultry: Assessing the Effects on Antibiotic Resistance and Human Health
Randall Singer University of Minnesota, St. Paul, MN USA

12:00 p.m. SCAD Business Meeting - B312
12:00 p.m. SPSS Business Meeting - B313
Environment Management III
Chair: Dr. Maurice Pitesky, UC Davis
Room Number: 3314
Tuesday, January 26, 2016

7:45 a.m. T172
Effects of monochromatic light exposure during incubation on footpad dermatitis
Mariana Mesquita1, Edgar Oviedo-Rondón2, Luis Bernal-Arango3, Albaraa Sarsour2, Liliane Borsatti4, Patricia Aристимунча3, Lindolfo Dorcino1 1Universidade Federal de Goiás — Goiânia; 2North Carolina State University; 3Politécnico Colombiano Jaime Isaza Cadavid; 4Universidade Federal do Rio Grande do Sul — Porto Alegre

8:00 a.m. T173
Effects of monochromatic green and red lights during incubation on broiler performance and carcass characteristics
Mariana Mesquita1, Edgar Oviedo-Rondón2, Luis Bernal-Arango3, Liliane Borsatti4, Albaraa Sarsour2 1Universidade Federal de Goiás — Goiânia; 2North Carolina State University; 3Politécnico Colombiano Jaime Isaza Cadavid; 4Universidade Federal do Rio Grande do Sul — Porto Alegre

8:15 a.m. T174
Effects of monochromatic green light exposure at different times during incubation on post-hatch performance
Mariana Mesquita1, Edgar Oviedo-Rondón2, Luis Bernal-Arango3, Albaraa Sarsour2, Liliane Borsatti4, Patricia Aристимунча3, Hernan Cordova2 1Universidade Federal de Goiás — Goiânia; 2North Carolina State University; 3Politécnico Colombiano Jaime Isaza Cadavid; 4Universidade Federal do Rio Grande do Sul — Porto Alegre

8:30 a.m. T175
Getting the greatest benefit from LED lighting systems in broiler barns
Joey Bray1, Gregory Archer2, Juliette Delabbio3 1Stephen F. Austin University; 2Texas A&M University; 3ONCE Innovations Inc.

8:45 a.m. T176
Effects of incubation conditions on growth performance and organ development of two egg laying pullet strains from hatching to 21 days of age
Ricardo Fasanaro1, Edgar Oviedo-Rondón2, Beatriz Solórzano1, Albaraa Sarsour2, Luis Bernal-Arango3, Mariana Mesquita1, Hernan Cordova2 1Universidade Estadual Paulista; 2North Carolina State University; 3Universidad Politécnica de Madrid; 4Politécnico Colombiano Jaime Isaza Cadavid; 5Universidade Federal de Goiás — Goiânia

9:00 a.m. T177
Comparison of Broiler Paw Lesions in the Field versus the Processing Plant — A Field Study
Suzanne Dougherty1, Ken Opengart2, S Bilgili3 1Pecking Around Consulting; 2Keystone Foods; 3University of Auburn

9:15 a.m. T178
Novel biosensor detects and quantifies Salmonella spp. in seconds; comparison to sandwich ELISA.
Maurice Pitesky1, Rob Atwill2, Myrna Cadena3, Jennifer Chase2, Andrew Korey4 1UC Davis School of Veterinary Medicine-Cooperative Extension; 2Western Institute for Food Safety and Security, UC Davis; 3UC Davis School of Veterinary Medicine; 4PathLog Corporation

9:30 a.m. T179
Evaluation of EFG broiler model to predict the effects of environmental conditions and feed composition on broiler live performance
Luis Bernal-Arango1, Edgar Oviedo-Rondón2 1Politécnico Colombiano Jaime Isaza Cadavid; 2North Carolina State University

9:45 a.m. T180
Field evaluation of litter-less flooring system
Casey Ritz, Michael Czarick, Brian Fairchild The University of Georgia

10:00 a.m. T181
Broiler heat removal analysis by whole house calorimetry
Michael Czarick, Brian Fairchild, Matthew Hicks, Cody Brown The University of Georgia
10:15 a.m. T182
The environmental and economic impact of eliminating antibiotics from U.S. broiler production
Matthew Salois*, Roger Cady, Eric Heskett Elanco Animal Health

10:30 a.m. T183
Sanitization of a Marek's vaccination device: Impact on vaccine viability
Alexandra Mendoza-Reilley*, Ivan Alvarado1, Ernst Van Gulijk2, Holly Sellers3, Christine Lobsinger* 1Merck Animal Health; 2Nova-Tech Engineering LLC; 3The University of Georgia; 4The University of Georgia-PDRC

10:45 a.m. T184
Stress assessment by hematology — requirements and application. Paul Cotter* Cotter Laboratory, Arlington, MA, USA
Paul Cotter* Cotter Laboratory

11:00 a.m. Milton L. Dendy Keynote Address B-313
Antibiotic Usage in Poultry: Assessing the Effects on Antibiotic Resistance and Human Health
Randall Singer University of Minnesota, St. Paul, MN USA

12:00 p.m. SCAD Business Meeting - B312
12:00 p.m. SPSS Business Meeting - B313
Metabolism & Nutrition VII
Chair: Dr. Wilmer Pacheco, Auburn University
Room Number: B315
Tuesday, January 26, 2016
7:45 a.m. T185
Enzyme complex improves productive performance of laying hens
Roberto Montanhini Neto*, Mathilde Le Crapper, Pierre Cozannet, Aurélie Preynat ADISSEO
8:00 a.m. T186
Effects of fumonisins and deoxynivalenol on broiler chicken and the efficacy of a mycotoxin
deactivating enzyme and a bacterial strain to counteract
Verena Starkl*, Sabine Masching, Ursula Hofstetter Bionorning GmbH
8:15 a.m. T187
Interaction between SBM trypsin inhibitor level and efficiency of protein hydrolysis by pancreatic
and microbial proteases
Paulina Tamez-Hidalgo*, Katrine Pontoppidan*, Nelson Ruiz*, Jose Sorbara1 1Novozymes A/S;
2Novozymes; 3Nelson Ruiz Nutrition, LLC; 4DSM
8:30 a.m. T188
Performance of broilers fed diets supplemented with yeast mannan oligosaccharide and/or
nucleotides from different sources
Melina Bonato1, John Schleifer2, Glycon Santos1, Brett Lumpkins2, Greg Mathis1 1ICC Industrial
Comércio Exportação e Importação Ltda; 2Quality Technology International, Inc.; 3Southern
Poultry Research, Inc.; 4Poultry Research, Inc.
8:45 a.m. T189
Broiler performance and footpad health in broilers fed an additive composed of secondary
plant compounds (SPC)
Wilmer Pacheco*, Wallace Berry, Joseph Hess Auburn University
9:00 a.m. T190
Effect of lysophospholipids product (LIPIDOLTM) supplementation to low metabolizable
energy, crude protein, and selected amino acids on growth performance, nutrient digestibility,
immunity, and gastrointestinal morphology in broilers
Woowaree Boontiam1, Hee Seong Kim1, Sung Ho Do1, Seoung Ok Nam1, Yoo Yong Kim1,
Byoungyun Jung7 1Seoul National University; 7EAST BIO, Inc.
9:15 a.m. T191
Evaluation of the efficacy of a multi enzyme carbohydrase complex in corn-soybean meal fed
broilers by a meta-analysis
Aurélie Preynat, Roberto Montanini Neto ADISSEO
9:30 a.m. Break
9:45a.m. T192
Replacement of soybean meal by sunflower meal HiPro with the addition of exogenous
enzymes on broiler performance
Roberto Montanhini Neto*, Elisabeth Bourgueil1, Pascal Leterme*, Aurélie Preynat1 ADISSEO;
2BUNGE
10:00 a.m. T193
Evaluation of starter diet protein level on performance and carcass yield of broilers raised under
sex separated or straight run conditions
Manuel Da Costa1, T.J. Frost2, J. Halley3, Gene Pesti*1 1University of Georgia; 2Wayne Farms LLC;
3Aviagen, Inc.
10:15a.m. T194
A compound bone index (LIAN2.1) as indicator of bone mineralization in broilers
Cristian Uculmana1, Diego Martinez2, Carlos Vílchez1 1Universidad Nacional Agraria La Molina;
2LIAN Development & Service
10:30 a.m. T195
The absence of correlation between protein solubility and digestible amino acids in full-fat
soybeans emphasizes focusing on trypsin inhibitors reduction
Carl Parsons1, Nelson 2 University of Illinois; 2Nelson Ruiz Nutrition, LLC
Maximizing research results by using simulation in nutritional requirement study planning
Dmitry Vedenov¹, Rashed Alhotan², Gene Pesti*² ¹Texas A&M University; ²University of Georgia

11:00 a.m. Milton L. Dendy Keynote Address B-313
Antibiotic Usage in Poultry: Assessing the Effects on Antibiotic Resistance and Human Health
Randall Singer University of Minnesota, St. Paul, MN USA

12:00 p.m. SCAD Business Meeting - B312
12:00 p.m. SPSS Business Meeting - B313
Poster Session
Chair: Dr. Kurt Perryman, Micronutrients

Physiology
P197 Expression of Nuclear Factor (Erythroid-derived 2)-like 2 (NFE2L2) and Kelch like-ECH protein 1 (KEAP1) in breast muscle of broiler breeder males with high or low feed efficiency. Devin Cook*GS, Byung-Whi Kong, Kentu Lassiter, Elizabeth Greene, Alissa Piekarski-Welsher, Sami Dridi, Walter Bottje University of Arkansas

P198 Immunophenotyping Avian Leukocytes in the Mucosal Tissues of the Head During Aging in the White Leghorn Madelyn Krukowsky*GS, Jadyn Levin, Leticia Garza, Ebru Karpuzoglu-Belgin, Maricarmen Garcia, Robbie Williams, David Hurley, Robert Gogal University of Georgia

P199 Differential gene expression of Na-K-ATPase in the salt glands in 2 lines of Pekin ducks exposed to salt water Shelly Nolin*, Zachary Lowman North Carolina State University

P200 The male and female contribution to parthenogenesis-induce infertility in quail Katherine Lott*UG, A. J. Kawooku, Holly Parker, Chris McDaniel Mississippi State University

P201 Roles of the male and female quail in egg component alterations due to the parthenogenetic trait A. J. Kawooku*UG, Katherine Lott, Holly Parker, Chris McDaniel Mississippi State University

P202 Investigating the potential to introduce Lactobacillus acidophilus and Bacteroides subtilis to the broiler embryo through commercial in ovo technology Pedro Mota*UG, Melissa Triplett, David Peebles, Christopher McDaniel, Aaron Kiess Mississippi State University

P203 Effect of thermal manipulation during pre and post hatch on intestinal bacterial populations in male broilers challenged by chronic heat stress Gholamreza Zaboli1, Shaban Rahimi1, Farid Shariatmadari1, Mohammad Amir Karimi Torshizi1, Ali Baghbanzadeh2 1Tarbiat Modares University; University of Tehran

P204 Comparative effects of in ovo versus subcutaneous vaccination and pre-placement holding time on scanning electron micrograph and histomorphometric measurements of small intestinal villus length and villus/crypt ratios in broiler chickens Edgar Peebles1, Floyd Wilson1, Taylor Barbosa2, Timothy Cummings2, John Dickson2, Sharon Womack1 1Mississippi State University; 2Zoetis

Processing & Products
P204 Corticosterone-induced changes in the expression of proteins and mRNAs in the magnum of laying hens Jimin Kim*, Yang-Ho Choi Gyeongsang National University Institute of Agriculture and Life Sciences

P206 The impact of drying time on detection of yolk and albumen solids Alexander Williamson*UG, John Carey Texas A&M University

P207 Tridsoan in Campy-Cefex Agar to aid in Enumeration of Naturally Occurring Campylobacter spp. in Broiler Ceca Camille Dent*UG, Mark Berrang, Eric Adams, Richard Meinersmann USDA-Agricultural Research Service
Salmonella detection from chicken rinsate with surface enhanced Raman spectroscopy and RT-PCR validation
Matthew Eady*GS1, Bossoon Park1, Gayatri Setia2 1USDA-ARS; 2Stony Brook University

Treatment with PoultrypHresh to lower Campylobacter counts on broiler parts
Melissa Landrum*GS1, Nelson Cox2, Douglas Cosby2, Mark Berrang2, Scott Russell1 1University of Georgia; 2U.S. National Poultry Research Center

Antimicrobial efficacy of acidified lactic acid, propionic acid, and lauric arginate against Salmonella in ground chicken frames
Alisha Moore*GS, Chander Sharma Mississippi State University

The relationship between instrumental compression forces and meat quality traits of woody breast fillets during short-term storage
Sun Xiao*GS1, Casey Owens2 1Nanjing University; 2University of Arkansas

Comparison of indicator microbial populations occurring during multiple stages of commercial poultry carcass processing by conventional plating method and next generation sequencing
Steven Riche1, Jennifer Wages, John Handley, Si Hong Park University of Arkansas

Campylobacter in docal swabs and water supply samples from broiler slaughter assessed by direct count on mCCDA and Campy-Cefex agar.
Anderlise Borsoi1, Camila Gonsalves2, Caroline Hiller2, Gustavo Perdoncini2, Vladimir Nascimento1 1Tuuti University of Paraná, Brazil; 2Federal University of Rio Grande do Sul

Effect of short term freezer storage on hardness of woody breast fillets
Sun Xiao*GS1, Casey Owens2 1Nanjing Agricultural University; 2University of Arkansas

Model response surface regression for predicting yolk colors
Elisa Ponsano*, Lígia Sandesky, Manoel Garcia-Neto Unesp Univ Estadual Paulista

Impact of succinate on growth of cultures of cecal bacteria from commercial broilers
Arthur Hinton Jr*, Kimberly Ingram U. S. National Poultry Research Center

Testing temperatures for the production of powdered egg products
Thiago Grassi, Elisa Ponsano* Unesp Univ Estadual Paulista

Artemisia annua enhances tissue tocopherol status and meat lipid stability in broiler chickens
Arun Panda1, Gita Cherian2 1Project Directorate on Poultry, India; 2Oregon State University

Texture analyses of cooked broiler breast fillets with different degree of white striping
Gabriela Sanchez Brambila, Debolina Chatterjee*, Brian Bowker, Hong Zhuang USDA-ARS

Comparison of 3M Molecular Detection Assay (MDA) Salmonella and ANSR Salmonella methods with the FDA Bacteriological Analytical Manual (BAM) method for rapid detection of Salmonella from egg products
Lijun Hu1, Li Ma2, Shimin Zheng3, Hua Wang1, Eric Brown1, Thomas Hammad1, Guodong Zhong1 1U.S. Food and Drug Administration; 2Oklahoma State University; 3Northeast Agricultural University

Pathology
Comparison of 3M Molecular Detection Assay (MDA) Salmonella and ANSR Salmonella methods with the FDA Bacteriological Analytical Manual (BAM) method for rapid detection of Salmonella from egg products
Lijun Hu1, Li Ma2, Shimin Zheng3, Hua Wang1, Eric Brown1, Thomas Hammad1, Guodong Zhong1 1U.S. Food and Drug Administration; 2Oklahoma State University; 3Northeast Agricultural University
P221 Comparison of Various Methods of Probiotic Administration against Salmonella Infection in Broiler chickens
Fereshte Gholami* 1, Mohammad Amir Karimi Torshizi, Fahimeh Hashemzadeh 2
1Tarbiat Modares University

P222 Arkansas Progressor and Regressor chicken lines: important models for tumor biomarker study
Bhuwan Khatri*1, Ashley Hayden, Ayla Smartt, Dongwon Seo, Nicholas Anthony, Byung-Whi Kong 2
1University of Arkansas

P223 The effect of an IBD virus on Broilers and SPF birds isolated in NE Georgia
Luis Gomez* Merial

P224 Expression of antimicrobial peptides in the intestine of Eimeria-challenged chickens
Shengchen Su* 1, Dylan Dwyer1, Katarzyna Miska2, Raymond Fetterer2, Mark Jenkins2, Eric Wong2 1Virginia Tech; 2USDA/ARS

P225 Sequential development of superficial pectoral myodegeneration and sclerosis (“Wooden Breast”) in commercial broiler chickens
Chelsea Landon1, Matthew Livingston, John Brake, H. John Barnes 1North Carolina State University

P226 Assessment of the level of protection against coccidiosis in broiler breeders conferred by vaccination.
Muhammed Shameer Abdul Rasheed* 1University of Arkansas

P227 Isolation of Clostridium perfringens from poultry in antibiotic-free commercial farms
F Vargas1,2, P Filsner2, L Moreno2, T Ferreira2, A Da Silva2, T Knobl2, A Moreno2 1Merck Animal Health; 2University of São Paulo

P228 Resistance profile and genetic characterization of Clostridium perfringens in poultry from Brazilian antibiotic-free commercial farms
F Vargas1,2, P Filsner2, L Moreno2, T Ferreira2, A Da Silva2, T Knobl2, A Moreno2 1Merck Animal Health; 2University of São Paulo

P229 Comparative expression of avian beta defensins in turkey pouls
Shaimaa Hamad* 1, Sungwon Kim2, Eric Wong1, Rami Dalloul1 1Virginia Polytechnic Institute and State University (Virginia Tech); 2The Roslin Institute, University of Edinburgh

P230 Behavior a program of immunization against bursal disease in broilers to challenges variant strains detected in field.
Nancy Christy, Salvador Infante, Josué Sánchez* Boehringer Ingelheim Vetmedica

P231 Effect of feeding oregano essential oil on efficiency and health of broilers under a mixed intestinal challenge
Diego Martinez1, Carlos Vilchez2 1LIAN Development & Service; 2Universidad Nacional Agraria La Molina

P232 Effect of Sporulin® on broilers inoculated with a strain of Salmonella heidelberg isolated in Brazil
Ricardo Hayashi1, Mariana Lourenço1, Ricardo Gonzalez-Esquerra2, Raquel Araujo2, Fernando Rigo2, Elizabeth Santini1 1LABMOR/MESSA - Universidad Federal do Paraná; 2Novus International Inc.
Histomorphometry in the Anterior Latissimus Dorsi (ALD) Muscle and Determination of Activity of Enzymes CK, GGT, AST, LDH, URIC ACID and Creatinine in Broilers With Dorsal Cranial Myopathy

Changing IBV vaccination program can improve farm profitability
Corrado Longoni1, Elisa Russo1, Giovanni Franco2, Claudia Tucciarone2, Mattia Cechinato2
1 Merck Animal Health; 2 University of Padua

Variant Infectious Bronchitis strains in the Middle East
Husam Bakri. MSD Animal Health

SCAD

Infectious bronchitis virus serotypes in Jordan
Saad Ghararibeh. Jordan University of Science and Technology

VariurnTM decreases the effects of necrotic enteritis
San Ching1, Fang Chi1, Sara Johnston1, Greg Mathis2, Brett Lumpkins2, Charles Hofacre3, Ron Cravens1. Avian International; 2 Southern Poultry Research, Inc; 3 University of Georgia

Pathogenicity and transmission of H5 highly pathogenic avian influenza clades 2.3.4.4 viruses (H5N8 and H5N2) in domestic waterfowl (Pekin ducks and Chinese geese)
Eric Dejesus1, Diane Smith1, Mary Pantin-Jackwood1, Mar Costa-Hurtado1. Southeast Poultry Research Laboratory, U.S. National Poultry Research Center, U.S. Dept. of Agriculture, Agricultural Research Service;

Effect of feeding Original XPC™ on Salmonella populations in the cecum (hindgut) of experimentally Salmonella-challenged 6-week-old broiler chickens. Peter Rubinelli, Stephanie Roto, Si Park, Steven Rake. University of Arkansas

In vivo cellular responses to intradermal injection of phytohemagglutinin (PHA) in chickens Kallie Sullivan1, Kristen Byrne, Hyeonm Jin, Gisela Erl. University of Arkansas

Detection and quantification of viable airborne avian influenza generated indirectly from infected chickens housed on litter Charles Balzli, Kateri Bertran, Lindsay Killmaster, David Swayne. USDA Agriculture Research Service

Characterizing the adaptive cellular immune response of peripheral blood and splenic leukocytes in juvenile White Leghorn and Plymouth White Rock SPF chickens. Stivalis Cardenas Garcia1, Robert Williams2, Robert Dunwoody2, Valerie Marcano2, Patti Miller3, Corrie Brown4, Claudio Afonso5, Robert Gogal Sr.1. University of Georgia; 2Mercer University; 3Southeast Poultry Research Laboratory

Outbreaks of Avian Encephalomyelitis with unusual Lesions in young Brown Chickens
Carmen Jerry1, Lisa Stabler2, Monique Franc2, Mark Bland3, H.L Shivaprasad4. University of Georgia; 2 Poultry Diagnostic Research Center; 3 Cotler Associates; 4 University of California, Davis

Protective effects of silymarin against cadmium induced renal and reproductive pathology in female Japanese quail (coturnix japonica)
Salman Butt1, Muhammad Zargham Khan2, Ahmar Khan2, Muhammad Kashif Saleemi2, Muhammad Waseem Tahir2. University of Georgia; 2 University of Agriculture, Pakistan
P245
Performance of coccidia challenged broiler chickens fed Gallinat® and Gallinat+®
Greg Mathis*, Brett Lumpkins Southern Poultry Research, Inc.

P246
Poulvac E. coli® trial in commercial broilers seeing unusually high E. coli mortality secondary to
IBV variant DMV/1639 challenge
Kalen Cookson*, Taylor Barbosa1, John Dickson1, Jon Schaeffer1, Don Ritter1 Zoetis, U.S.
Poultry; 2Mountain Farms

P247
Evaluation of the efficacy of different coccidiosis bioshuttle program and dietary capiscum-
turmeric oleoresins as an alternative to AGPs on performance in broilers.
Tina Yun-Ting Wang1, Marilyn Finklin2, Charles Hofacre2, Greg Mathis3, Ben Johnson1, Tj Gaydos1 Huepharma Inc; 2University of Georgia; 3Southern Poultry Research Group, Inc

P248
Efficacy of live infectious bursal disease (IBD) vaccines in México.
Nancy Christy*, Josue Sanchez Boehringer Ingelheim Mexico

P249
Experimental evaluation of combined application of live IB and E. coli vaccines in broilers
Harm Geerligs, Luuk Stooker, Kalen Cookson, John Dickson, Taylor Barbosa* Zoetis Inc

Environment, Management & Animal Well-Being

P250
Efficacy of 2-Nitropropanol and 2-Nitroethanol to reduce the growth of Salmonella Enteritidis,
Salmonella Heidelberg, Salmonella Typhimurium and Salmonella Typhiurium in vitro
P.A. Adhikari*1, D. E. Cosby2, N. A. Cox3, W. K. Kim3 1University of Georgia; 2USDA, ARS, U.S.
National Poultry Research Center, PHSPRU

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Biofilm growth on polyvinylchloride surface incubated in suboptimal quality warm water and
effect of sanitizers on biofilm removal post biofilm formation
Pranir Maharjan*1, Sonia Tsai1, Samantha Cox1, Geetha Phillips1, Wen Zhang1, Geraldine Huff1, Susan Watkins1 University of Arkansas; 2USDA

P252
Preference of young chicks for varying radiant fluxes
John Linhoss*1, Joseph Purswell2, Jeremiah Davis3 1Mississippi State University; 2USDA ARS
Poultry Research Unit; 3Auburn University

P253
The effect of pen size on water to feed ratio of broiler chickens
Abdulmohsen Alqhtani*1, Brian Fairchild, Michael Czarick The University of Georgia

P254
Characterizing the broiler transport thermal environment
Douglas Aldridge*1, Karen Christensen, Susan Watkins, Yvonne Vizzier-Thaxton, Yi Liang University of Arkansas

P255
Occurrence of white striping under commercial conditions in broiler chickens
Nilsa Lima*1, Francieli Montagna2, Rodrigo Garcia1, Ireniza Nääs1, Fabiana Caldara2 1State
University of Campinas; 2Federal University of Grande Dourados

P256
Stocking density impacts on production qualities of broilers raised without antibiotics
Meghan Loper*1, Amanda Mckeith California State University, Fresno

P257
The Performances and Susceptibility of Different Commercial Broilers Hybred to Leg Disorders
Fereshite Gholami*, Farid Shariatmadari Tarbiat Modares University

P258
Determining the Optimal Stocking Density of Meat Type Pekin Ducks Reared on Raised Floors
Chelsea Phillips*, Zachary Lowman North Carolina State University
Biofilm development on polyvinylchloride surface when exposed to low microbial content warm water under treated and untreated conditions
Pramir Maharjan¹, Sonia Tsai², Samantha Cox³, Geetha Phillips¹, Wen Zhang¹, Geraldine Huff², Susan Watkins¹ ¹University of Arkansas; ²USDA

Gait score in broilers raised in dark house and tunnel
Beatriz Roriz¹, Cristina Ayala¹, Rodrigo Garcia¹, Sarah Sgavioli¹, Irenilza Nääs¹, Fabiana Caldara¹, Carla Heloisá Domingues¹, Luiz Gustavo Rombola² ¹Federal University of Grande Dourados; ²Animal Scientist

Spondylolisthesis in broilers raised in dark house and tunnel
Cristina Ayala¹, Rodrigo Garcia¹, Sarah Sgavioli¹, Beatriz Roriz¹, Irenilza Nääs¹, Fabiana Caldara¹, Carla Heloisá Domingues¹, Luiz Gustavo Rombola² ¹Federal University of Grande Dourados; ²Animal Scientist

Storage period of quail egg affects weight loss of eggs
Beatriz Roriz¹, Sarah Sgavioli¹, Rodrigo Garcia¹, Irenilza Nääs¹, Carla Heloisá Domingues¹, Fabiana Caldara¹, Cristina Ayala¹, Luiz Gustavo Rombola² ¹Federal University of Grande Dourados; ²Animal Scientist

Negative pressure systems and housing position influences the broiler breast surface temperature
Cristina Ayala¹, Rodrigo Garcia¹, Sarah Sgavioli¹, Beatriz Roriz¹, Irenilza Nääs¹, Fabiana Caldara¹, Luiz Gustavo Rombola² ¹Federal University of Grande Dourados; ²Animal Scientist

Broiler surface temperature and behavioral response under two different light sources
Beatriz Roriz¹, Rodrigo Garcia, Fabrício Araújo, Irenilza Naas, Fabiana Caldara Federal University of Grande Dourados

Surface Temperature of broilers under Water Diet with Lemon Grass (Cymbopogon citrates Stapf)
Nilsa Lima¹, Silvana Simm, Rodrigo Garcia, Irenilza Nääs, Fabiana Caldara Federal University of Grande Dourados

FIELD OBSERVATIONS: Insect populations on mixed grasses versus alfalfa pastures
Jacqueline Jacob¹, Blake Newton¹, Anthony Pesatore¹, H. David Gillespie¹, Siddhartha Dasgupta¹ ¹University of Kentucky; ²Kentucky State University

Stress assessment complications by hematology — reactive clusters, leukergy, and white emboli
Paul Cotter*  Cotter Laboratory, Arlington, MA, USA

Influence of light sources and photoperiod on growth performance and carcass characteristics of heavy broilers at 56 days of age.
Hammed Olanrewaju¹, Joseph Purswell, Stephanie Collier, Scott Branton USDA-ARS

A simplified dilution method for detection of Campylobacter in broiler ceca
Douglas Cosby¹, Nelson Cox, Mark Berrang U.S. Department of Agriculture

Persistence of artificially inoculated Salmonella and Campylobacter in the ceca, spleen and liver/gall bladder of broiler chicks
Nelson Cox¹, Douglas Cosby⁴, Jeanna Wilson², Beverly Mcendon², Mark Berrang¹ ¹U.S. Department of Agriculture; ²University of Georgia
P271
Using White with Red LED Lighting to improve hatchability and chick quality in broilers and layers
Gregory Archer1, Juliette Delabbio2 1Texas A&M University; 2ONCE Innovations Inc.

P272
Supporting practice change on-farm: modifying hatching egg washing practices
Brenda Schneider1, Jessica Josephson1, Gary Gensler1, Nancy Robinson1, Valerie Carney1
Alberta Agriculture and Forestry; 2Alberta Hatching Egg Producers

P273
Including XPC™ feed additive in the diet of inoculated broilers during grow-out helps control Salmonella associated with their carcasses after processing
Nelson Cox1, Douglas Cosby1, Jeanna Wilson2, Dianna Bourassa1, R. Buhr1, Mark Berrang1, Donald McIntyre2, Douglas Smith3 USDA, ARS, PMSPRU; 2University of Georgia; 3Diamond V

P274
The in vitro Clostridium perfringens and Escherichia coli toxin adsorption of VariumTM.
Yeeseul Lim1, San Ching2, Fang Chi2, Sara Johnston2, Ed De Boer2, Hyun Lillehoj1 1ARS-USDA; 2Arlan International

P275
Effect of LED Color on the Behavior at Different Growth Stage of Ducks
Kyeong Ryu1, Ho Choe1, Kye Kim1 1Chonbuk National University; 2RFSemi Technologies, Inc

P276
A comparison of lighting sources influence between LED and conventional light on performance of broiler chicks
Kyeong Ryu1, Jong Choi2 1Chonbuk National University; 2Airtec System Co. LTD

P277
The effect of microbial contaminants in feed on broiler performance during a Clostridial challenge
Kurt Richardson1, Chuck Hofacre2, Greg Mathias2, Brett Lumpkin3 1Anitox Corporation; 2University of Georgia; 3Southern Poultry Research

P278
Effects of monochromatic green and red lights during incubation on hatchability and hatching traits
Marina Mesquita1, Edgar Oviedo-Rondón2, Luis Bernal-Arango3, Liliane Borsatti4, Albaraa Sarsour2, Mike Wineland2 1Universidade Federal de Goiás — Goiânia; 2North Carolina State University; 3Politécnico Colombiano Jaime Isaza Cadavid; 4Universidade Federal do Rio Grande do Sul — Porto Alegre

P279
Comparison of two different flooring systems for broilers
Hong Li1, Robert Alphin1, Zhiping Zhu2, Zhongkai Zhou3, Xin Wen3 1University of Delaware; 2Chinese Academy of Agriculture Sciences; 3Hunan Agricultural University; 4Jiangsu Academy of Agriculture Sciences

P280
Effects of limestone particle size and dietary phosphorus level for pullets on bone health and performance during lay raised in deep litter systems
Pamela Eusebio-Balcazar*, Sheila Purdum University of Nebraska-Lincoln

P281
Analysis of more than 380 mycotoxins in 556 feed and raw material samples in 2015
Verena Starkl*, Paula Kovalsky Biomin Holding GmbH

P282
Chamomile extracts (Matricaria recutita) in the performance of Japanese quails (Coturnix coturnix japonica)
Rodrigo Garcia1, Karine Tenório, Beatriz Roriz, Cristina Ayala, Sarah Sgavioli, Lucas Brasilheiro, Wellington Dos Santos, Willian Gouvea, Fabiana Caldara, Irenilza Neas Universidade Federal da Grande Dourados
FIELD OBSERVATIONS: Effect of pasture crop selection on insect population
Jacqueline Jacob¹, Blake Newton¹, Anthony Pescatore¹, H Gillespie¹, Siddhartha Dasgupta²
¹University of Kentucky; ²Kentucky State University

Western Poultry Conference: Influencing practice change through innovation
Valerie Carney*, Brenda Schneider, Jessica Josephson Alberta Agriculture and Forestry

Air quality and litter in negative pressure systems: dark house and tunnel
Rodrigo Garcia*, Cristina Ayala, Sarah Sgavioli, Beatriz Barz, Ireniza Naas, Fabiana Caldana, Luiz Rombola Universidade Federal da Grande Dourados

Model-predicted ammonia emission from two broiler houses with different rearing systems
Rodrigo Garcia*, Nilsa Lima, Ireniza Naas, Fabiana Caldara Universidade Federal da Grande Dourados

Foot scores of breeder Pekin ducks on conventional nipple water lines compared to open source water troughs
Jocelyn Romano¹, Zachary Lowman² ¹Poultry Consultant; ²North Carolina State University

Effect of monochromatic green light exposure at different times during incubation on hatchability and hatching characteristics
Marianna Mesquita¹, Edgar Oviedo-Rondon¹, Luis Bernal-Arango¹, Albaraa Sarsour², Liliane Borsatti³, Patricia Aristimunha³, Lindolfo Dorcino³, Mike Wineland³, Hernan Cordova³
¹Universidade Federal de Goiás — Goiânia; ²North Carolina State University; ³Politécnico Colombiano Jaime Isaza Cadavid; 4Universidade Federal do Rio Grande do Sul — Porto Alegre

Early colonizing bacteria in the gastrointestinal tract of day-of-hatch broilers
Evan Hutchison*, Tom Rehberger, Eric Yang, Xandra Smith Agro Biosciences

Metabolism & Nutrition

Evaluation of plant-based feed additive (AV/HLP/16) on egg quality, production performance and lipid parameters in laying hens
Kathryn Hollingsworth¹, Francine Verese¹, Gita Cherian¹, Shivi Maini¹, Kotagiri Ravikanth², Mohan J Saxena² ¹Oregon State University; ²Aayurved Limited

Effect of dietary corn and sorghum on intestinal microbiota of chickens
Naiara Fagundes¹, Jaqueline Rafael, Maria Carolina Scienza, Cristiano Bortoluzzi, Rafaela Pereira, Glauca Napty, José Guilherme Barbosa, José Fernando Menten University of São Paulo

Effect of cysteine protease enzyme in diet to reduce soybean meal without affecting performance of Kadaknath birds in India
Sandeep Gupta¹, Mukesh Mehta College of Veterinary Science & AH, Mhow, NDVSU Jabalpur

Impacts of alpha-galactosidase on ileal digestible energy and crude protein digestibility
Rocky Latham¹, Ray Poursalami², Jason Lee¹, Kyle Smith¹ ¹Texas A&M University; ²Kerry Inc.

Tissue distribution of oxidases and transaminases in broiler chickens fed methionine isomers or precursors
Shuai Zhang¹, Behnam Saremi¹, Elizabeth Gilbert¹, Eric Wong¹ ¹Virginia Tech; ²Evonik Nutrition & Care GmbH
Effects of Programmed Nutrition (PN) feeding strategy on the production performance, egg quality, bone quality, and liver mineral content of brown laying hens
Marquisha Paul, Anthony Pescatore, Tuoying Ao, Michael Ford, Harold Gillespie, Austin Cantor, Karl Dawson
University of Kentucky; Alltech, Inc.

Carcass traits of heritage chicken breeds using sorghum and field peas to replace corn and soybean meal in diets
Tatijana Fisher, Anthony Pescatore, Jacquie Jacob, Austin Cantor, Mike Ford, Tuoying Ao
University of Kentucky; Alltech Inc.

Relative bioavailability of Mn proteinate and Mn oxide through tissue Mn uptake in young chicks
Masoumeh Gholami, Abolghasem Golian, Tuoying Ao, Hassan Kermanshahi, Saeed Zerehdaran
Ferdowsi University of Mashhad; Alltech Inc, Catnip Pike, Nicholasville, KY, USA

Impact of a Bacillus direct-fed microbial supplementation on bone quality, digestive traits and performance parameters in 28-days old broilers fed Barley/Corn/Soybean-based diets
Juan Latorre, Ross Wollenden, Jose Vicente, Xochilt Hernandez-Velasco, Lisa Bielke, Billy Hargis, Guillermo Tellez
University of Arkansas; Pacific Vet Group-USA, Inc.; Universidad Nacional Autónoma de México; The Ohio State University

Effects of different feed restriction programs on antibody response to IBD of broiler chickens
Patricia Cruz Arístimunha, Priscila Oliveira Moraes, Mariane Possamai Della, Rodrigo Borille, Gustavo Dias Lovato, Carlos Ongarato, Kátia Cardinal, Andrea Machado Leal Ribeiro
Federal University of Rio Grande do Sul

Effect of glycosaminoglycans and vitamin C injected during incubation on the bone mineral content in broiler chicks
Elaine Santos, Diana Correa Castiblanco, Liliana Borges, Carla Domingues, Thays Quadros, Sarah Sgovioli, Tiago Petrolli, Giuliana Garcia, Natália Fonseca, Diogo Goulart, Lizandra Amoroso, Silvana Artoni
Sao Paulo State University; Federal University of Grande Dourados

Effect of NSP-degrading enzyme on the performance of laying hens.
Ashley Bigge, Sheila Purdum, Kathryn Hanford
University of Nebraska-Lincoln

Metabolisable energy and nutrient availability of field beans for broiler chickens
Jail Abdulla, S Rose, Alexander Mackenzie, Vasil Pirgozliev
Harper Adams University

Effect of Organically Complexes Zinc on Broiler Performance, Zn Concentration of Tibia and Immune response
Fereshte Gholami, Farid Shariatmadari, Somayeh Kamran Azad
Tarbiat Modares University

Production parameters and egg quality of laying hens supplemented with vitamin E, selenium and canthaxanthin
Mariane Fernandes, Alexandre Rosa, Angélica Londero, Alexandre Mariani, Ana Cougo, Adrian Ertmann, Janaina Moura, Pedro Feltrin
Universidade Federal de Santa Maria

Dietary pearzyme as a regulator of performance and development of digestive organs in broilers
Seokmin Kang, Jinmin Kim, Jeong Yong Yoon, Young-Rok Yang, Won Kim, Jung-Soon Jung, Yang-Ho Choi
Gyeongsang National University; Mill Tech, Inc.; Pearzyme, Inc.
P306
Digestible valine requirement for Japanese quail from 1 to 42 days
Danilo Cavalcante1, Fernando Guilherme Costa1, Cristina Lima1, Jose Vidal Jr1, Gabrielle Castro1, Guilherme Lima1, Eduardo Nogueira2, Gabriel Sandt Pessoa2 1Federal University of Paraiba; 2Ajinomoto from Brazil

P307
In ovo threonine supplementation and post-hatch intestinal morphology of chicks challenged with Salmonella Enteritidis
Alexandre Moreira Filho1, Patrícia Givisiez, Celso José Oliveira, Alessandra Azevedo, Maria De Fátima Andrade, Candice De Leon, Cristina Lima, Silvana Santos Federal University of Paraíba

P308
Digestible valine requirement for laying Japanese quail
Cavalcante Cavalcante1, Fernando Guilherme Costa1, Cristina Lima1, Luzia Silva1, Guilherme Lima1, Sarah Pinheiro1, Matheus Lima1, Gabrielle Castro1, Eduardo Nogueira2, Gabriel Sandt Pessoa2 1Federal University of Paraiba; 2Ajinomoto from Brazil

P309
Hydrolyzed yeast in laying hen diets
Natália Koiyama1, Bruno Locatelli2, Cristiane Araujo1, Melina Bonato2, Lucio Araujo1 1University of São Paulo; 2Federal University of Grande Dourados; 3ICC

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Ana Flávia Royer1, Rodrigo Garcia, Irenilza Nääs, Fabiana Caldara, Sarah Sgavioli, Beatriz Roriz, Cristina Ayala Federal University of Grande Dourados

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Craig Coon1, Andrew Magnuson, Justina Caldas, Judy England, Garrett Mullenix, Nirun Boonsinchai University of Arkansas

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Craig Coon1, Andrew Magnuson, Nirun Boonsinchai, Justina Caldas, Karen Vignale, Judy England University of Arkansas

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Rosana Maia1, Bruno Faria, Diego Da Silva, Luiz Albino, Horacio Rostagno Universidade Federal de Viçosa

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Su Hyun An1, Changsou Kong Konkuk University

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Jinyoung Lee1, Changsou Kong Konkuk University

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Raul Cortes Coronado1, Sergio Gomez Rosales2, Maria De Angeles2, Marie Casaubon1 1Faculty of Higher Studies Cuautitlan, National Autonomous University of Mexico; 2National Center of Disciplinary Research in Animal Physiology, INIFAP; 3Poultry Science Department, University City, National Autonomous University of Mexico.

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Kyle Brown1, Pat Welch2, Kendre Stringfellow2, Melanie Roux1, Bob Buresh2, Rocky Latham1, Christine Alvarado1, Jason Lee1 1Texas A&M University; 2Novus International Inc.
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Ana Beatriz Oliveira*, Wei Zhai, Kelley Wamsley Mississippi State University

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Shaban Rahimi*, Mohammad Amir Karimi Torshizi, Mohammad Mahdi Ayyari, Soeed Yakhkeshi, Gholamreza Zaboli Tarbiat Modares University

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Sakineh Babaei*, Shaban Rahimi*, Mohammad Amir Karimi Torshizi, Naser Khaleghi Miran*, Gholamhossein Tahmasi2, Amin Rahimi3 Tarbiat Modares University; 1Tarbiat Modares University; 2Animal Science Research Center; 3Islamic Azad University

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Morteza Yousefizadeh*, Babak Khosh Zareh, Javad Nasr Islamic Azad University-Saveh Branch

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Manuel Garcia-Neto1, Daniilo Sandre, Mayara Rodrigues, Silva Perri, Max Faria-Júnior, Marcos Pinto Faculdade de Medicina Veterinária de Araçatuba, UNESP - Univ Estadual Paulista

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Paula Sedlacek1, Shivi Maini2, Mohan Ji Saxena2, Ravikanth Kotagiri2 1University of Georgia; 2Ayurvet Limited

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Sunday Adedokun1, Anthony Pescatore1, Austin Cantor1, Michael Ford1, Jacqueline Jacob1, Tuoying Ao2, Ariane Helmbrecht1 1University of Kentucky; 2Alltech; 3Evonik

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Fernando Tavernari1, Lenilson Roza1, Diego Surek1, Marcio Da Silva1 EMBRAPA; 2UDESC

P326
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Fernando Tavernari1, Diego Surek1, Lenilson Roza1, Marcio Da Silva1, Luiz Albino1 EMBRAPA; 2UDESC; 3UFV

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Gustavo Castañeda1, Sangita Jalukar1, Hans Mann2 1Universidad de San Carlos de Guatemala; 2Arm and Hammer Animal Nutrition; 3Desarrollo y Nutricion Animal

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David Hall1, Elizabeth Wozniak1, Danny Hooge2, Michael Sims3 1Cytozyme Laboratories, Inc.; 2Hooge Consulting Service, LLC; 3Virginia Diversified Research Corp.

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Kate Jacques Alltech
P330 Effects of copper source and supplementation level on broiler performance and litter moisture from 0 to 28 d of age
Terri Parr, Kurt Perryman*, Jeff Cohen, James Usry

Micronutrients

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Chris Rude*, Dillon Mellick, Arlene Lamprey, Mark Bienhoff

Kemin Industries

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Nessrin Selim*, Heba Habib, Hemat Abdel Magied, Amany Waly, Ahmed Fadl, Sayed Sholash

Animal Production Research Institute(APRI), ARC

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Tuoying Ao*, Lizza Macalintal, Marquisha Paul, Anthony Pescatore, Austin Cantor, Mike Ford, Karl Dawson

Alltech-University of Kentucky Nutrition Research Alliance

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Stephanie Roto, Peter Rubinelli, Si Hong Park, Steven Ricka University of Arkansas

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Heinrich Bachmann* Herbonis Animal Health GmbH

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Manuel García-Neto*, Silvio Perri, Mayara Rodrigues, Danilo Sandre, Max Faria-Júnior

FMVA- Univ Estadual Paulista

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Silvana Barbosa1, Gerusa Corrêa1, Bruno Vieira1, Guilherme Silva2, Ricardo Gonzalez-Esquerra1, Raquel Araujo2 1Universidade Federal do Mato Grosso; 2Granja Mantiqueira; 2Novus do Brasil Ltda

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Monica Puyalto*, Miguel Colilla1, Teresa Flores1, Juan Mallo1

NOREL S.A.; 2St. John Biomedics

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Kamel Mahmoud*, Belal Obeidat, Mohammad Al-Sadi

Jordan University of Science & Technology

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Monica Puyalto*, Miguel Colilla1, Paolo Balzarini2, Juan Mallo1

NOREL S.A.; 2ORSELL S.R.L.

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Byoungyun Jung1, Waewaree Boontiam2, Lin Hu Fang2, Han Bit Yoo2, Yoo Yong Kim2

1EASY BIO, Inc.; 2Seoul National University

P342 Effect of Lysophospholipids product (LIPIDOLTM) supplementation on growth performance, nutrient digestibility, blood profiles, and carcass traits in broiler chickens
Young Hyun1, Yoon Kyung Hyun1, Waewaree Boontiam2, Yoo Yong Kim2, Byoungyun Jung1

1EASY BIO, Inc.; 2Seoul National University
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Roger James1, James Manoughton2, Al Olinde2, Damon Fodge3 1AZOMITE MINERAL PRODUCTS; 2AHPPharma Research, Inc.; 3DF International, LLC

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Diego Martinez1, Carlos Vílchez2 1LIAN Development & Service; 2Universidad Nacional Agraria La Molina

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Ricardo Gonzalez-Esquerra1, Raquel Aroja1, Carlos López-Coello2, José Árce-Menocal2, Cesar Lima2 1Novus International Inc.; 2Universidad Nacional Autónoma de México - UNAM; 3Universidad Michoacana de San Nicolás de Hidalgo; 4Universidade de São Paulo

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Maziar Mohiti-Asli1, Moein Ghanaatparast-Rashti1, Abdollah Akbarian2 1University of Guilan; 2EASY BIO, Inc.

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Dongwook Kim1, Ho Choe2, Kyeong Ryu2 1RDA National Research Livestock Institute; 2Chonbuk National University

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Hanbong Lee1, Kyeong Ryu2, Ho Choe2 1Miracle Bio Inc; 2Chonbuk National University

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G. Lima1, Gabrielle Castro2, Fernando Costa1, D. Cavalcante1, C. Lima1, L. Silva1, Alexandre Sechinato1, Vitor Fasina2 1Universidade Federal do Paraíba - UFPB; 2Universidade Federal do Paraíba; 2DSM Nutritional Products

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Sagar Paudel*, Damodor Neupane Nepal Agricultural Research Council

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Matt Kato1, Toshihiro Marubashi1, CoreyFarmer1, Brett Lumpkins2, Greg Mathis2, Charles Hofacre3, Danny Hooge4 1Calpis America, Inc.; 2Southern Poultry Research, Inc.; 3University of Georgia; 4Hooge Consulting Service, LLC

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Fernando Costa1, Cristina Lima1, Danilo Cavalcante1, Sarah Pinheiro1, Luzia Silva1, Gabrielle Castro2, Guilherme Lima1, Matheus Lima1, Eduardo Nogueira2, Gabriel Sandt Pessoa2 1Federal University of Paraíba; 2Ajinomoto from Brazil

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Fernando Perazzo Costa1, Cristina Lima1, Danilo Cavalcante1, Sarah Pinheiro1, Luzia Silva1, Gabrielle Castro2, Guilherme Lima1, Matheus Lima1, Eduardo Nogueira2, Gabriel Sandt Pessoa2 1Federal University of Paraíba; 2Ajinomoto from Brazil
P354
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Caroline Mendes1, Ricardo Abreu2, Leticia Bittencourt1, Dino Garcez3, Claudia Silva1, Rafael Hermes1 1DSM; 2UFRB

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Yasser Jameel1 University of Kerbala

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Sally Noll1, Adam Maidman1, Zhirong Jiang2, Paul Tillman3 1University of Minnesota; 2Ajinomoto Heartland, Inc; 3Poultry Technical Nutrition Services, LLC

P357
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Yasser Jameel1, Ali Sahib2, Mohammed Husain3, Morouj Al-Ajeeli4, Mohammed Hashim5 1University of Kerbala; 2University of Kufa; 3Texas A&M University

P358
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Carina Schieder1, Mirjana Dukic-Stojic1, Sinisa Bjedov2, Lidija Peric2 BIOMIN Holding GmbH; 1University of Novi Sad

P359
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Lizza Macalintal1, Tuoying Ao, Anthony Pescatore, Austin Cantor, P Glenney, Michael Ford, Karl Dawson Alltech-University of Kentucky Nutrition Research Alliance

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Terri Parr1, James Usry, Jeff Cohen Micronutrients

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Paulo Silva Junior, Patricia Givisiez, Fernando Costa1, Danilo Cavalcante, Romilton Barros Junior Universidade Federal da Paraíba

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Chung Chien Yang Synbiotech Inc

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Jesus Maguey1, Sergio Gomez Rosales2, Maria De Angeles3 1School of Veterinary Medicine and Animal Husbandry, Metropolitan Autonomous University; 2National Center of Disciplinary Research in Animal Physiology, INIFAP

P364
Tapioa dried meal is a valuable unconventional feed stuff in native chicken ration
Kumarave Varadharajan TANUVAS

P365
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Ming Xie1, Yong Jiang, Jing Tang, Wei Huang, Shuisheng Hou Institute of Animal Sciences, Chinese Academy of Agricultural Sciences
USPOULTRY Presentation
B313
Monday, January 25
4:00 p.m.
Chair: Dr. John Glisson, USPoultry

Poster Reception
B313 Foyer
Monday, January 25
4:30 p.m.
Chair: Dr. Mary M. Beck, Mississippi State University, Mississippi State, MS

Milton L. Dendy Keynote Address
B313
Tuesday, January 26
11:00 a.m.
Dr. Randall Singer, University of Minnesota, St. Paul, MN
Antibiotic Usage in Poultry: Assessing the Effects on Antibiotic Resistance and Human Health
Chair: Dr. Mark Jackwood, University of Georgia, Athens, GA

SCAD Business Meeting
B312
Tuesday, January 26
Noon
Chair: Dr. Brian Jordan, University of Georgia, Athens, GA

SPSS Business Meeting
B313
Tuesday, January 26
Noon
Chair: Dr. David Caldwell, Texas A&M University, College Station TX
2014 SPSS Student Awards:

**Nutrition**
Robert Sellers, Mississippi State
Kathryn Meloche, Auburn
C.E. Evans, NC State University
Tucker Allcorn, Texas A&M

**Environment Management**
Alex Gilley, U of Arkansas

**Processing and Products**
Kimberly Wilson, U of Georgia

**Physiology**
Jonathan Morris, U of Georgia

**Pathology**
Silvia Carnacini, U of Georgia

**Posters**
Anna Kenyon, U of Georgia
John Linhoss, Mississippi State
Marquisa Paul, U of Kentucky

**Don R. Sloan Undergraduate Research Award Recipients**
Hunter Walters, Texas A&M
Jared Chandler, Mississippi State

**Undergraduate Research Award Participants**
Hunter Walters, Texas A&M
Liris Kindlein, Federal University of Rio Grande do Sul

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2015 SCAD Student Awards:

**Best Poster Award**
Marie Schirmacher, Texas A&M University

**Best Oral Presentation**
Christina Leyson, University of Georgia

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Past Presidents of the Southern Conference on Avian Diseases

A.L. Kleckner
J.W. Williams
T.L. Landers
T.B. Blount
L.C. Grumbles
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W.T. Springer
T.H. Elazer
F.R. Craig
R.L. Clifford
E.E. Kashey
J.D. Story
W.B. Gross
H.W. Yoder
S.H. Kleven
R.B. Davis
C.F. Hall
T.H. Vardamann

C. Wang
T. Brown
A. Miles
M. Pantin-Jackwood
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D.L. Magee
J.M. Dixon
J.J. Giambrone
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Jared Chandler, Mississippi State
Lasheda Brooks, Delaware State
Kelly Frazier, Hope College
Erin Alenciks, Hope College
Amanda Porter, Hope College
Caitlin Harris, U of Georgia
Sarah Mathe, Kansas State
Margarita Fernanda Gomez Meza, Universidad Nacional Autonoma de Mexico

Juliana Hirai, Mississippi State
Chelsea Phillips, NC State
Courtney Wade, Mississippi State
McCaide Wooten, NC State
Marie Schirmacher, VA Tech
Klint McCafferty, Auburn
Austin Jasek, Texas A&M
Kyle Smith, Texas A&M
Kolton Page, Texas A&M
Derek Elmor, U of Georgia
Kyle Teague, U of Arkansas
Lucas Graham, U of Arkansas
C.E. Harris, U of Georgia
Amanda Howard, U of Georgia

**Alltech Student Manuscript Award**
Kathryn Meloche, Auburn

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### Past Chairmen of the Poultry Section Association of Southern Agricultural Workers

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
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<tbody>
<tr>
<td>1931-32</td>
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### Past Executive Secretaries of the Southern Poultry Science Society

<table>
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<td>S. Roberts</td>
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<td>D. Caldwell</td>
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### Past Presidents of the Southern Poultry Science Society

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<td>S. Watkins</td>
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<td>S. Roberts</td>
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<td>D. Caldwell</td>
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