Investigating Disease and Assessing
Productivity Using Epidemiological Tools

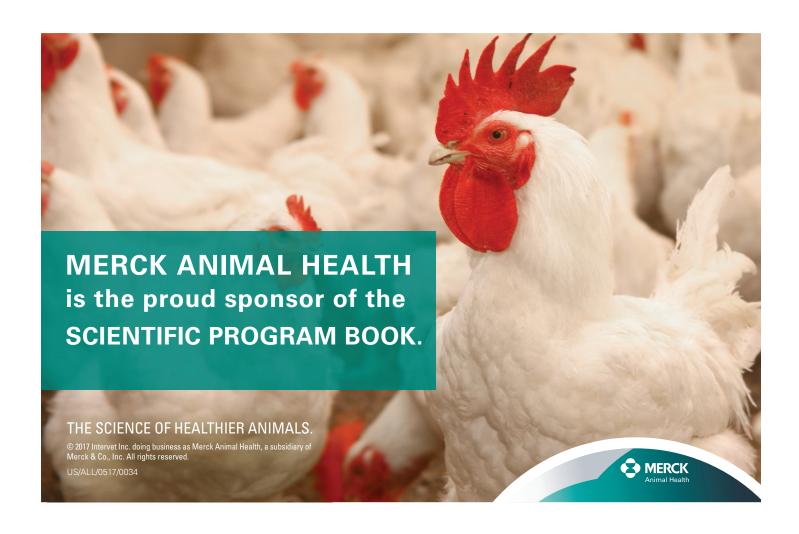
AAAP Symposium & Scientific Program

THE AMERICAN ASSOCIATION OF AVIAN PATHOLOGISTS

Facilitates member collaboration to advance science-based knowledge, expertise, and education on poultry health, welfare, and food safety.



Washington, D.C. August 2-5, 2019



AAAP Event Schedule

Friday

Opening Session

8:00 AM: Renaissance Ballroom West AB Renaissance Hotel

Keynote Address

Oscar Fletcher 8:20 AM: Renaissance Ballroom West AB Renaissance Hotel

Opening Welcome and Poster Reception

5:00 PM: Congressional Ballroom AB Renaissance Hotel

Saturday

Scientific Symposium

8:00 AM: Renaissance Ballroom West AB Renaissance Hotel

Committee Roundtables

12:45 PM: Mount Vernon Square B Renaissance Hotel

Poultry Professional Networking And Meet the Expert

5:30 PM: Renaissance Foyer Renaissance Hotel

Sunday

Yoga

6:30 AM: Meeting Room 3 Renaissance Hotel

Wellness Talk

Mike Gergye
10:15 AM: Renaissance Ballroom West AB
Renaissance Hotel

Business Meeting

10:45 AM: Renaissance Ballroom West AB Renaissance Hotel

Women's Network Dinner

6:30 PM: Meeting Rooms 12-14 Renaissance Hotel

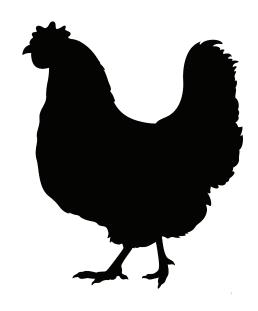
Monday

History Lecture

K.V. Nagaraja 11:30 AM: Renaissance Ballroom West AB Renaissance Hotel

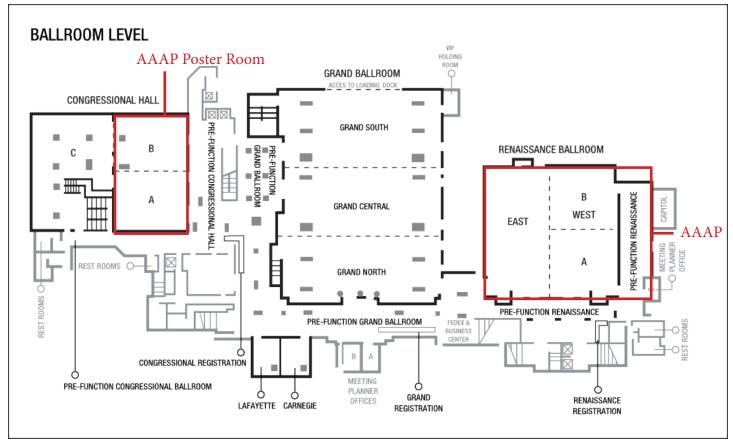
Awards Reception & Dinner

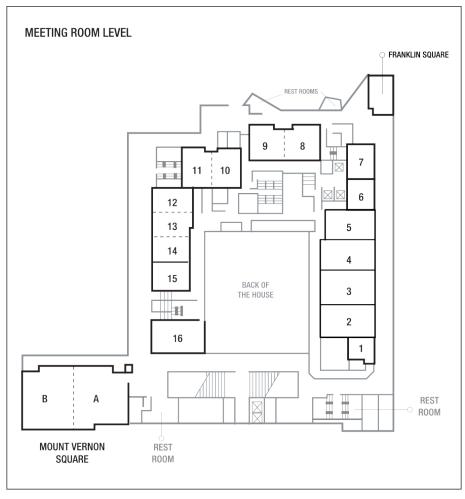
5:30 PM: Congressional Ballroom Prefunction 6:00 PM: Congressional Ballroom AB Renaissance Hotel



Name of Group	Meeting Date	Beg. Time	End Time	Location	Room
AAAP Board of Directors Meetings		00 100000 00		00	
AAAP Inc. and Foundation Board of Directors	Thursday, August 1	7:00 AM	5:00 PM	Renaissance Hotel	Meeting Room 6
AAAP Past Presidents Luncheon	Friday, August 2	12:00 PM		Renaissance Hotel	
AAAP Committee Chairs and BOD Meeting	Monday, August 5	12:30 PM		Renaissance Hotel	
Committee Meetings	monay, ragast c	12.001111	0.10111	Troniano anto Trotor	mounty normal
Histopathology/Case Report Interest Group	Thursday, August 1	1:00 PM	5:00 PM	Renaissance Hotel	Meeting Room 8/9
Small Flocks Interest Group	Thursday, August 1	1:00 PM		Renaissance Hotel	
AAAP Auditing Committee	Friday, August 2	4:00 PM		Renaissance Hotel	
Awards Committee	Saturday, August 3	1:30 PM		Renaissance Hotel	
Avian Diseases Advisory Board	Saturday, August 3	1:30 PM		Renaissance Hotel	
Avian Diseases Manual Editorial Board	Saturday, August 3	1:30 PM			
		1:30 PM	2.25 PIVI	Renaissance Hotel Renaissance Hotel	
Digital Communications Committee	Saturday, August 3	1.30 PM	2.25 PW		
Outreach Committee	Saturday, August 3	1:30 PM	2.25 PIVI	Renaissance Hotel	
Toxic, Infectious, Miscellaneous & Emerging Diseases Committe		1:30 PM			Congressional Ballroom C
Avian Diseases Editorial Board	Saturday, August 3	2:30 PM		Renaissance Hotel	
Enteric Diseases Committee	Saturday, August 3	2:30 PM	3:25 PM		Mount Vernon Square A
Epidemiology Committee	Saturday, August 3	2:30 PM			Renaissance Ballroom East
Membership Committee	Saturday, August 3	2:30 PM		Renaissance Hotel	
Preceptorship Committee	Saturday, August 3	2:30 PM		Renaissance Hotel	
Research Priorities Committee	Saturday, August 3	2:30 PM		Renaissance Hotel	
Small Flocks Committee	Saturday, August 3	2:30 PM		Renaissance Hotel	
Diseases of Public Health Significance	Saturday, August 3	3:30 PM			Congressional Ballroom C
Drugs and Therapeutics Committee	Saturday, August 3	3:30 PM		Renaissance Hotel	Meeting Room 4
Education Committee	Saturday, August 3	3:30 PM	4:25 PM	Renaissance Hotel	Meeting Room 3
History Committee	Saturday, August 3	3:30 PM	4:25 PM	Renaissance Hotel	Meeting Room 10
LAC Committee	Saturday, August 3	3:30 PM	4:25 PM	Renaissance Hotel	Meeting Room 8
Animal Welfare Committee	Saturday, August 3	3:30 PM	5:25 PM	Renaissance Hotel	Mount Vernon Square A
Respiratory Diseases Committee	Saturday, August 3	3:30 PM	5:25 PM	Renaissance Hotel	Mount Vernon Square B
Food Safety Committee	Saturday, August 3	4:30 PM	5:25 PM	Renaissance Hotel	Meeting Room 6
Tumor Virus Committee	Saturday, August 3	4:30 PM	5:25 PM	Renaissance Hotel	Congressional Ballroom C
AAAP Foundation Scholarship Committee	Sunday, August 4			Renaissance Hotel	
AAAP Foundation Development Committee	Monday, August 5			Renaissance Hotel	
Program Events					
AAAP Opening Session	Friday, August 2	8:00 AM	8-30 AM	Renaissance Hotel	Renaissance Ballroom West AB
2019 Scientific Program Keynote Address	Friday, August 2	8:20 AM			Renaissance Ballroom West AB
AAAP Welcome Reception and Poster Session	Friday, August 2	5:00 PM			Congressional Ballroom AB
Mentor/Mentee Breakfast (Invitation Only)	Saturday, August 3	7:00 AM		Renaissance Hotel	
AAAP Symposium	Saturday, August 3				Renaissance Ballroom West AB
BOD/Committee Chair Meeting	Saturday, August 3			Renaissance Hotel	
Committee Roundtables	Saturday, August 3	12:45 PM			Mount Vernon Square B
AAAP Poultry Professional Networking (Meet the Expert)	Saturday, August 3	5:30 PM			Renaissance Ballroom Foyer
AAAP Women's Network Dinner and Meeting	Saturday, August 3	6:30 PM			Meeting Rooms 12-14
Yoga/Walk	Sunday, August 4	6:30 AM		Renaissance Hotel	
Wellness Talk	Sunday, August 4				Renaissance Ballroom West AB
AAAP Business Meeting	Sunday, August 4	10:45 AM	12:00 PM	Renaissance Hotel	Renaissance Ballroom West AB
AAAP Lasher-Eckroade History Lecture	Monday, August 5	11:30 AM	12:00 PM	Renaissance Hotel	Renaissance Ballroom West AB
AAAP Awards Reception before Dinner	Monday, August 5				Congressional Ballroom Prefunction
AAAP Awards Dinner	Monday, August 5	6:00 PM	8:00 PM	Renaissance Hotel	Congressional Ballroom AB
ACPV	مرجس الللم والأروادور	ST - 11 - 12 - 12	- versus E		
ACPV Exam Practice	Wednesday, July 31	5:00 PM		Renaissance Hotel	
ACPV Exam #1	Thursday, August 1	7:00 AM	5:30 PM	Renaissance Hotel	Penn Quarter
ACPV Exam #2	Thursday, August 1	7:00 AM	5:30 PM	Renaissance Hotel	Meeting Room 10/11
ACPV Exam Grading Room	Thursday, August 1	7:00 AM	10:00 PM	Renaissance Hotel	Meeting Room 7
ACPV Board of Governors Meeting	Sunday, August 4			Renaissance Hotel	
ACPV Reception/Annual Meeting	Monday, August 5	7:00 AM			Congressional Ballroom C
Invitation Only	1,,			525101	A War and the same of the same
Association of Veterinarians in Broiler Production Meeting	Thursday, August 1	8:00 AM	3-00 PM	Renaissance Hotel	Meeting Room 5
Association of Veterinarians in Egg Production	Thursday, August 1	12:00 PM			Liberty Ballroom L
Association of Vetermanans in Egg Production Association of Poultry Consultants and Independent Laboratories		1:00 PM		Renaissance Hotel	
Association of Veterinarians in Turkey Production	Thursday, August 1	8:00 AM			Georgetown University
NC Veterinarians and NCSU Students and Alumni	Friday, August 2	7:00 AM		Renaissance Hotel	
A CONTRACTOR OF THE CONTRACTOR					
Association of Poultry Primary Breeder Veterinarians MAM and MAHM Alumni Association	Saturday, August 3 Sunday, August 4	11:30 AM 5:00 PM		Renaissance Hotel	Congressional Ballroom C

Renaissance Hotel





2018-2019
AAAP Foundation
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www.aaap.info/foundation

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Director-at-Large 2019

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AAAP Representatives to AVMA

AVMAConvention

Ivan R. Alvarado 2021

AVMA Food Safety

Gregg J. Cutler 2019

AVMA Legislative

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Jose Linares 2019 (Alternate)

Advisory Committee

Douglas Fulnecheck 2020

Daniel Wilson 2019 (Alternate)

Katherine Weathers 2019 (Alternate)

AVMA House of Delegates

Education Program Committee

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AVMA Animal
Agriculture Liaison

Andrea Zedek 2021 Joel Cline 2021 (Alternate)

AVMA Animal
Welfare Committee

Katherine Weathers 2019 Helen Wojinski 2019 (Alternate)

AVMA Clinical Practitioners Advisory Committee

Hector M. Cervantes 2020 Megan Lighty 2021 (Alternate)

AVMA Committee for Disaster and Emergency Issues

Brian Wooming 2019

AVMA Committee on Antimicrobials

Randall Singer 2021 Hector Cervantes 2021 (Alternate)

AAAP Representatives to Allied Organizations

Council for Agriculture Science and Technology (CAST)

Robert D. Evans 2019 Mohamed El-Gazzar 2019

Professional Animal Auditor Certification Organization (PAACO)

David A. Pyle 2020 David R. Hermes 2019

Stakeholder Forum on Antimicrobial Resistance (S-FAR)

Randall Singer 2019

United States Animal Health Association (USAHA)

Eric Gingerich 2019

Transmissible Diseases of Poultry and Other Avian Species

Dale C. Laurer, Chair

Animal Agriculture Coalition (AAC)

Jose Linares 2020

Animal Agriculture Alliance (AAA)

Donald Ritter 2022

National Chicken Council (NCC)

Mark Burleson 2022

United Egg Producers (UEP)

Elizabeth Beilke 2022

US Poultry & Egg (USP)

Bruce Stewart-Brown 2022

AAAP Foundation Committee Chairs

Awards

Andrea Zedek 2019

Kenneth Eskelund Preceptorship

Francene S. Van Sambeek 2020

Poultry Scholarship

Mark Bland 2019

Development Committee

Kristen Roza-Sutherland 2020

Andrea Zedek 2021

Avian Bioscience Travel Scholarship

Erica Spackman 2023

AAAP Constitutional Committee Chairs

www.aaap.info/committees

Auditing

Nominating

Resolutions

Karen Burns Grogan

Francene Van Sambeek

Frederic J. Hoerr

AAAP Task Force Committee Chairs

Animal Welfare and Management Practices

Kenneth Opengart 2019

Diseases of Public Health Significance

Dustin Burch 2022

Drugs and Therapeutics

Timmothy Cummings 2022

Education

Monique Franca 2019

Enteric Diseases

John Schleifer 2019

Epidemiology

Dave Fernandez 2020

Food Safety

Brett Hopkins 2021

History of Avian Medicine

Patricia Dunn 2019

Legislative Advisory

Suzanne Y. Dougherty 2021

Membership

Geoffrey Lossie 2019

Program Advisory

Ivan Alvarado 2021

Respiratory Diseases

Alejandro Banda 2022

Research Priorities

Natalie Armour 2021

Tumor Virus

John Dunn 2019

Toxic, Infectious, Miscellaneous

and Emerging Diseases

Milos Markis 2022

Small Flocks

Victoria Bowes 2019

Women's Network

Sara Steinlage 2019

Outreach

Bernard Beckman 2023

Committee Review

Bruce Stewart-Brown

2018-2019 AAAP

Board of Directors

www.aaap.info/aaap-board-of-directors

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Avian Diseases Advisory Board

Y. M. Saif

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Tahseen Abdul-Aziz

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Robert L. Owen

Diseases of Poultry Editorial Board

David E. Swayne

Isolation of Avian Pathogens

Manual Board

Susan Williams

Friday, August 2, 2019

Room	Renaissance Ballroom West			
8:00 AM	Opening Session			
8:20 AM	Session Keynote: Cases Selected from a Career in Poultry			
	Oscar Fletcher, NC State University			
Room	Renaissance Ballroom East	Renaissance Ballroom West		
Topic	Enteric Health	Case Report		
Moderator	Hyun Lillehoj	Enrique Montiel		
9:00 AM	Investigations of Influencing Factors on the Gut	Respiratory Disease and Bacterial Septicemia of		
	Health and Microflora Composition in Layers	Broilers Linked to Three Specific Breeder Flocks		
	Silke Rautenschlein, Clinic for Poultry, University	David French, Sanderson Farms, Inc.		
	of Veterinary Medicine, Hannover			
9:15 AM	The Effects of Direct-Fed Microbial	Respiratory Disease and Bacterial Septicemia of		
	Supplementation, as an Alternative to	Broilers Linked to Three Specific Breeder Flocks		
	Antibiotics, on Growth Performance, Intestinal	Jose Linares, Ceva Animal Health		
	Immunity, and Epithelial Barrier Integrity in			
	Broiler Chickens Infected with Eimeria maxima			
	Inkyung Park, USDA-ARS			
9:30 AM	Mechanism of Action of Antibiotic Growth	Itch Alert! There Mite Be A Problem		
	Promoters: Alteration of Immune Response and	Robinette Gilbert, Sanderson Farms, Inc.		
	Intestinal Metabolome			
	Hyun Lillehoj <i>, USDA-ARS</i>			
9:45 AM	Efficacy of Supplemented Bacillus subtilis DSM	I Need You to Call Me Now!		
	17299 in Broiler Chickens Fed Standard and	Eric Heskett, Case Farms		
	Energy, Protein and Amino Acid- Reduced Diets			
	John Schleifer, Chr-Hansen, Inc.			
10:00 AM		eak		
Topic	Avian Influenza			
		Case Report		
Moderator	Blanca Lupiani	Donald Ritter		
Moderator 10:15 AM	Blanca Lupiani Development of a Novel Avian Influenza Live	Donald Ritter Are those Necks Really Crooked?		
	Blanca Lupiani Development of a Novel Avian Influenza Live Virus Vaccine Based on Disruption of M2/M42	Donald Ritter		
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11:15 AM	Assessing Protection Induced by Maternally Derived Antibodies against Highly Pathogenic	Three Times a Charm? Three Different Clinical
	Avian Influenza H7N3 Virus	Presentations of Calcium Toxicity in Meat Type Chickens.
	Stivalis Cardenas-Garcia, <i>University of Georgia</i>	Philip Stayer, Sanderson Farms
	Stivalis Cardenas-Garcia, Oniversity of Georgia	Primp Stayer, Sunderson Furnis
11:30 AM	Avian Influenza H6 Virus-like Particles Confers	Feed Refusal Leading to Spiking Mortality
	Potent Immunogenicity and Protective Efficacy	Syndrome in Broiler Chickens
	in Chickens	Marie Severyn, Amick Farms
	Hui-Wen Chen, National Taiwan University	
11:45 AM	Mutations in PB1, NP, HA and NA Genes	Egg Drop Syndrome (Adenovirus 127) in Layers
	Contribute to Altered Pathogenicity and Viral	Sherrill Davison, University of Pennsylvania
	Shedding of H5N2 Highly Pathogenic Avian	
	Influenza Virus in Chickens and Mallards	
	Sungsu Youk, U.S. National Poultry Research	
	Center, ARS-USDA	
12:00 PM		Break
Room	Renaissance Ballroom East	Renaissance Ballroom West
Горіс	Avian Influenza	Case Report
Moderator	Maricarmen Garcia	Richard Fulton
1:15 PM	Overlapping Genes of the Avian Influenza Virus	The Saga Continues: Broiler Variant Reovirus in
	M Segment: Role of M2/M42 in Evolution of	Eastern North Carolina. Why Did it Happen?
	Highly Pathogenic Avian Influenza Virus	Erin Riley, Sanderson Farms Inc.
	Karen Segovia, ARS-USDA	
1:30 PM	The Molecular Determinants of Antibody	Chicks Exhibiting Drunken Behavior
	Recognition and Antigenic Variations of the HA	Jean-Pierre Vaillancourt, <i>University of Montreal</i>
	of H9N2 Viruses	
	Silvia Carnaccini, UGA - PDRC	
1:45 PM	Determining Molecular Markers of Avian	An Outbreak of Very Virulent Infectious Bursal
	Influenza Virus Adaptation in Poultry by Full	Disease Associated with Severe Mortality in 9-
	Genome Sequencing of Different Lineage Viruses	week-old Pullets in California.
	Mary Pantin-Jackwood, Southeast Poultry	H Shivaprasad, <i>University of California, Davis</i>
	Research Lab, US National Poultry Research	
	Center, US Dept. of Agriculture	
2:00 PM	In Vivo and In Vitro Differences Between Two	Clinical Investigation of False Laying Syndrome
	H5N8 Highly Pathogenic Avian Influenza Viruses	in Commercial Egg Layers
	Clade 2.3.4.4	Corine Giroux, Hickman's Family Farms
	Christina Leyson, Southeast Poultry Research	
	Laboratory	
2:15 PM	Alterations in H5 Highly Pathogenic and Low	Case study - Investigation of Aspergillosis
Z.13 KINI	Pathogenic Recombinant Hemagglutinin Tissue	Related Mortality in Commercial Layer Pullets
	The control of the co	Diagnasa Daya Things Dayalı
	Tropism associated with Increasing Age in	Diagnose Rare Things Rarely
	Selected Anseriformes and Galliformes Bird	Albert Payne, 1010 Consulting Group
	· · · · · · · · · · · · · · · · · · ·	
	Selected Anseriformes and Galliformes Bird	

Botulism in Turkeys, Is It More Common Than

A Case Report of Rotavirus A Hepatitis in

Simone Stoute, *University of California Davis*

We Realize?

Break

California Pigeons

Kabel Robbins, Butterball, LLC

2:30 PM

2:45 PM

3:00 PM

Network

Amendment

Challenges in Environmental Sampling and the

Persistence of LPAI in Carcass Composting and

Alejandra Figueroa, *University of California, Davis*

Use of the VetMAX Gold AI Detection Kit

Len Chappell, Georgia Poultry Laboratory

Bedding Litter Treated with Acidifier

Friday, August 2, 2019

Room	Renaissance Ballroom East		Renaissance Ballroom West
Topic	Epidemiology		Vaccinology
Moderator	Mohamed El Gazzar		Brian Jordan
3:15 PM	Epidemiological Approaches to Investigate the		New Field Experiences with Dual-Construct
	Determinants of Poultry Diseases and		Vaccines
	Productivity		Elise Myers, Merck Animal Health
	Robert Wills, College of Veterinary Medicine,		
	Mississippi State University		
3:30 PM	Understanding How Multiple Production		Recombinant HVT/IBD Vaccine As The Sole
	Variables Affect Production Performance Using		IBDV Primer In Broiler Breeders:
	Statistical Freeware		Seroconversion And Progeny Protection Against
	Dave Fernandez, AgForte		Challenge With Variant E
			Enrique Montiel, Boehringer Ingelheim
3:45 PM	Application of Remote Sensing Technologies to		Protection Against a California 2018 Virulent
	the Epidemiology of Avian Influenza and Other		Newcastle Disease Virus in Pullets by a
	Poultry Diseases		Vectored HVT-ND-IBD and a Live Vaccine
	Todd Kelman, <i>University of California, Davis</i>		Alexandra Reilley, Merck Animal Health
4:00 PM	Tactical Epidemiology: Analysis Becomes Action		Compatibility of A Recominant HVT-ND Vaccine
	During the Virulent Newcastle Disease Response		with Bursaplex to Provide Protections against
	in California		Velogenic NDV, Virulent Classic IBDV and
	Annette Jones, California Department of Food		Virulent MDV Challenges in SPF Birds
	and Agriculture		Sing Rong, Zoetis
4:15 PM	A Retrospective Study of Variables Associated		The Feasibility of the IBDV MB-1 Live Vaccine
	with the Incidence of Necrotic Enteritis in a No		Strain for In Ovo and Day of Hatch Applications
	Antibiotics Ever Broiler Complex in the USA		Ehud Ashash, Phibro Animal Health Corporation
	Andrew Bishop, <i>University of Georgia CVM</i>		
4:30 PM	Epidemiological Investigation of Infectious		Evaluation of Three Different Vaccination
	Bronchitis in Backyard Flocks in Arkansas		Programs Against Newcastle Disease in Layers
	Melissa Yates, Arkansas Livestock & Poultry		Using ELISA and Hemagglutination Inhibition
	Commission		Test
			Elisa Russo, MSD Animal Health Srl
4:45 PM	An Epidemiological Investigation of an Emerging		Comparison of Injection Sites for Se Bacterin
	IBD Variant in Broilers in BC, Canada		Vaccine in Commercial Pullets and Layers
	Babak Sanei, <i>Zoetis</i>		Katharine Schlist, Forsman Farms, Inc.
Room	Congression	al B	Ballroom AB
5:00 PM	Welcome Reception	n a	and Poster Session

Saturday, August 3, 2019

2019 AAAP Symposium: Investigating Disease and Assessing Productivity Using Epidemiological Tools

8:00 AM	Welcome		
Room	Renaissance Ballroom West		
Moderator	Dave Fernandez		
8:10 AM	Epidemiological Tools in Investigating Disease and Productivity Issues in Poultry – An Overview		
	Jean-Pierre Vaillancourt, <i>University of Montreal</i>		
8:45 AM	Development and Use of Biosecurity Risk Assessments in Commercial Poultry		
	David Shapiro, Perdue Farms		
9:20 AM	Application of Epidemiological Tools in Investigating Disease from Voluntary Disease Databases		
	Andreia Arruda, The Ohio State University		
9:50 AM	Break		
10:00 AM	Epidemiologic Tools Used in Investigating the 2015 HPAI Outbreak		
	Brian McCluskey, APHIS		
10:35 AM	A Production Veterinarian's Experience Using Epidemiological Tools Investigating Turkey Cellulitis		
	Brian Wooming, Cargill Turkeys		
11:10 AM	Geospatial Analysis and Related Epidemiological Tools in Understanding Common Poultry Diseases		
	Louise Dufour-Zavala, Georgia Poultry Laboratory Network		
11:45 AM	Epidemiological Application to Molecular Techniques in Understanding the Introduction, Spread and		
	Containment of Poultry Diseases		
	Mark Jackwood, UGA-PDRC		

Sunday, August 4, 2019

Room	Renaissance Ballroom East	Renaissance Ballroom West	
Topic	Wealth of Knowledge	Antimicrobial	
Moderator	Hector Cervantes	Michelle Kromm	
8:00 AM	Session Keynote: Economic Perspective of the	Session Keynote: Quantifying Antimicrobial Use	
0.007	Poultry Industry	in Poultry Production	
	Andrick Payen Diaz De la Vega, <i>Rabobank</i>	Randall Singer, <i>University of Minnesota</i>	
	RaboResearch Food and Agribusiness Analyst	The real services of the real	
8:30 AM	2019 Research Priorities of the American	Organic Acids and Nature Identical Compounds	
	Association of Avian Pathologists	Improve the Efficacy of Conventional Antibiotics	
	Natalie Armour, Mississippi State University,	Against E. Cecorum	
	CVM, DPPM	Benedetta Tugnoli, <i>Vetagro S.p.A.</i>	
8:45 AM	USDA- National Poultry Improvement Plan	Antimicrobial Effects of Lactic Acid and	
	Update	Bifidobacteria Probiotic Strains and an Enhanced	
	Elena Behnke, USDA- National Poultry	Organic Acid Product Against Salmonella	
	Improvement Plan	Chasity Pender, Biomin America Inc.	
9:00 AM	Creating a New Cross Commodity Retail	Evaluation of Dry Hydrogen Peroxide for	
	Labeled Animal Production Standard Based on	Reducing Microbial Load in a Commercial	
	the Principles of One Health	Hatchery	
	G. Donald Ritter, Mountaire Farms Inc.	Brian Jordan, The University of Georgia	
9:15 AM	Surviving the Hurricane of a LifetimeAgain	Use of Formaldehyde and Hydrogen Peroxide in	
	Becky Tilley, Butterball	a Commercial Broiler Hatchery	
		Sue Hubbard, Merck Animal Health	
Topic	Wealth of Knowledge	Protozoa/Parasitology	
9:30 AM	Hurricane Florence: North Carolina Department	Case Study: Broiler Integrator Performance	
	of Agriculture Response and Impact on NC	During Transition to No Antibiotics Ever	
	Poultry Production	Production	
	Michael Martin, North Carolina Department of	Linnea Newman, Merck Animal Health	
	Agriculture and Consumer Services		
9:45 AM	An Underestimated Tool: 25-Hydroxyvitamin	Effect of Litter Condition (new litter vs. built-up	
	D3 for Intestinal and Bone Health for Broilers	litter) and Two Anticoccidial Programs	
	Raised without Antibiotics.	(bioshuttle vs. non-bioshuttle) on the Oocyst	
	Tina Yun-Ting Wang, <i>DSM</i>	Concentration in Feces of Broiler Breeder	
		Pullets.	
10.00 414		Eric Orozco, Mississippi State University PRDL	
10:00 AM		reak Ballroom West	
Room 10:15 AM			
TU.TO AIVI		Debt Repayment Strategies Thales Solutions	
40.45.484	Mike Gergye, Thales Solutions		
1 1111115 /11/1	Business Meeting Lunch Break		
10:45 AM 12:00 PM		-	

Room	Renaissance Ballroom East		Renaissance Ballroom West
Topic	Wealth of Knowledge		Protozoa/Parasitology
Moderator	Yuko Sato		Elise Myers
1:15 PM	Dinner with Henrietta: Nutritional Issues in the		Anticoccidial Sensitivity Tests (ASTs): The Do's
	Small Flock		and Dont's
	Patricia Wakenell, Purdue VM: Dept. Comparative		Hector Cervantes, Phibro Animal Health
	Pathobiology		
1:30 PM	Extension 3.0 in Backyard Poultry Flocks in		Development of a Multi-Locus Sequence Typing
	California		(MLST) Scheme for Eimeria maxima
	Myrna Cadena, UC Davis School of Veterinary		Ruediger Hauck, Auburn University
	Medicine		
1:45 PM	Providing Poultry Disease Education in		Incorporating Recombinant Eimeria Proteins
	Myanmar		into Nanoparticles Improves Protective Efficacy
	Richard Fulton, Michigan State University		Against Avian Coccidiosis
			Mark Jenkins, ARS-USDA
2:00 PM	Femoral Head Necrosis (FHN): Incidence and		Using Polymer Microspheres or Fluorescein to
	Distribution in the U.S. Broiler Industry		Evaluate Live Coccidiosis Delivery Success
	Jaime Ruiz, Elanco Animal Health		Following Commercial Coarse Spray or Gel-
			Droplet Administration
			Ryan Snyder, <i>University of Guelph</i>
2:15 PM	Role of Wooden Breast in Late Mortality in		Characterization and Control by Vaccination of a
	Conventional Broiler Chickens and its		Pathogenic Eimeria Species Infecting
	Prevalence Prior to Processing		Commercial Chukar Partridge
	Sesny Gall, NCSU Veterinary College		Jessica Rotolo, The University of Guelph
2:30 PM	What's in the Tracheal Microbiome of a		The Use of a Non-Ionophore Anticoccidial in a
	Commercial Broiler Poultry Flock?		Bio-shuttle Program for Breeder Pullets
	Kelly Mulholland, <i>University of Delaware</i>		Takumu Niino, Zoetis
2:45 PM	Enhanced Statistical Process Control Systems for		Fifteen Years of Worming Broiler Breeder
	Monitoring and Predicting Live Operations		Pullets/Males
	Performance, Plant Performance, and		Kelli Jones, <i>Ceva</i>
	Pathogens		
	Timothy Buisker, Smart Data Science Solutions		
3:00 PM	В	rea	ık

Sunday, August 4, 2019

Room	Renaissance Ballroom East	Renaissance Ballroom West
Topic	Pathology	Immunology
Moderator	H. Shivaprasad	Juan Rodriguez-Lecompte
3:15 PM	Broiler Bone Evaluation: What is Normal and	Susceptibility and Characterization of Anti-viral
	Potential Causes of Lameness- Part 1	Innate Immune Responses in Chicken B Cells
	Suzanne Dougherty, Pilgrims	Infected with Infectious Bursa Diseases Virus
	5	and Supplemented with 1,25(OH)2D3
		Juan Rodriguez-Lecompte, Atlantic veterinary
		College, University of Prince Edward Island
3:30 PM	Skeletal Development in a Broiler Chicken	Influence of Feeding Programs on the Innate
	Dietary Study: Histopathology Correlates with	Immune Responses of Broiler Breeders against
	Clinical Findings	Salmonella and E coli
	Frederic Hoerr, Veterinary Diagnostic Pathology,	Enrique Montiel, Boehringer Ingelheim
	LLC	
3:45 PM	Myopathic Lesions in Broiler Chicken Heritage	Innate Immune Responses to Infectious
	Breeds and Red Junglefowl	Bronchitis Virus in Tracheal Organ Cultures from
	Hannah Sather, North Carolina State University	MHC Congenic Chicken Lines
	College of Veterinary Medicine	Ana Paula Da Silva, <i>UC Davis</i>
4:00 PM	I See Liver Spots!	Establishing Reference Ranges for Blood Gas
	Claude Hebron, Prestage Farms	and Blood Chemistry for Commercially Grown
		Pullets in North Georgia using the i-STAT ®
		Alinity v Handheld Clinical Analyzer
		Randi Clark, Poultry Diagnostic and Research
	- 10.6	Center
Topic	Food Safety	Immunology
Moderator	Robin Gilbert	Juan Rodriguez-Lecompte
4:15 PM	Salmonella Enteritidis Invasion of Internal	Recombinant Avian Interferons as Long Lasting
	Organs and Contamination of Eggs from	Adjuvants in Live IBV Vaccines.
	Experimentally Infected Laying Hens of Four Commercial Genetic Lines	Jose Cano, Universidad Nacional Autonoma de Mexico
	Richard Gast, U.S.National Poultry Research	Mexico
	Center, USDA-ARS	
4:30 PM	Effect of Yeast Derived Feed Additive on	Evaluation Of Humoral And Cellular Immune
4.30 FIVI	Salmonella and Antibiotic Resistance	Responses Of Broiler Breeders Following
	Michelle Kromm, Jennie-O Turkey Store	Vaccination With Inactivated FAdV Vaccine
	Whethere Krommi, Jennie-O Turkey Store	Adjuvanted With Emulsigen-D Or Cpg-ODN
		Ashish Gupta, Western College of Veterinary
		Medicine, University of Saskatchewan
4:45 PM		Correlating Breeder Flock Serology with
		.
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		1 11 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
4:45 PM		Maternal Antibody Titers in Poults Katie Stumvoll, Jennie-O Turkey Store

Monday, August 5, 2019

Room	Renaissance Ballroom East		Renaissance Ballroom West
Topic	Food Safety		Bacteriology
Moderator	John Schleifer		Naola Ferguson-Noel
8:00 AM	Session Keynote: Sex and the Single		Session Keynote: Evaluation of the Impact of
	Salmonella: What We Don't Know Hurts Us		Mycoplasma synoviae Infection on the Efficacy
	Jean Guard <i>, USDA</i>		of Infectious Laryngotracheitis CEO Vaccination
			in Broiler Chickens
			Naola Ferguson-Noel, University of Georgia
8:30 AM	Immunization with Live Salmonella Vaccine,		Field Trial of Live Mycoplasma synoviae (MS)
	Programs in Broiler Chickens and Resulting		Vaccine in Area of High MS Prevalence
	Impact in Plant Samples		Myeongseob Kim, Boehringer Ingelheim
	Robert Evans, <i>Elanco</i>		
8:45 AM	Live Salmonella Typhimurium Vaccination		Development and Validation of Mycoplasma
	Lowers the Load of Various Salmonella		iowae (MI) Core Genome Multilocus Sequence
	Serogroups at Different Challenge Ages in		Typing (cgMLST) Scheme
	Broilers		Mostafa Ghanem, The Ohio State University
	Manuel Da Costa, <i>Zoetis</i>		
9:00 AM	Use of Salmonella Vaccines in Commercial		Clinical 6/85 Mycoplasma Gallisepticum
	Turkeys for Pre-Harvest Reduction in		Vaccine Infection in Pre-Production Turkey
	Salmonella Load at Processing		Breeders
	Megan Lighty, Jennie-O Turkey Store		Judith LaBounty, Rembrandt Foods
9:15 AM	Most Effective Form of Vaccination Application		Campylobacter and Microbiome Interactions in
	Using a Live Attenuated Salmonella		Broiler Litter: a Matched Case Control Study
	Typhiumurium Vaccine		R. Chacin-Valeris, <i>University of MN</i>
	Jolene Tourville, Jennie-O Turkey Store		
9:30 AM	Feed and Drinking Water Delivered Chitosan-		Avian Pathogenic E. Coli Genotypes Across the
	Subunit Salmonella Nanovaccine for Poultry		US Broiler and Turkey Industries.
	Sankar Renu, The Ohio State Univsersity		Daniel Karunakaran, Arm and Hammer Animal
			Nutrition
9:45 AM	Evaluation of Long-Term Immunity and		Characterization of Omphalitis Causing Extra-
	Protection against Salmonella spp by an Orally		Intestinal Pathogenic Escherichia Coli
	Administrated Subunit Vaccine		Martine Boulianne, <i>Université de Montréal</i>
	Sherry Layton, Vetanco/BV Science		
10:00 AM	В	rea	ık

Room	Renaissance Ballroom East		Renaissance Ballroom West
Topic	Reovirus		Bacteriology
Moderator	Kalen Cookson		Patricia Wakenell
10:15 AM	Genotypic Diversity Among Avian Reovirus Field		The Role of Enterococcus Faecalis in the
	Isolates		Modulation of Avian Pathogenic E. coli
	Holly Sellers, The University of Georgia		Infections of Poultry
			Grayson Walker, North Carolina State University
			CVM
10:30 AM	Evaluation of the Pathogenicity of Recent		Attempts to Reproduce Focal Duodenal
	Reovirus Field Isolates in Genotypes 2, 4 and 6 in		Necrosis by Experimental Infection of Chickens
	Commercial Broilers		with Clostridium Perfringens Isolates and
	Angela Stewart, Poultry Diagnostic and Research		Duodenal Homogenates
	Center - University of Georgia		Monique Franca, UGA
10:45 AM	Cold Adaptation and Evaluation of an Avian		16s Phylogenomic Analysis of Environmental
	Reovirus Genotype One Variant		and Tissue Microbiota for Correlating
	William Dawe, University of Georgia		Management Strategies Related to Incidence of
			Clostridial Dermatitis in Turkeys
			Yuko Sato, <i>Iowa State University</i>
11:00 AM	Horizontal Transmission of Reovirus and Age-		Ornithobacterium Rhinotracheale (ORT): Never
	Associated Susceptibility to Development of		Ending Story
	Viral Arthritis/Tenosynovitis		Hafez Mohamed Hafez, Institute of Poultry
	Milos Markis, AviServe LLC		Diseases Free University Berlin
11:15 AM	My Experience with Laboratory Diagnosis of		In Vitro and In Vivo Evaluation of Probiotic
	Reovirus Tenosynovitis		Supplementation and its Effect on Performance
	Tahseen Abdul-Aziz, Rollins Animal Disease		and Immune Response in Campylobacter-
	Diagnostic Laboratory		Challenged Broilers
Decom	Densissana	Dal	Mohamad Mortada, <i>University of Georgia</i>
Room 11:30 AM	Renaissance History Lecture: Pullorum Disease:		
11.30 AIVI	K.V. Nagaraja, <i>Uni</i>		= -
12:00 PM	Lunc		
Topic	Virology		Diagnostics
Moderator	Daral Jackwood		Louise Dufour-Zavala
1:15 PM	Immune Responses Induced in Chickens by a		Evaluation of Sample Collection Devices for
	Genetically More Homogeneous Infectious		Recovering Poultry Respiratory Viruses from
	Bronchitis Virus Vaccine		the Environment
	Haroldo Toro, Auburn University		Erica Spackman, SEPRL-USDA-ARS
I 1:30 PM			,
1:30 PM	Broiler Study Evaluating Arkansas IBV Protection		Re-emerging Turkey Arthritis Reovirus -
1:30 PM			Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies
1:30 PM	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations		Re-emerging Turkey Arthritis Reovirus -
1:30 PM 1:45 PM	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies
	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota
	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization
	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious Bronchitis Virus, Genetic Characterization and		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization In California
	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious Bronchitis Virus, Genetic Characterization and Pathobiology Insights		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization In California
1:45 PM	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious Bronchitis Virus, Genetic Characterization and Pathobiology Insights Rodrigo Gallardo, University of California, Davis		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization In California Sofia Egana, University of California, Davis
1:45 PM	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious Bronchitis Virus, Genetic Characterization and Pathobiology Insights Rodrigo Gallardo, University of California, Davis Use of Different NDV ELISA Kits for the		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization In California Sofia Egana, University of California, Davis Molecular Characterisation of Chicken Arthritis
1:45 PM	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious Bronchitis Virus, Genetic Characterization and Pathobiology Insights Rodrigo Gallardo, University of California, Davis Use of Different NDV ELISA Kits for the Evaluation of the Antibody Response at		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization In California Sofia Egana, University of California, Davis Molecular Characterisation of Chicken Arthritis Reoviruses Circulating in Israel, Germany and
1:45 PM	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious Bronchitis Virus, Genetic Characterization and Pathobiology Insights Rodrigo Gallardo, University of California, Davis Use of Different NDV ELISA Kits for the Evaluation of the Antibody Response at Different Ages Elicited by a Recombinant		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization In California Sofia Egana, University of California, Davis Molecular Characterisation of Chicken Arthritis Reoviruses Circulating in Israel, Germany and the United States
1:45 PM	Broiler Study Evaluating Arkansas IBV Protection Achieved By Various Heterologous IB Vaccine Combinations Kalen Cookson, Zoetis False Layer Syndrome Caused by Infectious Bronchitis Virus, Genetic Characterization and Pathobiology Insights Rodrigo Gallardo, University of California, Davis Use of Different NDV ELISA Kits for the Evaluation of the Antibody Response at Different Ages Elicited by a Recombinant Newcastle Disease Vaccine (HVT+ND) Applied In		Re-emerging Turkey Arthritis Reovirus - Diagnostic Strategies Sunil Mor, University of Minnesota Avian Reoviruses: Molecular Characterization In California Sofia Egana, University of California, Davis Molecular Characterisation of Chicken Arthritis Reoviruses Circulating in Israel, Germany and the United States

2:15 PM	Host Adaptation Affects the Transmission of	Developing and Application of Real Time PCR
	Virulent Newcastle Disease Viruses in Chickens	Protocols to Differentiate Mycoplasma
	Helena Lage Ferreira, US National Poultry	synoviae Vaccine Strains
	Research Center, SEPRL	Mohammadreza Ehsan, University of Georgia
2:30 PM	Molecular-Epidemiological and Evolution Study	Infectious Bronchitis in Immunologically Naive
	of the Newcastle Disease Virus Causing	Breeding Chickens and Their Progeny
	Outbreaks in California in 2018	Corissa Steimling, The Pennsylvania State
	Kiril Dimitrov, USDA/ARS/USNPRC/SEPRL	University Animal Diagnostic Laboratory
2:45 PM	Evaluation of Protection against AL-2 like	Infectious Laryngotracheitis Prevalence in
	Infectious Bursal Diseases Virus using a Dual	California Backyard Chicken Flocks and Strain
	Recombinant HVT-ND-IBDV Vaccine Along and in	Differentiation by ICP4 Sequencing, 2007-2017.
	Combination with a Live 89/03 and Two Plaque	Julia Blakey, California Animal Health and Food
	Intermediate Standard Strains of IBDV Vaccine	Safety Lab- UC Davis
	Andres Montoya, Merck Animal Health	
2.00 DM	D	a a l

3:00 PM Break

3:00 PIVI	D	rear	N
Room	Renaissance Ballroom East		Renaissance Ballroom West
Topic	Virology		Management
Moderator	Kristen Roza-Sutherland		Becky Tilley
3:15 PM	Study of pathogenesis of Infectious Bursal		Evaluation of Enrichments for Meat-type
	Disease Virus (IBDV): Comparison between a		Chickens
	South American Variant and a Classic Strain		Katherine Barger, Cobb Vantress Inc
	Ariel Vagnozzi, INTA		
3:30 PM	Cell-mediated Immune Responses in the Eye		Effects of Sanitation Water Treatments During
	Associated Lymphoid Tissues of Chickens after		Broiler Growth-Out
	Vaccination or Infection with Infectious		Ricardo Munoz, Neogen
	Laryngotracheitis Virus (ILTV)		
	Maricarmen Garcia, The University of Georgia,		
	Athens GA		
3:45 PM	Interpretation of Real-time PCR Data from		What are You Doing to Day-Old Poults
	Clinical Specimens Suspected for Vaccinal		Ben Wileman, Select Genetics
	Laryngotracheitis Virus Infection.		
	Arun Kulkarni, Georgia Poultry Laboratory		
4:00 PM	Efficacy of Innovax-ILT (recombinant HVT-LT)		Implementation and Evaluation of a Biosecurity
	Vaccine when Administered Alone or in		Audit Tool Within a Large Turkey Company
	Combination with a Chicken Embryo Origin		Molly Parker, Butterball, LLC
	(CEO) Vaccine		
	Daniel Maekawa Maeda, University of Georgia		
4:15 PM	The Role of Vaccination on Transmission of		Impact of Downtime on Performance and
	Marek's Disease Virus in Poultry		Livability in Commercial Turkey Flocks
	John Dunn, USDA-ARS-ADOL		Elise Gerken, Jennie-O Turkey Store
4:30 PM	Are Birds Expressing Cas9 and Guide RNAs		Pullet Vaccination Evaluations: The Good, the
	against Marek's Disease Virus (MDV) Resistant		Bad, and the Ugly
	to MDV Challenge?		Timothy Cummings, Zoetis
	Karel Schat, Cornell University		
4:45 PM	Next Generation Sequencing (NGS) of		Comparison of the Circadian Rythm of Broiler
	Haemorrhagic Enteritis Virus (HEV) Obtained		Brreders and Commercial Layers During Lay on
	from Spleens of Turkeys Raised in Western		Different Biochemical Parameters with an
	Canada		Emphasis on Shell Formation
	Victor Palomino-Tapia, University of Calgary		Daniel Venne, Couvoir Scott Ltée
5:00 PM	Ac	djor	n

Posters

Poster numbers are listed below. Posters should be put up in Congressional Hall AB by Friday, August 2nd 8:00 AM and taken down by Monday, August 5th 12:00 PM.

Antimicrobial

- Reducing Microbial Load on Hatching Eggs Using a Dry Hydrogen Peroxide Gas System Julia McElreath, University of Georgia
- Efficacy of Sodium Formate (Amasil NA),
 Monobutyrin, Other Glycerides, and Glycerol
 (SiloHealth 104),) and Bacitracin Methylene
 Disalicylate (BMD) on Intestinal and Processed
 Parts Bacteria Count when fed to Broiler Chickens
 Challenged with Mild Coccidia
 Michael Coelho, BASF Corp
- Are You Ready for an FDA Inspection? Ensuring a Valid VCPR for Poultry Prescriptions and Protocols Steven Clark, Devenish Nutrition, LLC
- Prevalence and Antimicrobial Resistance of Fecal Commensal E. coli and Salmonella Isolates Obtained from Ontario Small Poultry Flocks Csaba Varga, Ontario Ministry of Agriculture Food and Rural Affairs
- Antimicrobial Resistance Patterns in Campylobacter Species Isolated From Poultry Production Facilities in Alberta Karen Liljebjelke, University of Calgary

Avian Influenza

- Risk Assessment of Avian Influenza Virus
 Dissemination in Duck Farms in France
 Kateri Bertran, ENVT, University of Toulouse
- 7. Prevention and Control of Avian Influenza
 Through Biosecurity, Surveillance, Early Detection,
 and Rapid Response: It Is Easier Said Than Done
 Nathaniel Tablante, University of Maryland College
 Park

- 8. Outbreaks of Low Pathogenic Avian Influenza H7N3 in Turkeys in California.
 - H Shivaprasad, *University of California, Davis*
- Vaccine Protection of Commercial Broilers
 Vaccinated with an Avian Influenza Vector
 Vaccine rHVT-H5 and an Inactivated H5N2 Vaccine
 and Challenged with the Mexican H5N2 Highly
 Pathogenic Avian Influenza Virus (HPAIV)
 Luiz Sesti, Ceva Animal Health
- 10. Chimeric Virus-Like Particle Vaccine Elicits Strong Antibody Response against Different Clades of H5 Highly Pathogenic Avian Influenza Viruses Dong-Hun Lee, Department of Pathobiology & Veterinary Science, University of Connecticut
- Genetic Characterization and Transmissibility of the First H9N2 Avian Influenza Virus in Indigenous Chickens from Kenyan Live Bird Markets Henry Kariithi, USDA-ARS
- 12. Pathogenicity and Transmission of Clade 2.3.4.4 H5Nx Highly Pathogenic Avian Influenza Viruses in Chickens.
 - Junghoon Kwon, U.S. National Poultry Research Center
- 13. Development and Comparison of Two Primary Chicken Tracheal Cell Culture Systems for the Study of Avian Influenza Virus Infection Emily Aston, University of California-Davis
- Extended Laboratory Exercise on Surge Capacity of Highly Pathogenic Avian Influenza (HPAI) Virus Testing

Stephanie Forrester, *Georgia Poultry Laboratory Network*

Impact of Immune Pressure on Mutations of Highly Pathogenic Avian Influenza Virus in Vaccinated Poultry

Darrell Kapczynski, USDA-ARS-Southeast Poultry Research Laboratory, Athens, Ga

Bacteriology

15. Characterization of the duodenal microbiota in egg layers with Focal Duodenal Necrosis using next generation sequencing

Monique Franca, UGA

16. Molecular Characterization of Avian Pathogenic E. coli (APEC) from Turkey Cellulitis

Catherine Logue, University of Georgia

17. Complete Genome Sequence of Mycoplasma iowae (MI) type strain 695

Mostafa Ghanem, The Ohio State University

18. Outbreaks of infectious endocarditis in mule duck: epidemiological study and potential etiological role of Streptococcus pluranimalium

Jean-Luc Guerin, ENVT, University of Toulouse

- 19. Pathogenecity of Avibacterium paragallinarum Isolates with Different Nicotinamide Adenine Dinucleotide Requirements of South Korea Ok-Mi Jeong, Animal and Plant Quarantine Agency
- 20. Effect of a Feed Incorporated Phytobiotic on Intestinal Lesions in Poultry Challenged with Clostridium perfringens

Sherry Layton, Vetanco BV Science

- 21. Mycobacterial Infection in a Pet Zebra Finch Kristen Hill-Thimmesch, *Purdue University*
- Identification of Gallibacterium Anatis in Egg
 Producing Hens Using the PCR Test in Los Altos de Jalisco, Mexico

Alejandro Hori, Boehringer Ingelheim Animal Health

Case Reports

23. Chicks Exhibiting Drunken Behavior
Jean-Pierre Vaillancourt, *University of Montreal*

- 24. Mycotoxins Toxicity in Laying Hens Andres Rodriguez-Avila, *BioARA SA*
- 25. Chronic Mycosis in a Backyard Hen
 Laura Morman, Purdue University Indiana Animal
 Disease Diagnostic Lab

Diagnostics

26. A Summary of Epidemic Pattern of Increased Infectious Bronchitis Virus Isolations in Broiler and Layer Chickens in Pennsylvania
Huaguang Lu, The Pennsylvania State University

27. Identification and Lineage Typing of Infectious bronchitis virus in clinical samples by real-time MinION Nanopore sequencing Salman Latif Butt, University of Georgia, Athens

28. Poultry Vaccines: Innovative Serological Assays for Diagnosis and Vaccination Monitoring for H5, H7 and H9 Avian Influenza A Laure Papaix, IDvet

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 Fernando Lozano, CEVA ANIMAL HEALTH
- 32. MinION sequencing to genotype US strains of infectious laryngotracheitis virus
 Stephen Spatz, US National Poultry Research
 Center, Agricultural Research Service, United States
 Department of Ag
- 33. Isolation, identification and genomic characterizations of two different genotypes of avian paramyxoviruses 1 isolated from live bird markets in Tanzania in 2012

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Erfan Chowdhury, Alabama Veterinary Diagnostic Laboratory System

36. In vivo testing of a qPCR for the specific detection of a new MDV serotype-1 vaccine (RN1250 strain) administered at day-old chicks

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- 37. Evaluation of an Easy and Rapid Detection of Avian Leukosis Virus Subgroup J (ALV-J) by Fully Automated POCKIT™ Central PCR System Keat Fu, Aviagen Inc.
- 38. A Portable Microdevice for Size-based Virus Enrichment

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39. Isolation and TEM examination of unknown duck viruses

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- 41. A Comprehensive Comparison of Multiple MG/MS Real Time PCR Assays

Heather Failyer, *Georgia Poultry Laboratory Network*

42. Diagnostic Service for Avian Pathogenic Escherichia coli (APEC) Identification in Georgia: Comparison of Gene Profiles with Tissue of Isolation.

Nicolle Barbieri, University of Georgia

45. Next-generation random Sequencing for Identification and Characterization of Infectious Agents in broilers with Hypoglycemia and Spiking Mortality Syndrome

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46. Why a Quality Managment System is Valuable in a Poultry Laboratory

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- 47. Isolation of Salmonella sp. in Poultry Tissue Samples using the MSRV Method
 Bridgeth Flores, GA Poultry Lab
- 48. Development of Multiplex Polymerase Chain Reaction for Detection of Avian Leukosis Virus, Reticuloendotheliosis Virus, Marek's Disease Virus and Chicken Infectious Anemia Virus in Korean Native Chicken

You-Chan Bae, Animal and Plant Quarantine Agency

Enteric Health

49. The effect of dietary supplementation of several Bacillus strains on growth performance and gut health in mixed coccidiosis infection in chickens Atul Chaudhari, USDA-ARS

Food Safety

- 50. The Effectiveness of a Feed Grade Sodium Formate in Feed or Drinking Water in Reducing Salmonella heidelberg Colonization of Broilers Charles Hofacre, Southern Poultry Research Group, Inc.
- 51. Estimating Salmonella Numbers to the Processing Plant: a Correlation of Salmonella Enumeration of Bootsocks, Ceca and Carcass Rinses from Broiler Chickens

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52. Salmonella enterica Subsp. enterica Serovar Typhimurium Weakens Avian Blood Macrophagelike Monocytes Functions In Vitro Elya Abbaszadeh, The University of Tehran 53. Salmonella Field Isolates: A Retrospective
Analysis of Salmonella Serotypes Association with
Common Field Isolation Media of Poultry Flocks in
the Southern United States
Carolyn Miller, Consultant

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Doug Waltman, *Georgia Poultry Laboratory*Network

55. Comparing Salmonella spp. Isolated Based on Organ Type

Kathryn Burden, GA Poultry Lab

Immunology

- 56. Development of Sandwich ELISA for Differential Detection of Chicken Heterodimeric Cytokines, Interleukin-12 and -23
 Woohyun Kim, USDA-ARS
- 57. Development of novel monoclonal antibodies against chicken interleukin- 4 and alternative activation of macrophage-like cells in chickens Atul Chaudhari, USDA-ARS
- 58. Development of Poultry-Specific Immune Reagents

Hyun Lillehoj, *Animal Biosciences and Biotechnology Laboratory, Beltsville Agricultural Research Center, United States*

60. Clostridium perfringens induces IL-10 secretion in chicken intestinal epithelial cells and necrotic enteritis broiler chicken YOUNGSUB LEE, USDA-ARS

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- 62. Expression and Characterization of Chicken Perforin and Granzyme A

Charles Li, Beltsville Agricultural Research Center / ARS / USDA

63. Effect of In Ovo Vaccination with HVT on IFNgamma and TLR-3 Transcripts in the Spleen and Lung of Chicken Embryos

Allison Boone, North Carolina State University, College of Veterinary Medicine and North Carolina Veterinary Diagno

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- 65. Development Of The Immune System In Broiler Breeders: Impact Of IBDV Vaccination and Feeding Programs

Enrique Montiel, Boehringer Ingelheim

66. Correlation Between the Level of Maternal
Antibodies in Broilers Against Chicken Anemia
Virus and Infectious Bursal Disease Virus with
Respect to the Time of Egg Storage and the Age of
the Breeders

Xanat Alicia Roa Garcia, Boehringer Ingelheim Animal Health Mexico

67. Comparison of the Serological Response of Three Tetravalent Commercial Inactivated Vaccines in Breeders

Bruno Garcia, San Marcos University

68. Effects of glycinated zinc on host immune response to necrotic enteritis in broilers
Theros Ng, *University of Georgia*

Marek's Disease Virus

69. The effects of CVI988 Marek's disease vaccine in eliciting transcription of IFN-gamma and TLR-3 in turkey embryos

Jewell Bremer, North Carolina State University CVM

70. Effect of Challenge with Oncogenic Marek's Disease Virus on the Replication of Marek's Disease Vaccines

Rachel Reese, North Carolina State University CVM

71. Study of the efficacy and replication of recombinant vector vaccines using herpesvirus of turkey (rHVT) when combined with other Marek's disease vaccines

Aneg Lucia Cortes, North Carolina State University, CVM

72. Role of Meq-vIL8 in the Pathogenesis of Marek's Disease Virus

Blanca Lupiani, Texas A&M University

Parasitology

73. Fenbendazole Resistance in the Turkey
Nematode, Ascaridia dissimilis
James Collins, University of Georgia, Dept. of
Infectious Diseases

- 74. Eimeria tenella Elongation Factor-1a (EF-1a) coadministered with chicken IL-7 (chIL-7) DNA vaccine emulsified in Montanide Gel 01 adjuvant enhanced immune response to E. acervulina infection in broiler chickens. Alfredo Panebra, USDA
- 75. Evaluation of a Potential Universal Subunit Coccidosis Vaccine to Protect Against Mixed Eimeria spp Challenge
 Sherry Layton, Vetanco/BV Science
- 76. Histomoniasis in broiler breeders in Peru Nelly Cribillero, San Marcos University
- 77. Populations of Eimeria tenella Express Resistance to Commonly Used Anticoccidial Drugs in Southern Nigeria

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Pathology

78. Mycotoxicosis by T-2 Toxin in Broiler Breeders in Peru

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 Floyd Wilson, MVRDL
- 83. Production Trial Analysis in Commercial Layers
 Using Mortality Survey Analytics and Cumulative
 Mortality

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Vaccinology

- 84. Protection Conferred by Infectious Bronchitis
 Virus Spike Ectodomain
 - Ramon Zegpi, Auburn University
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- 87. Construction and Efficacy of A Recombinant HVT-ND Vaccine against NDV and MDV Challenges in SPF and NDV Challenge in Broiler Birds Sing Rong, Zoetis
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90. Compatibility evaluation of two Fowl Pox Vectorized Vaccines against the Avian Influenza Virus H7N3 and H5N2 administered simultaneously.

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 A Fowlpox-vectored H7 Influenza Vaccine to Help Combat H7N3 Avian Influenza Virus Circulating in Mexico.

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92. Seroconversion and Vaccine Take Monitoring in SPF Birds Vaccinated, Alone or Combination, with Different HVT Vector Vaccines Against Newcastle or Avian Influenza (H5 or H7) Viruses and an Inactivated Reverse Genetics Vaccine Against the Avian Influenza Vi

Luiz Sesti, Ceva Animal Health

94. Assesment of a Novel 4 Way Inactivated Vaccine for Broiler Breeders.

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95. Verification of in Ovo Vaccination Using Next Generation Sequencing and a Traffic Light- Style Scoring System

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- 96. Optimization of antibody avidity index estimation using logistical regression models
 Ramon Zegpi, Auburn University
- 97. Field safety of in ovo and subcutaneous administration of Innovax-ND-IBD (HVT-ND-IBD) vaccine in commercial Broilers

 Matthew Stock,
- 138. Development of a Genotype-Matched Vaccine
 Against Virulent Newcastle Disease Virus
 Dana Goldenberg, USDA ARS

Virology

98. IBV DMV/1639/11 causing cystic oviducts in egg layers: Prevalence and risk factors in Eastern Canada laying flocks

Eric Parent, *Université de Montréal, Saint-Hyacinthe, Canada*

- 99. Virus neutralization of the Canada/17-099269/17 strain of Infectious Bronchitis Virus using antisera to known vaccine strains Andrew Bishop, University of Georgia PDRC
- 100. Broiler Study Evaluating Protection Against A Contemporary DMV/1639 Isolate By A Commercial GA08 Vaccine Either By Itself Or In Combination With Other IB Vaccines Kalen Cookson, Zoetis
- 101. Genetic and Pathologic Characterization of Recombinant TC07-2-like and Q1-like Infectious Bronchitis Viruses in Korea So Youn Youn, Animal and Plant Quarantine Agency
- 102. Intestinal tropism of an IBV isolate is not explained by spike protein binding specificity Saiada Farjana, Auburn University
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- 104. Control of Production Losses in Commercial Layer Flocks Infected with the BR-I Variant Strain of Infectious Bronchitis Virus in Brazil Jorge Chacón, Ceva Animal Health
- 105. Infectious Bronchitis Virus (IBV) in Peru: a 10-year molecular epidemiological survey (2009 to 2018)
 Claudia Carranza, USP / Ceva Animal Health
- 106. Economic Estimation of Direct Disease Cost of an IBV Outbreak in a Grandparent Flock in Brazil Claudia Carranza, USP / Ceva Animal Health
- 107. Persistence of Infectious Bronchitis and Newcastle
 Disease Vaccine virus by In Situ Hybridization
 Alejandro Banda, Mississippi State University
- 108. Seroconversion of Two ND Vaccination Programs
 Bruno Garcia, San Marcos University

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110. Evaluation of Factors Influencing Marek's Disease Vaccine Titer Variability

Blanca Lopez de Juan Abad, *North Carolina State University*

111. Vaccinal efficacy of Gallid alphaherpesvirus 3 strain 301B/1 from BAC clone against Marek's disease virus challenge

Taejoong Kim, USDA-ARS-USNPRC

112. Use of HVT vector to express protective antigens from important viral pathogens

Sanjay Reddy, Texas A & M University

113. Current Infectious Bursal Disease Virus Circulation in Mexican Poultry. A Molecular Survey

Francisco Rios-Cambre, MSD Salud Animal Mexico

114. New Introduction of a Very Virulent Infectious Bursal Disease Virus in the USA

Daral Jackwood, The Ohio State University

115. Towards the Construction of Sigma C epitopebased Vaccine for Avian Reoviruses

Joseph Giambrone, Auburn University

116. Pathogenicity of a variant Reovirus isolate close to Classical strains obtained from Clinical case of Viral Arthritis in Northwest Canada.

Victor Palomino-Tapia, *University of Calgary*

117. Characterizing the etiological agent of guinea fowl viral pancreatitis

Jean-Luc Guerin, ENVT, University of Toulouse

118. Defining the Host Range of Aquatic Bird
Bornavirus through In Vitro Replication Kinetics
and Lesion Development In Ovo

Alex Leacy, University of Guelph

119. A Preliminary Survey of Hemagglutinating Viruses from Penguins, Great Grebes and Petrels in the Coast of the District of Pinamar, Argentina.

Celina Buscaglia, Comision de Investigaciones

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120. Evaluation of Infectious Bronchitis Virus (IBV)
Infection in Broilers Fed Availa®Zn
Brian Ladman, University of Delaware

Wealth of Knowledge

- 121. Non-biological factors impacting efficacy of Direct Fed Microbials in commercial poultry production James Barton, *Adisseo*
- 122. Peptidoglycan: An issue in chicken intestinal tract that has been overlooked.

Tina Yun-Ting Wang, DSM

123. Toward Understanding the Respiratory Microbiota of Poultry

Chang-Won Lee, Food Animal Health Research Program, The Ohio State University

124. Field Experiences in Preventing Bacterial Bone Disease in Broiler Chickens

Marie Severyn, Amick Farms

125. Big Data in Poultry Production: Harnessing Information Regardless of Scale
Albert Payne, Simple Ag Solutions

126. Using Telemedecine for Training and for Collaborative Initiatives in the Field Jean-Pierre Vaillancourt, University of Montreal

127. Incorporating the New NPIP SubPart J into the State's Plan.

Douglas Anderson, GPLN

128. Industry Strategies for Inclusion Body Hepatitis Control in Peru.

Francisco Perozo, Merial

129. Poultry Health Management Schools: Continuing Education For the Poultry Health Professional Robert Porter, Univ of Minnesota

130. The effects of downtime on key chicken production parameters

Timothy Buisker, Smart Data Science Solutions

131. Characterization of the Demographics and Prevalence of Poultry Pathogens in Ontario, Canada Small Poultry Flocks

Marina Brash, Animal Health Laboratory

132. Causes of Morbidity and Mortality in Small Flocks in Ontario

Leonardo Susta, University of Guelph

133. Review and statistical analysis of trends in common diseases of pet/hobby chickens submitted to the Georgia Poultry Lab Network Christopher Gaudette, North Carolina State University CVM

134. Mycotoxin Prevalence in the 2018 Latin American Corn Crop

Eduardo Vicuna, BIOMIN

135. Megabacteriosis, Macrorhabdus ornithogaster and Mycobacterium genavense in a Zoo Budgerigar, Melopsittacus undulatus, Flock Richard Fulton, Michigan State University

136. A Historical Snapshot of Turkey Production in the USA

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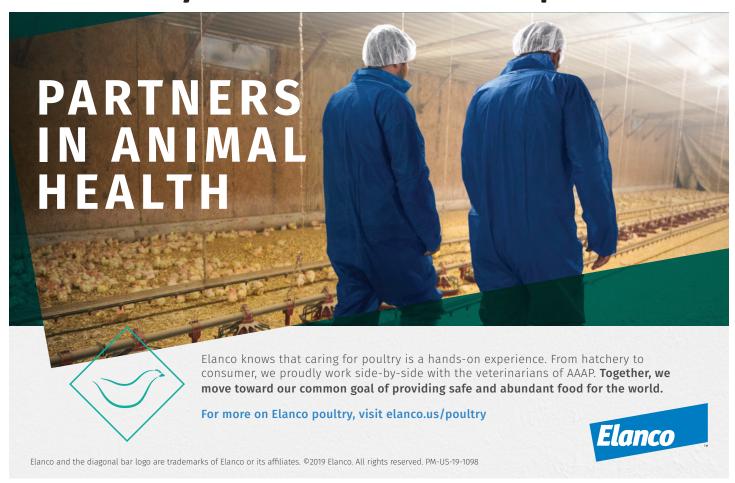
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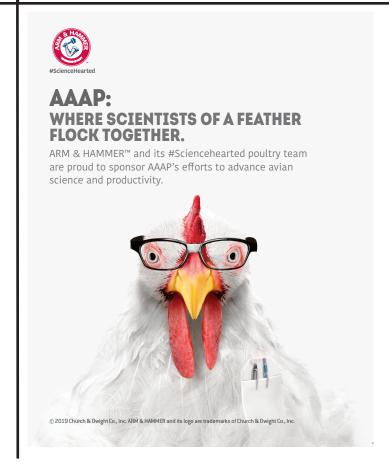


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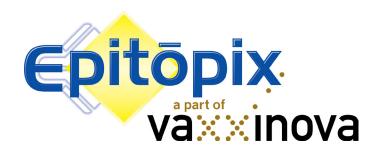
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