July 9 - 11, 2024



# Symposium & Scientific Program

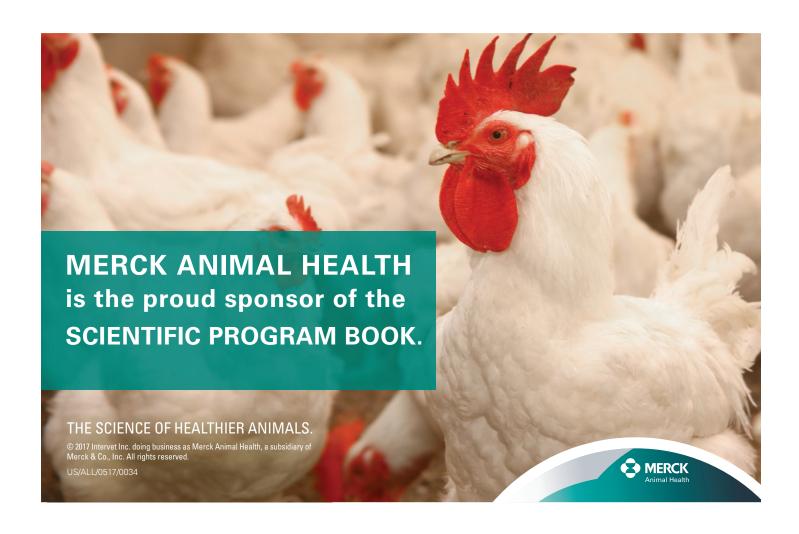


### American Association of Avian Pathologists (AAAP)

AAAP will be the premier organization that advances science-based knowledge, expertise, and education on poultry health, welfare, and food safety to provide member value and stakeholder trust.

Sixty-Seventh Annual Meeting
American Association of Avian Pathologists
St. Louis Union Station Hotel
July 9-11, 2024, St. Louis, MO

# Thank You MERCK Animal Health For Sponsoring The 2024 Scientific Program Book



# Welcome to the AAAP 2024 Annual Meeting Scientific Program



Natalie Armour Manginsay, BVSc, MAM, PhD, dACPV Chair, AAAP Program Advisory Committee Chair

The Program Advisory Committee is excited to present our first ever hybrid scientific program at this year's AAAP Annual Meeting. The scientific program is comprised of a combination of in-person oral, in-person poster, and prerecorded oral presentations that highlight the latest poultry health and management research and field experiences from a diversity of presenters and experts. Presentations are arranged in sixteen sessions, incorporating topics on viral, bacterial and parasitic diseases, enteric health, diagnostics, epidemiology, vaccinology, case reports, and others.

Our Keynote Speaker, Dr. Marc de Beer, will kick off the scientific program on Tuesday July 9th, with his presentation entitled "Future Perspectives for the Global Poultry Industry". As President of Aviagen North America, Dr. de Beer is well positioned to address a "bird's-eye view" of focus areas for future growth of the

poultry industry and emerging technologies that promise to transform poultry production, as well as future challenges that the industry should be prepared for.

Attendees can also look forward to other important components of the program not organized by the Program Advisory Committee, including the Symposium ("Maintaining Intestinal Health with Non-Antibiotic Compounds"), the History lecture by Dr. Holly Sellers ("The History of Avian Reovirus"), the Women's Network Luncheon presentation (Dr. Cherie Buisson), and the Wellness Talk (Jeff Winton).

I would personally like to thank the Program Committee for their tireless efforts in designing an exciting and informative program this year. Our committee reviewed and scored a total of 294 submitted abstracts, facing the added challenges of fewer in-person oral slots (due to the shorter meeting) and three possible presentation formats. Thankfully, our three-person core committee (Tak Niino, Darrell Kapczynski, and myself) was bolstered with an additional three associate members (Yuko Sato, Travis Schaal, and Joel Cline) this Spring, facilitating the work of the committee, and ensuring that each abstract was reviewed and scored by two committee members.

This will be my final year chairing the Program Advisory Committee. I have been honored to serve the AAAP in this role since 2022, and I know that the work of the committee will continue to advance under the leadership of the incoming Program Chair, Dr. Tak Niino. I want to thank the AAAP staff, leadership and membership for all your support. Welcome to St. Louis!

### **AAAP Leadership**

#### **AAAP Constitutional Committee Chairs**

www.aaap.info/committees

Auditing Karen Grogan Nominating Louise Dufour-Zavala Resolutions Frederic J. Hoerr

### **AAAP Task Force Committee Chairs**

Animal Welfare and Management Practices

Nancy Reimers 2024

**Bylaws Review** 

Michelle Kromm 2027

Committee Review
Bruce Stewart Brown

Diseases of Public Health Significance

Claude Hebron 2024

**Diversity & Inclusion** Eliza Ripplinger 2026

**Education** 

Nisana Siman-Tov 2024

**Enteric Diseases** 

Maria Terra 2025

**Epidemiology** 

Mostafa Ghanem 2026 Louise Dufour Zavala 2026

**Food Safety** 

Beth Krushinskie 2025

**History of Avian Medicine** 

Ton Schat 2025

Legislative Advisory

Suzanne Dougherty 2026

Membership

Ashley Hallowell 2024

Outreach

Yuko Sato 2025

**Program Advisory** 

Natalie Manginsay 2024

**Research Priorities** 

Stephen Williams 2025

**Respiratory Diseases** Brian Jordan 2025

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Small Flock Julie Helm 2024

Therapeutics, Biologics, and Bioprotection

Randy Singer 2024

Toxic, Infectious, Miscellaneous and Emerging Diseases

Linnea Tracy 2026

**Tumor Virus** 

Algis Martinez 2024

**Small Flocks** 

Julie Helm 2024

**Women's Network** 

Ellen Lapuck-Harris 2024

#### 2023-2024 AAAP Board of Directors

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

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Student Director 2024

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Associate Director 2024

### **AAAP Publication Board Chairs**

**Avian Diseases Advisory Board** 

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Randy Singer

**Avian Diseases Manual** 

Martine Boulianne

Avian Histopathology Manual Board

Tahseen Abdul-Aziz

**Gross Pathology of Avian Disease** 

Tahseen Abdul-Aziz

**Biosecurity Manual Board** 

Robert L. Owen

3 of 41

Diseases of Poultry Editorial Board David E. Swayne

Isolation of Avian Pathogens Manual Board

Susan Williams

### 2023-2024 AAAP Foundation **Board of Directors**

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Director 2025

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Director 2025

**Josie Gamble** 

Student Director 2024

**Holly Sellers** 

**Associate Director 2024** 

### **AAAP Foundation Leadership**

#### **AAAP Foundation Committee Chairs**

Awards

John Dunn 2025

**Kenneth Eskelund Preceptorship** 

Luke Baldwin 2026

**Scholarship Committee** 

Kabel Robbins 2024

**Development Committee** 

Roy Jacob 2026 Travis Schaal 2026

**Avian Bioscience Travel Scholarship** 

Brian Ladman 2027

### **AAAP Representatives to Allied Organizations**

**Animal Agriculture Alliance (AAA)** 

**Donald Ritter 2026** 

**Animal Agriculture Coalition (AAC)** 

Jose Linares 2024

**Center for Disease Control (CDC)** 

Bruce Stewart-Brown 2026

**Council for Agriculture Science** and Technology (CAST)

Mostafa Ghanem 2025

**International Poultry Welfare** 

Alliance (IPWA)

James Barton 2026

**National Chicken Council (NCC)** 

Beth Krushinskie 2025

**National Turkey Federation (NTF)** 

David Hermes 2024

**Professional Animal Auditor Certification Organization (PAACO)** 

David Hermes 2025

Katherine Barger Weathers 2024

Stakeholder Forum on **Antimicrobial Resistance (S-FAR)** 

Randy Singer 2025

**United Egg Producers (UEP)** 

Dan Wilson 2026

**United States Animal Health** 

**Association (USAHA)** 

Yuko Sato 2025

**US Food and Drug Administration** 

(FDA)

Randy Singer 2025

**US Poultry & Egg (USP)** 

Denise Heard 2026

### **AAAP Allied Association Groups**

**Association of Veterinarians in Broiler Production (AVBP)** 

Eric Heskett, President

Association of Veterinarians in Association of Veterinarians in **Turkey Production (AVTP)** 

Elizabeth Beilke, President

**Association of Poultry Primary Breeder Veterinarians (APPBD)** Lisa Tenny, President

**Egg Production (AVEP)** 

Eric Gingerich, President

**Association of Poultry Consultants** and Independent Laboratories (APCIL)

Leonard Fussell, Gordon Whitbeck, Helen Wojcinski, Beth Krushinski, and Fred Hoerr (Contact)

4 of 41

### **AAAP AVMA Representatives**

### **AVMA House of Delegates**

www.aaap.info/join-the-avma

### **Primary**

Katherine Barger Weathers 2024

#### **Alternate**

Karen Grogan 2024

### **AVMA Committees and Panels**

### **Animal Agriculture Liaison Committee**

#### Current

Joel Cline 2024 (Alternate)

### Upcoming

Jake Carlson 2027

Andre Ziegler 2027 (Alternate)

#### **Animal Welfare Committee**

#### Current

Nancy Reimers 2025

Sara Reichelt 2025 (Alternate)

### **Clinical Practitioners Advisory Committee**

#### **Current**

Megan Lighty 2026

#### **Upcoming**

Michaela Olson 2026 (Alternate)

#### **Committee on Antimicrobials**

#### Current

Randy Singer 2024

Hector Cervantes 2024 (Alternate)

#### **Upcoming**

Michelle Kromm 2027

Randy Singer 2027 (Alternate)

#### **Committee on Disaster and Emergency Issues**

#### Current

Michael Martin 2025

(Representing Poultry Medicine)

#### **Committee on Evironmental Issues**

#### Current

Carrier Cremers 2026

(Representing Avian Medicine)

### **Convention Education Program Committee**

AVMA

#### Current

Natalie Manginsay 2024

(Representing Poultry Medicine)

#### **Upcoming**

Takumu Niino 2024

(Representing Poultry Medicine)

### **Food Safety Advisory Committee**

### Upcoming

Elizabeth Krushinskie 2026

Robert O'Conner 2026 (Alternate)

### **Legislative Advisory Committee**

#### Current

Jose Linares 2024

Suzanne Dougherty 2024 (Alternate)

#### Upcoming

Suzanne Dougherty 2027

Carl J. Heeder III 2027 (Alternate)

#### **Panel on Depopulation**

#### **Current - Non-Voting Member**

Michelle Kromm 2026

(Representing Poultry Working Group)

#### **Panel on Humane Slaughter**

### **Current - Chair**

Kenneth Opengart 2024

(Representing Poultry Working Group)

Committee members are nominated by the AAAP Board of Directors and approved by AVMA. These entities usually meet twice a year, in the spring and fall. AAAP is grateful to have its members working as volunteers in many AVMA committees and panels.

### **AAAP Event Schedule**

All Events To Be Held In The St. Louis Union Station Hotel.

### Tuesday, July 9

### **Scientific Program Keynote Address**

Marc de Beer, Aviagen
Future Perspectives for the Global
Poultry Industry
8:15 AM - 9:00 AM: Grand Ballroom DEF

#### **Avian Bioscience Travel Scholarship Winner**

Emily Cason, University of Georgia, PDRC Reevaluating the gold standard: evaluating environmental Salmonella surveillance sampling methodologies in commercial broiler live-production

10:45 AM - 11:00 AM: Grand Ballroom DEF

#### **Women's Network Committee Lunch**

Dr. Cherie Buisson, A Happy Vet, Helping Hands Pet Hospice If You Think You Suck, You're Probably Wrong 12:00 PM - 1:00 PM: Grand Ballroom AB

### **Poster Session and Reception**

5:15 PM - 6:30 PM: Midway West

### AAAP Poultry Professionals Networking Event

6:30 PM - 7:30 PM: Midway East

### Wednesday, July 10

### **AAAP Symposium**

8:00 AM - 12:00 PM: Grand Ballroom DEF

### **AAAP Student Symposium**

9:00 AM - 10:30 AM: Regency Ballroom

### Thursday, July 11

#### **Rimler Memorial Paper**

Roel Becerra, University of Georgia
Evaluating the efficacy of novel inactivated
and live vaccine approaches for the control
of Spotty Liver Disease
(SLD) caused by Campylobacter hepaticus
in layer hens
8:15 AM - 8:30 AM: Grand Ballroom DEF

### **Reed Rumsey Clinical Research**

Hemlata Gautam, University of Saskatchewan Protection of Broiler Chickens Against Necrotic Enteritis by Intrapulmonary Delivery of a Live Clostridium Perfringens Vaccine Employing Gut-Lung-Axis Concept 8:45 AM - 9:00 AM: Grand Ballroom DEF

### **Lasher-Eckroade History Lecture**

Holly Sellers, University of Georgia 10:15 AM - 10:45 AM: Grand Ballroom DEF

### **AAAP Business Meeting**

10:45 AM - 12:00 PM: Grand Ballroom DEF

### **Reed Rumsey Basic Research**

Julia Blakey, USDA ARS SEPRL
Endemic Unit
Analysis of the localized immune response
in the bursa of Fabricius post infectious
bursal disease virus challenge
3:15 PM - 3:30 PM: Regency Ballroom

#### **Awards Banquet**

5:30 PM - 8:00 PM: Grand Ballroom AB

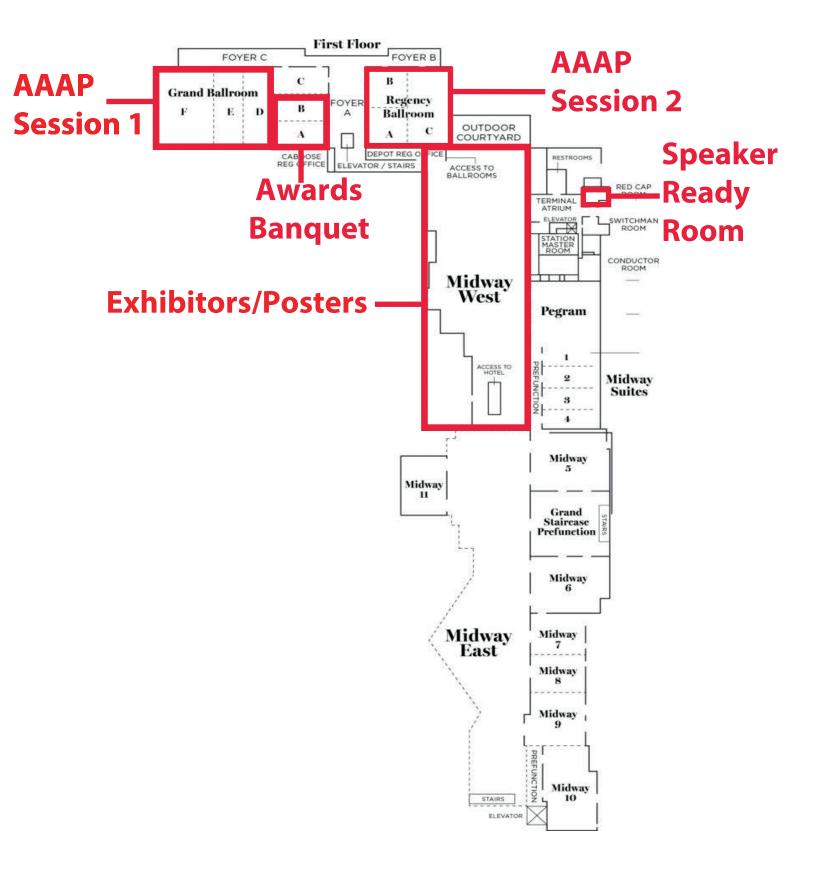
### **AAAP 2024 Annual Meeting and Committee Schedule**

Name of Group	Meeting Date	Beg. Time	End Time	Room
AAAP Board of Directors Meetings				
AAAP Inc. and Foundation Board of Directors	Monday, July 8	8:00 AM	5:00 PM	Midway Suites 5
AAAP Past Presidents Luncheon	Thursday, July 11	12:00 PM	1:15 PM	Midway Suites 4
Committee Meetings				, , , , , , , , , , , , , , , , , , , ,
AAAP Foundation ABTS Committee	Wednesday, July 10	3:15 PM	4:15 PM	Midway Suites 3
LAC Committee (combined with Outreach Committee)	Wednesday, July 10	3:15 PM	4:15 PM	Grand Ballroom C
Membership Committee	Wednesday, July 10	3:15 PM	4:15 PM	Midway Suites 4
Therapeutics, Biologics and Bioprotection Committee	Wednesday, July 10	3:15 PM	4:15 PM	Midway Suites 11
Preceptorship Committee	Wednesday, July 10	3:15 PM	4:15 PM	Midway Suites 6
Animal Welfare Committee	Wednesday, July 10	4:15 PM	5:15 PM	Grand Ballroom C
Education Committee	Wednesday, July 10	4:15 PM	5:15 PM	Grand Ballroom A
Awards Committee	Wednesday, July 10	4:15 PM	5:15 PM	Midway Suites 4
Outreach Committee (combined with LAC Committee)	Wednesday, July 10	3:15 PM	4:15 PM	Grand Ballroom C
Toxic, Infectious, Miscellaneous & Emerging Diseases Committee	Wednesday, July 10	4:15 PM	5:15 PM	Midway Suites 11
AAAP Auditing Committee	Wednesday, July 10	4:15 PM	5:15 PM	Midway Suites 6
Research Priorities Committee	Wednesday, July 10	5:15 PM	6:15 PM	Midway Suites 3
Enteric Diseases Committee	Wednesday, July 10	5:15 PM	6:15 PM	Midway Suites 11
Epidemiology Committee	Wednesday, July 10	5:15 PM	6:15 PM	Midway Suites 6
Program Events				
AAAP Speaker Ready Room	Monday, July 8	12:00 PM	5:00 PM	Red Caps Room
AAAP Poster Room	Monday, July 8	7:00 AM	5:00 PM	Midway West
AAAP Session Room 1	Monday, July 8	7:00 AM	5:00 PM	Grand Ballroom DEF
AAAP Session Room 2	Monday, July 8	7:00 AM	5:00 PM	Regency Ballroom
Nursing Room	Monday, July 8	7:00 AM	5:00 PM	Midway Suites 1
Food Safety Listening Session with USDA-ARS	Monday, July 8	1:30 PM	3:30 PM	Midway Suites 10
Mentor/Mentee Breakfast (Invitation Only)	Tuesday, July 9	7:00 AM	8:00 AM	Midway Suites 11
AAAP Women's Network Committee Meeting (Open to All)	Tuesday, July 9	12:00 PM	1:15 PM	Grand Ballroom AB
AAAP Committee Chair/BOD Meeting	Wednesday, July 10	12:00 PM	1:15 PM	Midway Suites 5
AAAP Symposium	Wednesday, July 10	8:00 AM	12:00 PM	Grand Ballroom DEF
AAAP Student Symposium	Wednesday, July 10	9:00 AM	11:00 AM	Regency Ballroom
AAAP Opening Session	Tuesday, July 9	8:00 AM	8:15 AM	Grand Ballroom DEF
AAAP Scientific Program Keynote Address	Tuesday, July 9	8:15 AM	9:00 AM	Grand Ballroom DEF
AAAP Welcome Reception and Poster Session	Tuesday, July 9	5:15 PM	6:30 PM	Midway West
AAAP Poultry Professionals Networking Event	Tuesday, July 9	6:30 PM	7:30 PM	Midway East
AAAP Lasher-Eckroade History Lecture	Thursday, July 11	10:15 AM	10:45 AM	Grand Ballroom DEF
AAAP Business Meeting	Thursday, July 11	10:45 AM	12:00 PM	Grand Ballroom DEF
AAAP Awards Reception before Dinner	Thursday, July 11	5:30 PM	6:00 PM	Foyer C
AAAP Awards Banquet	Thursday, July 11	6:00 PM	8:00 PM	Grand Ballroom AB
ACPV	Maria de la compansión	700.614	10.00.111	Miles C. Hay C.
ACPV Board of Governors Meeting ACPV Annual Meeting/Breakfast	Wednesday, July 10 Thursday, July 11	7:00 AM 7:00 AM	10:00 AM 8:30 AM	Midway Suites 2 Grand Ballroom AB
	Thursday, July 11	7:00 AIVI	8:30 AIVI	Grand Ballroom AB
Invitation Only				
Association of Veterinarians in Broiler Production Meeting	Monday, July 8	8:00 AM	3:00 PM	Grand Ballroom A
Association of Veterinarians in Turkey Production	Monday, July 8	8:00 AM	5:00 PM	Grand Ballroom BC
Association of Veterinarians in Egg Production	Monday July 8	8:00 AM	4:40 PM	New York/Illinois Central
Association of Poultry Primary Breeder Veterinarians	Wednesday, July 10	11:30 AM	1:00 PM	Midway Suites 11
Alumni Associations				
NC Veterinarians and NCSU Students and Alumni	Wednesday, July 10	7:00 AM	8:00 AM	Midway Suites 11
MAM and MAHM Alumni Coffee Hour	Wednesday, July 10	7:00 AM	8:00 AM	Midway Suites 7 & 8
MAM and MAHM Alumni Happy Hour (with Zoetis)	Wednesday, July 10	5:00 PM	7:00 PM	Gothic Corridor

### 2024 Virtual AAAP Committee Meeting Schedule

Name of Group	Meeting Date	Beg. Time	End Time
Committee Meetings			
Avian Diseases Reviewers & Editorial Board	Monday, July 1	2:00 PM	3:00 PM
Histopathology/Case Report Interest Group	Tuesday, July 2	1:00 PM	4:00 PM
History Committee	Wednesday, June 12	4:00 PM	5:00 PM
AAAP Foundation Scholarship Committee	Tuesday, June 25	2:00 PM	3:00 PM
Respiratory Diseases Committee	Monday, June 17	1:00 PM	2:00 PM
Diversity & Inclusion Committee	Friday, June 28	1:00 PM	2:00 PM
Diseases of Public Health Significance	Wednesday, May 29	2:00 PM	3:00 PM
Food Safety Committee	Tuesday, June 18	11:00 AM	1:00 PM
Tumor Virus Committee	Friday, June 21	9:00 AM	10:00 AM
AAAP Foundation Development Committee	Friday, June 28	11:00 AM	12:00 PM

### **St. Louis Union Station Hotel Meeting Rooms**



# Tuesday, July 9, 2024

Room	Grand B	allr	oom DEF
8:00 AM	Openir	ng S	Session
8:15 AM	Keynot	e S	<u>peaker</u>
	Future Perspectives for	the	Global Poultry Industry
	Dr. Marc de	Ве	eer, Aviagen
9:00 AM	В	rea	k
Room	Grand Ballroom DEF		Regency Ballroom
Topic	Epidemiology		Case Reports
Moderator	Kabel Robbins		Kayla Niel
9:15 AM	Understanding risk factors associated with		I SPY HPAI - Gross lesions highly suggestive of
	broiler breeder MS cases in Georgia		HPAI
	Kathleen Sary, Georgia Poultry Laboratory		Yuko Sato, Iowa State University
	Network (GPLN)		
9:30 AM	Comparison and evaluation of poultry		Layers Don't get Bacterial Chondronecrosis and
	biosecurity plans through the Rapid Access		Osteomyelitis, Right?
	Biosecurity app		Geoffrey Lossie, Purdue University/Indiana
	Jason Galvis, College of Veterinary Medicine,		Animal Disease Diagnostic Lab
	North Carolina State University		
9:45 AM	Mastering Sample Size Determination: Facts,		High Pitched Layers - Case Report
	Fallacies, and Best Practices for Use in		Gigi Lin, BC Ministry of Agriculture and Food
	Veterinary Research and Diagnostics		
	Enrique Mondaca, CEVA Animal Health		
10:00 AM	Securely moving duck hatching eggs from a		It's Hard To Be Positive When You're B Positive
	farm out of or within a Highly Pathogenic Avian		Molly Parker, Select Genetics
	Influenza (HPAI) Control Area		
	Sylvia Wanzala-Martin, University of Minnesota		
10:15 AM	An approach for prioritizing Salmonella		Torticollis in Turkey Poults
	serotypes for foodborne outbreak prevention:		Laura Tensa, Cargill
	Using burden and trajectory of outbreak-		
	related illnesses associated with meat and		
	poultry		
	Katherine Marshall, CDC		
Topic	Salmonella		Case Reports
10:30 AM	Longitudinal evaluation of Salmonella in broiler		Aspergillus flavus and Penicillium spp Infection
	breeder flocks		in a Five Week Old Broiler Breeder Pullet Flock
	Nikki Shariat, Poultry Diagnostic and Research		Hollyn Maloney, Prairie Livestock Veterinarians
	Center, University of Georgia		
10:45 AM	Avian Bioscience Travel Scholarship		Where my eggs at doc?
	Re-evaluating the gold standard: evaluating		Reginald Onyema, Aviagen North America
	environmental Salmonella surveillance		
	sampling methodologies in commercial broiler		
	live-production		
	Emily Cason, University of Georgia, Poultry		
	Diagnostic and Research Center		

# Tuesday, July 9, 2024

	T		
11:00 AM	SE challenge studies in live ST vaccinated		Economic Impact, and Molecular
	broilers—comparing different vaccination		characterization of CAstVs obtained from
	strategies to protection against SE challenge at		outbreaks of White Chicken Syndrome (WCS) in
	different ages		Western Canada
	Kalen Cookson, Zoetis		Victor Palomino-Tapia, Maple Leaf Foods
11:15 AM	The use of a nutritional approach to support the		Field Experiences with Avian Metapneumovirus
	control of Salmonella in poultry.		in U.S. Broilers and Broiler Breeders
	Raquel Burin, Zinpro Corporation		Andy Bishop, <i>Amick</i>
Room		allr	oom DEF
11:30 AM	Welln	nes	s Talk
	Jeff v		
12:00 PM	Lunci		
Topic	Bacteriology		Case Reports
Moderator	Algis Martinez		Rodrigo Gallardo
1:15 PM	Peeling Back the Many Layers of Competitive		Enteroccocus fecalis Infection In Laying Hens
1.13 FIVI	Exclusion		Mike Petrik, McKinley Hatchery
			Wike Petrik, Wickiniey Hutchery
1.20 DM	Margie Lee, Virginia Tech		A Doodle Coop of Chied Tom Tombicollic
1:30 PM	Differentiation of nonpathogenic from		A Deadly Case of Stud Tom Torticollis
	pathogenic Enterococcus cecorum isolates,		Jake Carlson, Select Genetics
	identifying unique genetic characteristics		
	providing virulence, survival, and adaptation		
	traits		
	Martha Pulido Landinez, Mississippi State		
	University		
1:45 PM	Genotypic characterization of Enterococcus		Swollen Heads with an acute elevated mortality
	cecorum isolated from field cases		in Commercial Turkeys.
	Marcela Arango, Mississippi State University		Claude Hebron, Prestage Farms
Topic	Bacteriology		Virology
2:00 PM	Clostridium colinum in quail: Battling to reduce		Preliminary characterization of avian
	the need for antibiotics use		metapneumovirus subtype B in the U.S.
	Roxana Sanchez-Ingunza, RSI Poultry Veterinary		Darrell Kapczynski, USDA-ARS
	Consulting LLC		
2:15 PM	Exploring Focal Duodenal Necrosis: Two		Detection and molecular characterization of
	Challenge Experiments Investigating Disease		avian metapneumovirus subtype B in the US
	Replication in Layers		turkey and chicken farms
	Yuyang Tsai, University of Georgia		Sumit Jangra, South Dakota State University
2:30 PM	Assessment of water-based interventions for		An Epidemiological look at Infectious Bursal
	the control of Campylobacter hepaticus in		Disease (IBD) in Commercial Broiler Industry in
	laying hens.		Canada; Geographical Difference and Applied
	Catherine Logue, University of Georgia		Vaccination programs
			Babak Sanei, Zoetis Canada
2:45 PM	Impact of Avibacterium paragallinarum		Molecular survey of infectious bursal disease
	infection on the Upper Respiratory Tract		virus in Western Europe in 2020-2023 reveals
	Microbiome of Chickens		lasting predominance of A3B1 reassortant
	Mostafa Ghanem, University of Maryland		viruses
			Matteo Legnardi, Department of Animal
			Medicine, Production and Health (MAPS),
			University of Padova
3:00 PM	R	rea	
3.00 i ivi		. Ca	***

# Tuesday, July 9, 2024

Moderator	Jaime Ruiz		Milos Markis
3:15 PM	The plasmid-encoded serine protease		Decoding the Sequence, Structure, and
	autotransporters Tsh and Sha contribute to		Antigenicity of Infectious Bursal Disease Virus
	avian pathogenic Escherichia coli colonization		(IBDV) Isolates in the Delmarva Region Using
	of the lungs in turkey		Whole Genome Sequencing (WGS) and Reverse
	Charles M. Dozois, INRS-Centre Armand-Frappier		Genetic Approaches
			Sofia Egana-Labrin, Department of Animal and
			Avian Sciences, University of Maryland
3:30 PM	Mycoplasma gallisepticum Live attenuated		Infectious laryngotracheitis viruses (ILTV)
	Vaccine Reversion to Virulence - What Changed		Genotypes Associated with Cases of the
	Eniope Oluwayinka, <i>University of Georgia</i>		Disease between March 2023 to April 2024.
			Maricarmen Garcia, <i>University of Georgia</i>
Topic	Coccidiosis		Virology
3:45 PM	Practical Guide to Successful Coccidiosis		Transmission of Highly Pathogenic Avian
	Vaccination in Broilers		Influenza Virus H5N1 in Dairy Cattle
	Sara Throne, Simmons Foods		David Suarez, Agricultural Research Service
4:00 PM	Practical ways to assess coccidiosis vaccination		Binding Ability of the Hemagglutinin-
	in commercial broilers.		Neuraminidase Protein as a Predictor of
	Matilde Alfonso, Ceva Animal Health		Pathogenicity of Newcastle Disease Virus
			Isolates
			Farjana Saiada, Department of Pathobiology,
			College of Veterinary Medicine, Auburn
			University
4:15 PM	Utilizing Oocyst Per Gram (OPG) surveillance to		Comparing gene expression in chicken
	monitor coccidiosis management in		Harderian glands and tracheas with and
	commercial cage-free, floor-raised leghorn		without maternal antibodies after vaccination
	pullets		with LaSota Newcastle Disease Virus
	John Schleifer, Devenish Nutrition, Inc.		Taina Lopes, Universidade Federal de Minas
			Gerais
4:30 PM	Rotating Chemical Coccidiostats Following		Detecting Infectious Bronchitis Virus
	Prolonged Use in Broilers		Recombinants From Field Samples: A Next
	Nicholas Brown, Huvepharma, Inc		Generation Sequencing Approach
			Robert Beckstead, Ceva Animal Health, LLC
4:45 PM	Evaluation of Performance and Level of		Avian hepatitis E virus in the U.S. diagnostics,
	Coccidiosis Immunity of Coccidia Vaccinated		isolation, and characterization
	Broiler Chickens Fed Various Feed Additives in a		Rodrigo Gallardo, University of California, Davis
	Coccidiosis Pen Challenge		
	Brandon Doss, Huvepharma, Inc.		
5:00 PM	Br	ea	k
Room	Midwa	ay	West
5:15 PM	Poster Session with Ho		
Room	Midw		
6:30 PM	Network	kin	g Event

### Wednesday, July 10, 2024

### 2024 AAAP Symposium **Maintaining Intestinal Health with Non-Antibiotic Compounds**

Hosted by the Enteric Diseases Committee and the Therapeutics, Biologics and Bioprotection Committee Chairs: Maria Terra-Long (Enteric Diseases) and Randy Singer (TBB)

Room	Grand Ballroom DEF
8:00 AM	Introduction
8:10 AM	The Gut-Brain Connection/Physiology of the intestinal tract Guillerm Tellez-Isaias, University of Arkansas
8:30 AM	Impact of the Intestinal Ecosystem of Poultry on Production and Sustainability Michael Kogut, USDA
8:50 AM	Break
9:00 AM	Use of Prebiotics and Postbiotics to Modulate Enteric Microbiome and Gut Health in Poultry  Peter Ferket, North Carolina State University
9:15 AM	<b>Probiotics</b> Tim Johnson, <i>University of Minnesota</i>
9:30 AM	Mechanisms of Action of Botanicals for Enhancing Gut Health and Performance in Poultry  Diego Martinez, University of Arkansas
9:45 AM	Role of Micro-Minerals and Fatty Acids in Intestinal Health  Todd Applegate, University of Georgia, Athens
10:00 AM	Break
10:10 AM	A review of methods that are used in research and diagnostics to assess gut health  Cristiano Bortoluzzi, DSM
10:25 AM	Experimental Modeling and Research Result Interpretation of Intestinal Health Products in Broiler Chickens Matthew Jones, Southern Poultry Research Group
10:40 AM	FDA: Current and possible future regulatory framework  Bill Flynn, FDA-CVM
11:00 AM	Break
11:10 AM	Panel on Field Experiences with Non-Antibiotic Feed Additives  Sara Throne, Simmons Foods  Dave Hermes, Perdue Farms  Dan Wilson, Wilson Vet Co.  Mike Blair, Devenish
12:00 PM	Lunch Break

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# Wednesday, July 10, 2024

	2024 AAAP Student Symposium	
Room	Regency Ballroom	
9:00 AM	Poultry Industry Overview:	
	Karen Grogan	
9:15 AM	AAAP Student Opportunities:	
	Josie Gamble	
	Nikolas Faust	
	Kabel Robbins	
	Yuko Sato	
9:30 AM	Panel: Industry Veterinarians:	
	Ashley Hallowell	
	Dan Wilson	
	Susan Williams	
	Carrie Cremers	
10:00 AM	Networking:	
	Eliza Ripplinger	
10:30 AM	Adjourn	

# Wednesday, July 10, 2024

Room	Grand Ballroom DEF		Regency Ballroom
Topic	Wealth of Knowledge		Enteric Health
Moderator	Maggie Thompson		Enrique Montiel
1:15 PM	ATP Meter for Evaluating Water Line Sanitation	- 1	Characterization of the predicted metagenome
	Kabel Robbins, Butterball, LLC		function of "normal" microbiota in chicken
			intestines
		_	Ruediger Hauck, Auburn University
1:30 PM	Hatchery investigations: proposing a protocol		Transcriptome analysis of the jejunal mucosa of
	to maximize insight and efficiency.		broiler chickens with subclinical necrotic
	Isabella Hannay, Mississippi State University		enteritis fed diets containing varying calcium
			concentrations and limestone particle sizes
			Rana Waqar Tabish, Auburn University
1:45 PM	A 12-Year Retrospective on Hatchery Applied	- 1	Identifying chicken Lactobacillus strains
	Vaccines in the Layer Industry	- 1	possessing immunomodulatory and anti-
	Ian Rubinoff, Hy-Line North America		Clostridium perfringens properties
			Ravi Kulkarni, NC state University
2:00 PM	Development and Implementation of a		Influence of coccidiosis and enteritis challenges
	Framework and Assessment Tool to Evaluate an		on diet productive energy and economics in
	Organization's Antimicrobial Stewardship		broilers
	Policies and Practices		Diego Martinez, University of Arkansas
	Ken Opengart, 3 Birds Consulting		
2:15 PM	Overview of the AVMA Guidelines for the		Effect of a blend of organic acids (short-chain
	Depopulation of Animals and the revision		fatty acids) and oregano oil on gut morphology
	process		growth performance and lymphoid organs of
	Cia Johnson, AVMA		broiler chicken
			Frank Ayala-Limaylla, <i>Laboratorios Drogavet SAC</i>
2:30 PM	CRISPR: An easy button for disease mitigation?		Effect of Campylobacter jejuni and
	Michelle Kromm, Food Forward LLC		Campylobacter coli co-colonization on the cecal
			environment in turkeys
			Silke Rautenschlein, Clinic for Poultry, University
			of Veterinary Medicine Hannover
2:45 PM	Feed Withdrawal: Review and Lessons Learned		Blackhead – Disease review: Past and Current
	Over a Lifetime		Prevention and Control Strategies
	Timothy Cummings, Zoetis		Jaime Ruiz, Elanco Animal Health
3:00 PM		eak	
3:15 PM	Committee Mee	ting	gs (See Page 7)
6:15 PM	Adj	our	'n

## **Thursday, July 11, 2024**

Room	Grand Ballroom DEF	Regency Ballroom
Topic	Vaccinology	Parasitology
Moderator	Robert Beckstead	Ruediger Hauck
8:00 AM	Control of Fowl Cholera in Commercial Layer type birds with Siderophore Receptor and Porin Protein Vaccine Charles Hofacre, Southern Poultry Research	Effect of Fenbendazole on Broiler Breeder Sperm Mobility.  Ivan Alvarado, Merck Animal Health
8:15 AM	Group, Inc.  Rimler Memorial Paper: Evaluating the efficacy of novel inactivated and live vaccine approaches for the control of Spotty Liver Disease (SLD) caused by Campylobacter hepaticus in layer hens Roel Becerra, University of Georgia	Anthelmintic Support with Natural Products Philip Stayer, Dr Phil Stayer Poultry Consulting, LLC
8:30 AM	The Impacts of a Spotty Liver Disease (Campylobacter hepaticus) Autogenous Vaccine on Pasture Raised Production Systems Mark Mouw, Wilson Veterinary Co.	Effects of stress factors on histomoniasis in broiler breeder pullets Catherine Fudge, University of Georgia
8:45 AM	Reed Rumsey Clinical Research Award Winner: Protection of Broiler Chickens Against Necrotic Enteritis by Intrapulmonary Delivery of a Live Clostridium Perfringens Vaccine Employing Gut-Lung-Axis Concept Hemlata Gautam, University of Saskatchewan	Economic Impact of Bed Bug Infestation in Breeder Operations Aaliyah Gore, North Carolina State University
9:00 AM	Field evaluation of the efficacy of live E. coli and live Salmonella Typhimurium vaccination by parenteral administration in commercial layers Fernando Ruiz-Jimenez, Zoetis	Performance of Broiler Chickens Vaccinated with an In Ovo Coccidiosis Vaccine Compared to Broiler Chickens Treated with Anticoccidial Drugs in-Feed Joan Molist, Laboratorios HIPRA S.A.
Topic	Vaccinology	Antimicrobials & Antimicrobial Resistance
9:15 AM	Optimising in ovo Herpesvirus of turkey (HVT) - vectored vaccines: Defining the role of the HVT vNr-13 protein in vitro in chicken embryo fibroblasts and in ovo in late stage embryonic tissues  Vishwanatha Reddy Avalakuppa Papi Reddy,  The Pirbright Institute	Remediating the Poultry Litter Resistome John Maurer, Virginia Tech
9:30 AM	Efficacy of a reverse-genetics derived vaccine against highly pathogenic avian influenza viruses from clade 2.3.4.4 Leticia Frizzo da Silva, Zoetis Veterinary Medicine Research and Development	Phenotypic characterization of Castellaniella spp. associated with mortality events in commercial broiler breeders  Tiffani Allen, Poultry Diagnostic and Research Center, University of Georgia
9:45 AM	Vaccination of Pullets with an Inactivated Chicken Astrovirus Isolated from a Clinical Case of White Chick Syndrome Jason Sousa, University of Georgia - PDRC	Efficacy of a Silane Quaternary Ammonia Compound (SiQAC) applied to feed trailers for inactivating low pathogenic avian influenza 15 days post-application JeJuan Bryant, NCSU-CVM Veterinary Student
10:00 AM	F	Break

# **Thursday, July 11, 2024**

Room	Grand Ba	allroom DEF
10:15 AM	Histor	y Lecture
		f Avian Reovirus
	Holly Sellers, Un	iversity of Georgia
10:45 AM	Busines	s Meeting
12:00 PM	Lunc	h Break
Room	Grand Ballroom DEF	Regency Ballroom
Topic	Reovirus	Diagnostics
Moderator	Ben Wileman	Silke Rautenschlein
1:15 PM	Evaluation of Pathogenicity and Antigenicity of	A molecular beacon with RT-LAMP can detect
	Turkey Reovirus Isolates	AOAV-1 and differentiate low virulence from
	Milos Markis, AviServe LLC	virulent virus strains
		Megan Mears, Exotic and Emerging Avian Viral
		Diseases Research Unit, USDA
1:30 PM	Forgotten turkey avian reovirus isolates	Improved Efficiency by multiplexing Infectious
	decipher naturally occurring co-infections of	Bronchitis Virus (IBV) Singleplex Assays
	CRV and TRV in commercial turkeys.	Ramhari Thapa, Ceva Animal Health
	Sonsiray Alvarez Narvaez, Southeast Poultry	
	Research Laboratories	
1:45 PM	Development of turkey reovirus specific ELISA	Development and Validation of New Differential
	Khaled Abosria, Department of Veterinary and	qPCR Assays for Improved Diagnosis of
	Biomedical sciences, South Dakota State	Avibacterium paragallinarum in the Field
Tania	University	Mostafa Shelkamy, <i>Iowa State University</i>
Topic 2:00 PM	Avian Influenza	Diagnostics
2:00 PIVI	Investigating the Prevalence of Highly Pathogenic Avian Influenza (HPAI) Virus	Development of an Enzyme-Linked Immunosorbent Assay (ELISA) for detection and
	Among Migratory Wild Shorebirds in Iowa	differentiation of Avibacterium paragallinarum
	Valerie Kim, <i>Iowa state University</i>	infections
	Valence Kim, rowa state oniversity	Mariela Srednik, <i>Iowa State Univesity</i>
2:15 PM	Viral Shedding and Environmental Dispersion	Development and Validation of New TaqMan
2.13 1 141	of Clade 2.3.4.4B H5 High Pathogenicity Avian	Real-Time PCR assays for enhancing diagnosis of
	Influenza Virus in Ducks: Implications for	Spotty Liver Disease
	Environmental Sampling in HPAI Survelliance	Eman Gadu, <i>Iowa State University</i>
	Jean-Luc Guerin, <i>University of Toulouse</i>	,
2:30 PM	Enhanced process to select avian influenza	Field outbreak Investigation of Spotty Liver with
	vaccines for protection against diverging field	Artificial Intelligence (AI) assisted Histology
	viruses	Chaitanya Gottapu, University of Florida
	David Swayne, Birdflu Veterinarian,	
	Watkinsville, Georgia, USA	
2:45 PM	The effect of inactivated vaccines on highly	Development of a Deep-Learning Artificial
	pathogenic avian influenza virus shedding	Intelligence Diagnostic Support Tool for Chicken
	Erica Spackman, US National Poultry Research	Renal Histopathology
	Center, USDA-ARS	Adrea Mueller Slay, Charles River Laboratories;
		University of Georgia
3:00 PM	В	reak

## **Thursday, July 11, 2024**

Topic	Avian Influenza	Pathology
Moderator	Katie Schlist	Holly Sellers
3:15 PM	Cross-Protection Study of Inactivated H5N1	Reed Rumsey Basic Research Award Winner:
	2.3.2.1c Vaccine against Novel H5N1 2.3.4.4b	Analysis of the localized immune response in the
	Virus Circulating in Indonesia	bursa of Fabricius post infectious bursal disease
	Elly Setiawaty, <i>PT Medion Farma Jaya</i>	virus challenge
		Julia Blakey, USDA ARS SEPRL Endemic Unit
3:30 PM	Application of enzyme linked lectin assay	Lesions Associated with Avian
	(ELLA) for differentiation of infected from	Metapneumovirus Subtype B Infection in
	vaccinated animals (DIVA) in poultry for avian	Commercial Turkeys and Broiler Breeder
	influenza	Chickens
	Sherif Ibrahim, South-East Poultry Research	Dallas Clontz, Veterinary Diagnostic Pathology,
	Laboratory (SEPRL), ARS-USDA	LLC
3:45 PM	An update on the assessment of the risk of	Postmortem diagnostic profile of laying hens
	moving washed and sanitized eggs off a highly	with hypocalcemia
	pathogenic avian influenza (HPAI) positive	Mayra Tsoi, Michigan State University
	premises	
	Mickey Leonard, <i>University of Minnesota</i>	
Topic	Avian Influenza	Immunology
Topic 4:00 PM	Avian Influenza Walks like MSD, talks like MSD, think?	Immune Responses in the Harderian Gland after
•	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with
•	Avian Influenza Walks like MSD, talks like MSD, think?	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies
•	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology,
4:00 PM	Avian Influenza  Walks like MSD, talks like MSD, think?  Kayla Niel, Penn State University Animal  Diagnostic Laboratory	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine
•	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates
4:00 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from
4:00 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies
4:00 PM 4:15 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics
4:00 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service  Improvement of Oxford Nanopore Influenza A	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics Evaluation of Diagnostic Tools for Detection of
4:00 PM 4:15 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service  Improvement of Oxford Nanopore Influenza A Whole Genome Sequencing Protocol	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics Evaluation of Diagnostic Tools for Detection of Egg Drop Syndrome
4:00 PM 4:15 PM 4:30 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service  Improvement of Oxford Nanopore Influenza A Whole Genome Sequencing Protocol Iryna Goraichuk, USDA-ARS-USNPRC	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics Evaluation of Diagnostic Tools for Detection of Egg Drop Syndrome Cole Taylor, University of Georgia
4:00 PM 4:15 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service  Improvement of Oxford Nanopore Influenza A Whole Genome Sequencing Protocol Iryna Goraichuk, USDA-ARS-USNPRC  Development of optimized CRISPR/Cas13	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics  Evaluation of Diagnostic Tools for Detection of Egg Drop Syndrome Cole Taylor, University of Georgia  Glycerides of lauric acid supplementation in the
4:00 PM 4:15 PM 4:30 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service  Improvement of Oxford Nanopore Influenza A Whole Genome Sequencing Protocol Iryna Goraichuk, USDA-ARS-USNPRC  Development of optimized CRISPR/Cas13 transgenes for the control of avian influenza	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics Evaluation of Diagnostic Tools for Detection of Egg Drop Syndrome Cole Taylor, University of Georgia Glycerides of lauric acid supplementation in the chicken diet enhances the humoral and cellular
4:00 PM 4:15 PM 4:30 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service  Improvement of Oxford Nanopore Influenza A Whole Genome Sequencing Protocol Iryna Goraichuk, USDA-ARS-USNPRC  Development of optimized CRISPR/Cas13 transgenes for the control of avian influenza virus in chicken cells	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics Evaluation of Diagnostic Tools for Detection of Egg Drop Syndrome Cole Taylor, University of Georgia Glycerides of lauric acid supplementation in the chicken diet enhances the humoral and cellular immune response to infectious bronchitis virus
4:00 PM 4:15 PM 4:30 PM	Avian Influenza Walks like MSD, talks like MSD, think? Kayla Niel, Penn State University Animal Diagnostic Laboratory  Trials to evaluate safety and immunogenicity of HPAI vaccines for California condors David Suarez, Agricultural Research Service  Improvement of Oxford Nanopore Influenza A Whole Genome Sequencing Protocol Iryna Goraichuk, USDA-ARS-USNPRC  Development of optimized CRISPR/Cas13 transgenes for the control of avian influenza virus in chicken cells Karel Schat, Cornell University	Immune Responses in the Harderian Gland after Newcastle Disease Vaccination in Chickens with Maternal Antibodies Raimundo Espejo, Department of Pathobiology, Auburn University College of Veterinary Medicine Field vaccination of turkey breeder candidates part II: Challenge trial of day old poults from various vaccine strategies Ben Wileman, Select Genetics Evaluation of Diagnostic Tools for Detection of Egg Drop Syndrome Cole Taylor, University of Georgia Glycerides of lauric acid supplementation in the chicken diet enhances the humoral and cellular

### **AAAP Online Program**

Available July 1 – July 25 to all registrants. CE granted for viewing up to 10 hours. To access go to https://aaap.mclms.net/en/

### **Avian Influenza**

**911 Poultry Call: we have a HPAI positive** Eric Orozco, *Butterball, LLC* 

How the Ducks Stole Thanksgiving: A Natural HPAI Infection in Raised for Release Mallard Ducks Emily Pittman, *Georgia Poultry Laboratory Network* 

### **Bacteriology**

Circulation of non-pathogenic Avibacterium paragallinarum in the USA confounds the current diagnostics

Mohamed El Gazzar, Iowa State University

The Use of a Bacterial Litter Amendment to Delay Gangrenous Dermatitis and Reduce Barn Ammonia Levels

Meagan Abraham, Jennie-O Turkey Store

Nanopore MinION sequencing of emerging Castellaniella spp. associated with mortality in broiler breeders

Yi Chen Luo, Department of Infectious Disease, College of Veterinary Medicine, The University of Georgia

### **Case Report**

**An Unusual Case of Diphtheritic Pox in a Small Commercial Layer Flock**Jarra Jagne, *Cornell University* 

Know your neighbors - Mycoplasma gallisepticum and Mycoplasma synoviae dual infection in broiler breeders

Karen Grogan, UGA PDRC

**Atypical Presentation of Streptococcus Infection in Commercial Turkey Poults** Elise Gerken, *Butterball, LLC* 

#### **Neurologic Signs in Broilers Associated with Myopathy Lesions**

Sabrina Hurst-Proctor, Gaydos Technical Services

Increased Incidence of Rickets in Broilers and Thin Eggshells in Broiler Breeders

Thomas Gaydos, Gaydos Technical Services

Case Report: R emerella anatipestifer Outbreak in Breeder Ducklings

Alexander Strauch, Four Star Veterinary Service

Ask and You Shall Receive. Part 1: A Case Report on Vent Gleet Clinical Manifestations in Commercial Egg Layers as a Result of Chronic Excess Calcium Supplementation

Daniel Wilson, Wilson Vet Co.

Cloacitis in a commercial layer facility attributed to metabolic alkalosis: identification and resolution Montana Oubre, dsm-firmenich

### **Diagnostics**

Use of Next Generation Sequencing for the diagnosis of poultry tumor viral diseases Isabel Gimeno, North Carolina State University

Cytopathologic diagnosis of inclusion body hepatitis in chickens via Romanowsky staining of liver impression smears

Kathryn McCullough, Department of Pathology, College of Veterinary Medicine, University of Georgia

Non-invasive sampling for early detection and surveillance of avian reovirus infection in turkey flocks Mohamed Selim, South Dakota state university

Use of feather pulp in the diagnosis of Marek's disease: viral replication and immunopathological characterization

Federico Bonorino, Universidad de León

### Parasitology/Coccidiosis

The Effect of High Dose Level of Amprolium Following Prolonged Use of Low Dose Level Leslie Johnson, *Huvepharma*, *Inc.* 

**Intestinal Integrity Overview in Latin America from 2021 to 2023** 

Bauer Alvarenga, Elanco Animal Health

A Live Look at the HTSi Database and I2 Index

Francene Van Sambeek, Elanco Animal Health

Sources of Viable Eimeria Oocysts to Young Chicks in Commercial Broiler Houses

Mark Jenkins, Agricultural Research Service, USDA

#### Histomoniasis and Coccidiosis Reduction with Herbal Extract Blend

Greg Mathis, Southern Poultry Research, Inc.

Field Trial Utilizing Fecal Egg Count Reduction Test to Assess Anthelmintic Resistance in a Commercial Tom Turkey Flock

Trent Eckle, Farbest Farms Inc.

Polyphenol and Saponin Combination in Coccidia Control

Katie Stumvoll, SilvaTeam US

### Vaccinology

Serological Monitoring of a trivalent vector HVT-IBD-ILT vaccine in Layer Pullets under Field Conditions in Canada

Kevin Amini, Boehringer Ingelheim Animal Health Canada Inc.

A Novel Application Procedure for Applying Vaccines Via Gel Droplets on the Farm at Day of Age in Commercial Poultry

Kelli Jones, Ceva Animal Health

Development and characterization of HVT vector vaccines to control ND and IBD

Blanca Lupiani, Department of Veterinary Pathobiology, Texas A&M University

**Field safety of in ovo and subcutaneous administration of HVT-ILT-IBD vaccine in commercial Broilers**Faris Jirjis, *Merck Animal Health* 

Replication and early immune responses induced by various MD vaccines when administered in ovo in meat type chickens

Abdelhamid Fares, North Carolina State University, College of Veterinary Medicine

**Evaluation of MDV-1 Vaccines in the Control of vv+MDV-induced Immunosuppression** Nagwa Khaled, *NCSU* 

Assessment of Protection and Changes in the Splenic Immune Cellular Phenotypes in Meat-Type Chickens Vaccinated with HVT and Challenged with a vv+MDV Strain

Nagwa Khaled, NCSU

### Wealth of Knowledge

"Staph" Problems Again: Synovitis and Broiler Breeder Livability

Maggie Thompson, AMT Poultry Health Consulting, LLC

The Life of an Extension Poultry Veterinarian: Lessons Learned from My Personal Journey

Nathaniel Tablante, University of Maryland College Park

### AAAP Diversity and Inclusion (D&I) committee: Evolving to meet the changing demographics of AAAP members

Eliza Ripplinger, Best Veterinary Solutions

An overview on the AVMA Working Group on the Psychological Impacts of Humane Endings Michelle Kromm, Food Forward LLC

#### **AAAP Research priorities commitee survey results**

Stephen Williams, AAAP Research Priorities Commitee

Is male grading a proper management tool to improve male uniformity and livability as well as production performance?

Jose Bruzual, Aviagen

### **Posters**

### Poster Session on Tuesday July 9 at 5:15 PM in Midway West

### **Antimicrobials & Antimicrobial Resistance**

1. Agroforestry tree leaves as feed supplements for improving growth and as an alternative to antimicrobial drugs in poultry breed of Jammu and Kashmir, India.

Mandeep Singh Azad, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu

- 2. Relationship between antimicrobial use and resistance in Salmonella, Campylobacter, E. coli and Enterococcus from an on-farm U.S. broiler production monitoring system: 2020-2023
  Randall Singer, *University of Minnesota*
- 3. Phenotypic and genotypic antimicrobial resistance profiling of Staphylococcus xylosus isolated from layer chicken barn bioaerosols in Alberta, Canada

Awais Ghaffar, Faculty of Veterinary Medicine, University of Calgary

4. Trained immunity or innate immune memory induced by CpG-ODN to protect broiler chickens against bacterial diseases

Iresha Subhasinghe, University of Saskatchewan

### **Avian Influenza**

5. Evaluation of 5 and 10-day-old commercial Pekin ducklings (Anas platyrhynchos domesticus) naturally infected with H5N1 highly pathogenic avian influenza

Veronica Nguyen, University of California, Davis

6. Safety and Antibody Response of a RNA Vaccine Against H5Nx HPAI in Commercial Ducks Reared in Field Conditions in France

Christophe Cazaban, Ceva Animal Health

7. Environmental Sampling and Results on Multiple Turkey Farms with Highly Pathogenic Avian Influenza, from 2022 through 2023

Carrie Cremers, Jennie-O

- **8.** Antigenic characterization of immune escape mutants of H7 low pathogenic avian influenza virus. Jiho Lee, SEPRL, USDA
- 9. Pathology and viral tissue distribution of high pathogenicity avian influenza H5N1 in wild black-headed gulls (Chroicocephalus ridibundus) in France

Manuela Crispo, IHAP, ENVT, INRAE, University de Toulouse

**10.** Breeder farm biosecurity enhancements during the 2022-2023 HPAI outbreak Marissa Studniski, *Select Genetics* 

11. Avian influenza virus replication in bone marrow-derived dendritic cells induce cytokine dysregulation with eventual cell death

Jongsuk Mo, USDA-ARS

12. A Focus on the Basics of the National Poultry Improvement Plan (NPIP) Avian Influenza Compartmentalization Program

Savannah Busby, USDA APHIS NPIP

13. Genetic identification of the HPAIV (H5N1) in domestic birds received at the Faculty of Veterinary Medicine, Universidad Nacional Mayor de San Marcos, Peru (2022- 2024).

Rosa Gonzalez, Universidad Nacional Mayor de San Marcos

14. Active surveillance of Avian Influenza Virus from wild birds in Peru after highly pathogenic H5N1 subtype emergence (2023-2024)

Gina R. Castro-Sanguinetti, Universidad Nacional Mayor de San Marcos

**15.** Monitoring of commercial Layers vaccinated with a rHVT H5 vaccine in Peru Claudia Carranza, *Ceva Salud Animal Peru* 

16. Efficacy of an inactivated avian influenza H5N1 vaccine in layer hens

Melanie Caballero, R&D Quimtia

17. Development of an Inactivated Avian Influenza Virus Vaccine against local highly pathogenic H5N1 isolated in Peru

Melanie Caballero, R&D Quimtia

18. Update on Mexican lineage H5N2 low pathogenic avian influenza virus

David Suarez, Agricultural Research Service

### **Bacteriology**

19. Correlation between Clostridium perfringens spore load and prevalence of netB-positive isolates in the poultry environment and necrotic enteritis on broiler chicken farms

John Maurer, Virginia Tech

20. Impact of a Postbiotic Containing Saponin, with or without Vaccination, on the Mitigation of Colibacillosis in Broilers Challenged with Avian Pathogenic Escherichia coli Serotype O78

Evan Chaney, Cargill, Inc.

- **21.** In-vitro Bacillus-based probiotic screening against field Campylobacter hepaticus isolates Kay Russo, *Chr Hansen*
- 22. Using an Experimental Blend of Mono- and Di-glycerides in the Starter Phase for Efficacy Against a Pathogenic Enterococcus cecorum Isolate in Broilers

Matthew Jones, Southern Poultry Research Group, Inc.

23. Assessment of virulence in novel Avian Pathogenic Escherichia coli (APEC) serogroups using in vitro and in vivo assays.

Klao Runcharoon, Department of Population Health, College of Veterinary Medicine, University of Georgia

#### 24. Characterization of emergent Avibacterium paragallinarum strains in Brazil

Priscila Diniz Lopes, Vaxxinova Brazil

# 25. In-Vitro Evaluation of a Blend of Three Direct-Fed Microbial Bacillus Strains to Inhibit the Growth of Multiple Enterococcus cecorum and Enterococcus faecalis Field Isolates from Several Commercial Chicken Companies

Blair Telg, Phibro Animal Health

### 26. Ecology of Avian Pathogenic Escherichia coli in Commercial Turkey Production Across Time, Space, Tissue, and Vaccination Status

Lauren White, University of Minnesota

### 27. Identification, typing and antimicrobial susceptibility of Gallibacterium anatis isolates from Colombia.

Vladimir Morales Erasto, Facultad de Medicina Veterinaria y Zootecnia - Universidad Nacional Autónoma de México

### 28. Identification and typing of Avibacterium paragallinarum isolates obtained from commercial laying hens in Colombia.

Vladimir Morales Erasto, Facultad de Medicina Veterinaria y Zootecnia - Universidad Nacional Autónoma de México

### 29. Whole Genome Sequencing and Characterization of Enterococcus faecalis isolated from Pullet Layers with Growth Depression and Amyloid Arthropathy.

Aaliyah Gore, North Carolina State University

### **30.** Mycoplasma synoviae Genotyping and Phylogenetic Analysis: A Comprehensive Study of Vlha Gene Variation in the Middle East

Husam Bakri, Vaxxinova International

### 31. Importance of Mycoplasma Synoviae Vaccination in performance of breeders challenged with Infectious bronchitis virus: A field report from Colombia.

Francisco Perozo, Boehringer Ingelheim

### 32. The Effect of Sample Pooling on the Detection of Mycoplasma gallisepticum and Mycoplasma synoviae by Real-time PCR

Michael Davis, UGA Poultry Diagnostic Research Center

### **Case Reports**

33. Weather or Management: A Series of Erysipelas Cases in Commercial Turkeys During an Unseasonable Midwest Winter

Ashley Poissant, Jennie-O Turkey Store

34. Case Report: Glaucoma, Corneal Edema, Cataracts, and Retinal Degeneration in Broiler Breeder Chickens

James Davis, Georgia Poultry Laboratory Network

**35. Avian Coryza and Laryngotracheitis co-infection in layer chicken: A case report** Ahmed Achhal, *Clinique vétérinaire Tit Mellil* 

**36.** Outbreaks of duck viral enteritis in breeding mallards for the British game sector in 2023 Christopher Poulos, *Pathology Department*, *Animal and Plant Health Agency* 

**37. Ocular Marek's Disease in a Black Shouldered Peafowl**Hailey Quercia, *Virginia Department of Agriculture and Consumer services* 

### **Diagnostics**

38. Modified Extraction Method Reduced Variation in Feather Corticosterone Replicates In Combination With High Extraction Efficiency

Nikolas Faust, Poultry Science Department, Texas A &M University

39. Nanopore Adaptive sampling: a new tool for in silico enrichment for respiratory pathogens from clinical samples

Maria Chaves, *Iowa State University* 

40. New Infectious Bronchitis indirect ELISA, based on well conserved recombinant protein, for improved detection of live vaccines and challenge including variant strains

Rafael Forero, Innovative Diagnostics

41. Rapid Disease Diagnostics in Broiler Chickens Using Metabolomics

Asha Ranaraja, University of Saskatchewan

- **42.** Advantages of Genotyping Infectious laryngotracheitis virus (ILTV) from Clinical Samples Using MinION April Skipper, *University of Georgia*
- 43. Enhancing Diagnostic Efficiency: Implementation of a Multi-Laboratory Platform for Poultry Diagnostics

Dimitri Popov, Aggio

**44.** Optimizing Metagenomic Approaches for Enhanced Food Safety in Poultry Production Environment. Mostafa Ghanem, *University of Maryland, College Park* 

45. Use of High-Resolution Melting Point RT-PCR for Confirming the Effectiveness of Two Live IB Vaccine Strains Application When Administered Simultaneously at the Hatchery and at Farm Level in Layers

Francisco Rios-Cambre, MSD Salud Animal Mexico

46. Looking beyond implementing Oxford Nanopore Technologies (ONT) in poultry diagnostics: Lessons Learned from Years of Working with ONT

Amro Hashish, Iowa State University

47. IBV molecular surveillance using Oxford Nanopore MinION sequencing

Renato Luciano, Biological Institute, Advanced Center of Research and Development for Poultry Health

48. The Advantages of Hemagglutination Inhibition (HI) MGMS Test Automation Using a Lynx LM900 by Dynamic Devices Versus Manual Testing

Sara Cooper, Georgia Poultry Laboratory Network

- **49.** Use of a new veterinary diagnostic tool for ELISA titer data analysis and interpretation Reshma Ramachandran, *Professional Services Veterinarian-II*
- **50. HVT-NDV** hatchery vaccination evaluation using a fusion protein-specific ELISA Duane Murphy, *Farbest Farms, Inc.*
- 51. Developing Third Generation Sequencing Assays to Rapidly Analyze Whole Genome and Hexon Genotypes from Field Samples and Isolates of Fowl Adenovirus

Derek Moormeier, Ceva Animal Health

**52.** Incidence of airsacculitis in newly hatched broiler chicks in Brazil: possible causes and potential consequences

Jorge Chacon, Ceva Animal Health - Veterinary Services, Brazil

- **53.** Developing a novel method for sequencing the whole genome of infectious bursal disease virus Julia McElreath, *Ceva Animal Health*
- 54. Genetic Evolution of Avian Reoviruses in France (2016-2023), First Applications of Oxford Nanopore Sequencing.

Guillaume Croville, University of Toulouse

**55.** Evaluating the role of Vitamin E in Turkey Degenerative Myelopathy Syndrome Jonathan Elissa, *Penn State University* 

### **Enteric Health**

56. Colonization of Probiotic Bacteria in the Intestine of Chicken Embryos Following Coarse Spray on Incubating Eggs

Mihiprabha Rathnayake, University of Saskatchewan

57. Effect of RfC in the relative genetic expression of mRNA for: IgG, IgM, and INF γ, and histomorphometry in the intestine of broiler chickens.

Sebastian Mena, Dimune, Veterinary Services

- **58.** Crude Protein and Starch Analyses of Fecal Feed Particles obtained from 60 Day-old Broilers Samuel Christenberry, *Alabama Veterinary Diagnostic Laboratory*
- 59. Ex vivo assessment of the direct and indirect antimicrobial capacities of glycerides of lauric acid using gastrointestinal fluids

Wanderley Quinteiro-Filho, Adisseo LATAM

- **60.** Effect of Bacillus subtilis DSM29784 secreted metabolites on poultry resilience Wanderley Quinteiro-Filho, *Adisseo LATAM*
- **61.** Microbiome Changes and Horizontal Transmission of Salmonella infantis in Broilers Consuming Feed Treated With Feed Sanitizers, Organic Acid Blends, Probiotics and Combinations Enrique Montiel, *Anitox Corporation*
- 62. Microbiome Shifts in Birds Fed Quillaja saponaria and Yucca schidigera Biomass that are Related to Performance Outcomes

Luis Gomez, Phibro Animal Health Corporation

### **Infectious Bronchitis Virus**

- **63. Detection of Avian Infectious Bronchitis GI-23 (Variant 2) Virus in Mexico During 2023** Juan Carlos Valladares de la Cruz, *Phibro Animal Health*
- 64. Epidemiological assessment of Infectious Bronchitis Virus after the detection of strains of the GI-23 lineage in Brazil

Jose Emilio Dias, Phibro Animal Health, Instituto Federal Catarinense, Concórdia – SC, Brazil

65. Reduction on airsacculitis condemnations in commercial broiler and griller flocks after introduction of homologous vaccine against IBV GI-23 lineage in Brazil

Josiane Griebeler, MSc. In veterinary science in Poultry Health - UFRGS

66. Improvement in the airsacculitis condemnation, antibiotic therapy, and mortality after introduction of a homologous vaccine against IBV - Var 2 (IS/1494/06 strain)

Andre Marca, DVM, University of Santa Catarina State (UDESC) - Brazil

67. Evaluation of Two Bronchitis Vaccines under field conditions

Lucas Colvero, MSD Saúde Animal

68. Efficacy of TAbic® IBVAR206 vaccine against challenge with Infectious Bronchitis Virus BR-1 field strain in broiler chickens

Dana Goldenberg, Phibro Animal Health

69. Effect of spraying supplemental passive IBV antibodies in the protection against early IBV exposure in chicks

Rachel Jude, Department of Population Health & Reproduction, University of California, Davis

70. Identification and Geographic Location of Variant Strains of Infectious Bronchitis Virus in Broiler and Layer Farms in Peru 2023

Cesar Reyes, MSD Salud Animal - Peru

71. Cross-protection studies using GA08 and Mass type IBV vaccines against four different antigenic variant viruses currently circulating in poultry in the USA and Canada.

Mark Jackwood, Ceva Animal Health

72. Polymorphisms of S1 Sequence following Single or Dual Infectious Bronchitis Virus Strains Passage in Embryonated Chicken Eggs

Ming-Kun Hsieh, *Graduate Institute of Microbiology and Public Health, National Chung Hsing University, Taiwan* 

### **Infectious Bursal Disease**

73. Disease Awareness Program: Field survey of Infectious Bursal Disease Virus from broiler and layer farms in Peru during 2020 and 2022

Claudia Carranza, Ceva Salud Animal - Peru

74. Infection by Genogroup 4 strains of Infectious Bursal Disease Virus negatively affects mortality and feed conversion in commercial broiler flocks in Brazil

Jose Emilio Dias, Phibro Animal Health, Instituto Federal Catarinense, Concórdia – SC, Brazil

75. Generation of avian paramyxovirus type 1 TS09 strain-based recombinants expressing the VP2 protein of infectious bursal disease virus and a chicken cytokine as dual vaccines for in ovo vaccination

Qingzhong Yu, USDA/ARS, US National Poultry Research Center

76. Genetic and epidemiological characteristics of Infectious Bursal Disease Virus circulating in broiler flocks in Brazil

Jorge Chacon, Veterinary Services - Ceva Animal Health, Brazil

- 77. Datamining an infectious bursal disease field trial database comparing bursal atrophy effect on performance data, serology and biochemistry profile. Putting it all together Part 2

  Daniel Venne, Ceva animal health
- 78. Molecular detection and characterization of emerging novel variant IBDV (genotype A2dB1b) in the Middle East prompts concern of spread of subclinical disease forms

Matteo Legnardi, Department of Animal Medicine, Production and Health (MAPS), University of Padova

- **79.** Title Comparing recombinant infectious bursal disease virus vaccines: field observations, bursal size, DIVA serology, qPCR and sequencing. Putting it all together. Part 1

  Brenna Tuer, *Carqill Canada*
- 80. Reassortant strains of infectious bursal disease virus (IBDV) belonging to genogroup A3B1 predominate in British broiler flocks

Vishwanatha Reddy Avalakuppa Papi Reddy, The Pirbright Institute or Keele University

81. Immunoprotection of broiler chickens against variant infectious bursa disease virus (varIBDV SK09) and associated B cell, T cell subsets and macrophage profile in the bursa of Fabricius Ayumi Matsuyama, *University of Saskatchewan* 

### Parasitology/Coccidiosis

- **82.** Effects of a proprietary essential oil product on body weight, feed conversion, and mortality of Ross **708** broilers that are either vaccinated or unvaccinated against coccidiosis at placement Sharon Heins Miller, *Devenish Nutrition LLC*
- **83.** Comparison of live attenuated and live-non attenuated vaccines on the safety of the administration of an overdose using the model of the European Monograph in SPF chickens

  Joan Molist, *Laboratorios HIPRA S.A.*
- 84. Comparative analysis of broiler chicken productivity following vaccination with different coccidiosis vaccines and using different administration methods

  Joan Molist, Laboratorios HIPRA S.A.
- **85.** Use of an attenuated Eimeria vaccine in broilers with in-ovo application for on-farm hatching Joan Molist, *Laboratorios HIPRA S.A.*
- **86. Single fecal collection for oocyst shedding does not predict infection for all Eimeria species** Robert Beckstead, *Ceva Animal Health, LLC*
- **87.** Prevalance of Gastro-Intestinal Parasites in Backyard Chicken at Bharatpur-11, Nepal Naresh Sah, *Nepal polytechnic Institute, College of Veterinary Science*
- **88.** Leucocytozoonosis: Diagnosis and PCR analysis in avian species in Canada Emily Martin, *Animal Health Laboratory*, *University of Guelph*

### Reovirus

89. Understanding the variability of avian reovirus through adaptation attempts of the virus by serial passages in cell culture and embryonated chicken eggs

Abdul Rehman Bilal, Department of Population Health and Reproduction, School of Veterinary Medicine, UC Davis

- **90.** Determination of Purity of an Avian Reovirus Isolate following Plaque Purification Zubair Khalid, *Auburn University*
- 91. Amino Acid Sequence Confirmation and Peptide Analysis of Avian Reovirus Proteins by Mass Spectrometry

Steven Conrad, USDA

92. Construction of recombinant Marek's disease virus vaccine expressing sigma C proteins of avian reoviruses

Taejoong Kim, Southeast Poultry Research Laboratory, US National Poultry Research Center, USDA-ARS

- **93.** Identification of the Role of Avian Reovirus Infection in Various Poultry Diseases in India Namdeo Bulbule, *Assistant General Manager*
- **94.** First Seroprevalence Survey of Avian Reovirus in Broiler Breeders Chicken Flocks in Morocco Ahmed Achhal, *Clinique vétérinaire Tit Mellil*
- 95. Correlation Study Exploring the Relationship Between Maternal Titer and Maternal Antibody Levels in Turkeys for Reovirus

Evan VanBeusekom, Hendrix Genetics - Hybrid Turkeys LLC

96. Genotypic and pathological characterization of emerging avian reoviruses isolated from clinical cases in Georgia, USA

Sujit Mohanty, USDA-ARS

97. Proteomics of Avian Reovirus

Telvin Harrell, United States Department of Agriculture

### Salmonella

98. Cross-protection conferred by a live-attenuated Salmonella Enteritidis vaccine against Salmonella Heidelberg and Salmonella Infantis challenge

Luiz Sesti, Ceva Animal Health

99. Evaluating Salmonella Serotype Bias in Various Enrichment Protocols

Katie Murray, Georgia Poultry Laboratory Network

100. A Novel Approach to the Salmonella ISR Genotyping of Field Isolates Using Nanopore Sequencing Technology

Scott Callison, Ceva Animal Health

101. Evaluation of different inactivated vaccines to control Salmonella on the performance and productivity of laying birds up to 37 weeks of age

Eva Hunka, Phibro Animal Health Corporation

102. Correlation between titers obtained in ELISA and Widal test for serological analysis of Salmonella groups B, C1 and D.

Eva Hunka, Phibro Animal Health Corporation

103. Live Salmonella Vaccine Compatibility with Competitive Exclusion Solution

Elizabeth Krushinskie, Food Safety Risk Management Consulting LLC

### Vaccinology

104. HVT-ILT-IBD: A Double Recombinant HVT-Based Vaccine for Protection Against IBDV and ILTV Plus Marek's Disease Virus

Paula Dyas, Merck Animal Health

105. Induction of protective mucosal immunity against avian coronavirus via nanoparticle-synchronized antigen and adjuvant delivery to the chicken Harderian gland

Hui-Wen Chen, National Taiwan University

106. Differences on Broilers Productive Performance Parameters Between Different Vaccination Protocols Against IBD and ND as Measured by a Statistical Analysis Model in Colombia

Camilo Andres Medina Santos

107. Comparison of two vaccination programs against fowl adenovirus serotype 8b (FAdV-8b) in broiler breeders in Peru

Bruno García, Ceva Animal Health Peru

108. Efficacy of different inactivated vaccines against infection with the B serovar variant of Avibacterium paragallinarum from Argentina in laying hens

Joan Molist, Laboratorios HIPRA S.A.

109. Correlation between the spray dye levels on the body of broilers and the corresponding viral load in the trachea 6 days after vaccination against Infectious Bronchitis Virus

Jose Emilio Dias, Phibro Animal Health, Instituto Federal Catarinense, Concórdia – SC, Brazil

110. Evaluation of vaccine take in commercial broilers flocks vaccinated with a homologous vaccine against Infectious Bronchitis Virus GI-23 lineage in Brazil

Jose Emilio Dias, Phibro Animal Health, Instituto Federal Catarinense, Concórdia – SC, Brazil

- **111.** Monitoring of a rHVT vaccine against Marek's disease and Avian Influenza H5 in Broiler Breeders Bruno García, *Ceva Animal Health Peru*
- **112.** Effects of homologous vaccination against IBV GI-23 lineage on tracheal lesion, serology, antibiotic therapy, mortality, and airsacculitis condemnation in commercial broiler flocks in Brazil Daiane Horn, *Universidade Federal do ParanÃi*, *Palotina PR*, *Brazil*
- **113.** Investigation of procedures and water quality impacting vaccine effectiveness in egg layers in Alberta Muhammad Farooq, *University of Calgary*
- 114. Preliminary Evaluation of InvG as a Novel Salmonella Vaccine Candidate: Immunogenicity and Efficacy in Layer Chickens

Roshen Neelawala, University of Florida

**115.** Control of a Respiratory Complex in a Highly Challenged Region in Layers in Mexico Francisco Rios-Cambre, *MSD Salud Animal Mexico* 

- 116. Before and after comparison from using Nobilis® SG9R on a commercial layer, using the Friedman test for repeated measurements, ANOVA non parametric equivalent of repeated measurements

  Camilo Andres Medina Santos
- **117.** Evidence of booster response of rFP-gB (ILT) in high ILT prevalence areas in Peru Claudia Carranza, *Ceva Salud Animal Peru*
- 118. Mucosal and Serum Antibody Responses Elicited by Single Vaccination with Recombinant LaSota Virus Expressing IBV Spike in Chickens with NDV Maternal Antibodies

Camila Cuadrado, Department of Pathobiology, College of Veterinary Medicine, Auburn University

### Virology

119. Respiratory and gastrointestinal microbiome analysis of chicken infected with infectious bronchitis virus (DMV/1639)

Heshanthi Herath, Faculty of Veterinary Medicine, University of Calgary

120. Inclusion Body Hepatitis (IBH) vaccines in Peru: an immunogenicity check

Claudia Carranza, Ceva Salud Animal - Peru

121. Vaccine Takes Evaluation of Turkey Herpesvirus vector - Newcastle Disease Recombinant Vaccine (HVT- ND) by Using on-site iiPCR Analyzer

Keat Fu, Aviagen Inc

122. US-UK Collab: Influence of vaccines, host genetics, and mutation rates on the evolution of infectious diseases

John Dunn, USDA-ARS, US National Poultry Research Center

123. Comparative Transcriptome Analysis of Chicken Embryos after Infection with Low Pathogenic Newcastle Disease Virus (LoNDV) from Wild Birds

Deepa Chaudhary, Auburn University

124. Genetic and pathogenic characterization of avian Paramyxovirus isolated from domestic birds in Perú (2004-2022)

María Eliana Icochea D'Arrigo, Universidad Nacional Mayor de San Marcos

125. Detection of Infections Laryngotracheitis Virus (ILTV) circulating in broilers with and without clinical signs

Jose Linares, Ceva Animal Health

126. Identification and Functional Characterization of a Virokine Homologous to Chicken Interleukin-4 in Infectious Laryngotracheitis Virus

Stephen Spatz, US National Poultry Research Center, ARS-USDA

127. Sequence and phylogenetic analyses of chicken astroviruses (CAstVs) detected at Mississippi State University between 2016 to 2023 and associated with digestive and hatchability issues.

Alejandro Banda, Poultry Research and Diagnostic Lab Mississippi State University

### 128. Molecular characterization of emerging variants of turkey coronavirus associated with outbreaks in turkeys in 2023

Muhammad Luqman, South Dakota State University

### Wealth of Knowledge

129. National Poultry Improvement Plan (NPIP): A Review of the Proposed Changes for the 46th Biennial Conference and the Federal Rulemaking Process

Elena Behnke, USDA APHIS VS NPIP

130. The Importance of Contact Time in Using Ultraviolet Light as a Disinfectant

Katherine Schaefbauer, Jennie-O Turkey Store

131. Multi-causal respiratory disease and co-infection profiles in Latin America (2nd semester 2023): Brazil, Colombia and Peru as examples

Adam Jbenyeni, Ceva Animal Health, France

132. Management of vaccination program against Infectious Bronchitis Virus as a tool to reduce antibiotic therapy in broilers in Brazil

Josiane Schuvank Maculan Salvo, Universidade Estadual do Centro Oeste (UNICENTRO) - Brazil

133. Developing Sterile Insect Technique (SIT)using Wolbachia for potential biocontrol of Litter beetles (Alphitobius diaperinus)

Teresa Dormitorio, Auburn University, Poultry Science Department

**134.** Significance of Biosecurity Audits in Addressing High Pathogenic Avian Influenza (HPAI) Challenges Mostafa Ghanem, *University of Maryland, College Park* 

135. The Great, the Good, the Untestable Serum

Jaime Hamrick, Georgia Poultry Laboratory Network

136. Safety in Necropsy: Human Protection for Poultry Dissection

Adriana Guzman, Georgia Poultry Laboratory Network

137. Part 2: NPIP Salmonella Program Overview Specific to Pullorum-Typhoid

Katy Burden, USDA NPIP

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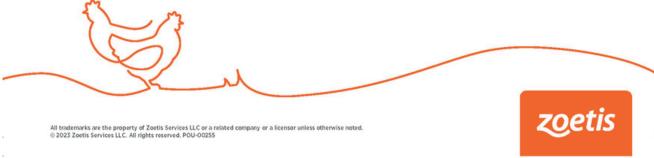


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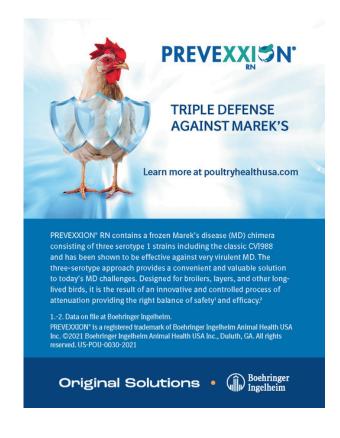
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