

▶ **AAAP Symposium**

Current Respiratory Challenges in Poultry  
A Perspective from the Field

○ JULY 29 - AUGUST 2 ○ 2022

# 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.**



Philadelphia, PA  
July 29 - August 2, 2022



**MERCK ANIMAL HEALTH**  
is the proud sponsor of the  
**SCIENTIFIC PROGRAM BOOK.**

THE SCIENCE OF HEALTHIER ANIMALS.

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US/ALL/0517/0034



# AAAP Event Schedule

## Saturday

### Scientific Symposium

11:30 AM: Philadelphia Convention Center 120 ABC  
Philadelphia Convention Center

### Opening Session

4:15 PM: Philadelphia Convention Center 120 ABC  
Philadelphia Convention Center

### Keynote Address

Douglas Fulnechek  
4:30 PM: Philadelphia Convention Center 120 ABC  
Philadelphia Convention Center

### Welcome Reception and Poster Session

5:15 PM: Broad Street Atrium  
Philadelphia Convention Center

## Sunday

### New Member Meet & Greet

5:30 PM: Philadelphia Ballroom South  
Sheraton Philadelphia Downtown Hotel

### Women's Network Dinner

6:30 PM: Horizons Rooftop Ballroom  
Sheraton Philadelphia Downtown Hotel

## Monday

### Yoga

6:30 AM: Horizons Rooftop Ballroom  
Sheraton Philadelphia Downtown Hotel

### History Lecture

Jim McKay  
10:15 AM: Philadelphia Convention Center 120 ABC  
Philadelphia Convention Center

### Business Meeting

10:45 AM: Philadelphia Convention Center 120 ABC  
Philadelphia Convention Center

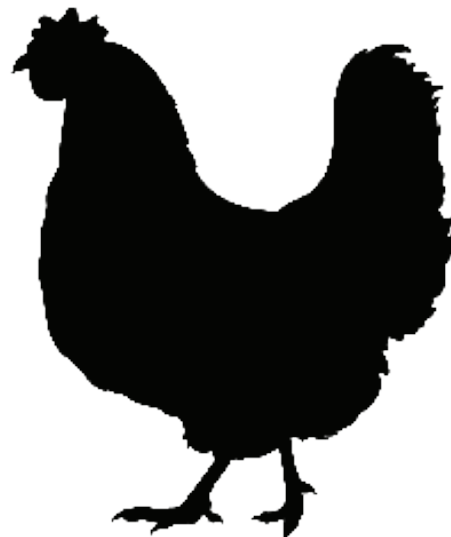
### Awards Reception & Dinner

5:30 PM: Liberty Ballroom Foyer  
6:00 PM: Liberty Ballroom  
Sheraton Philadelphia Downtown Hotel

## Tuesday

### Wellness Talk

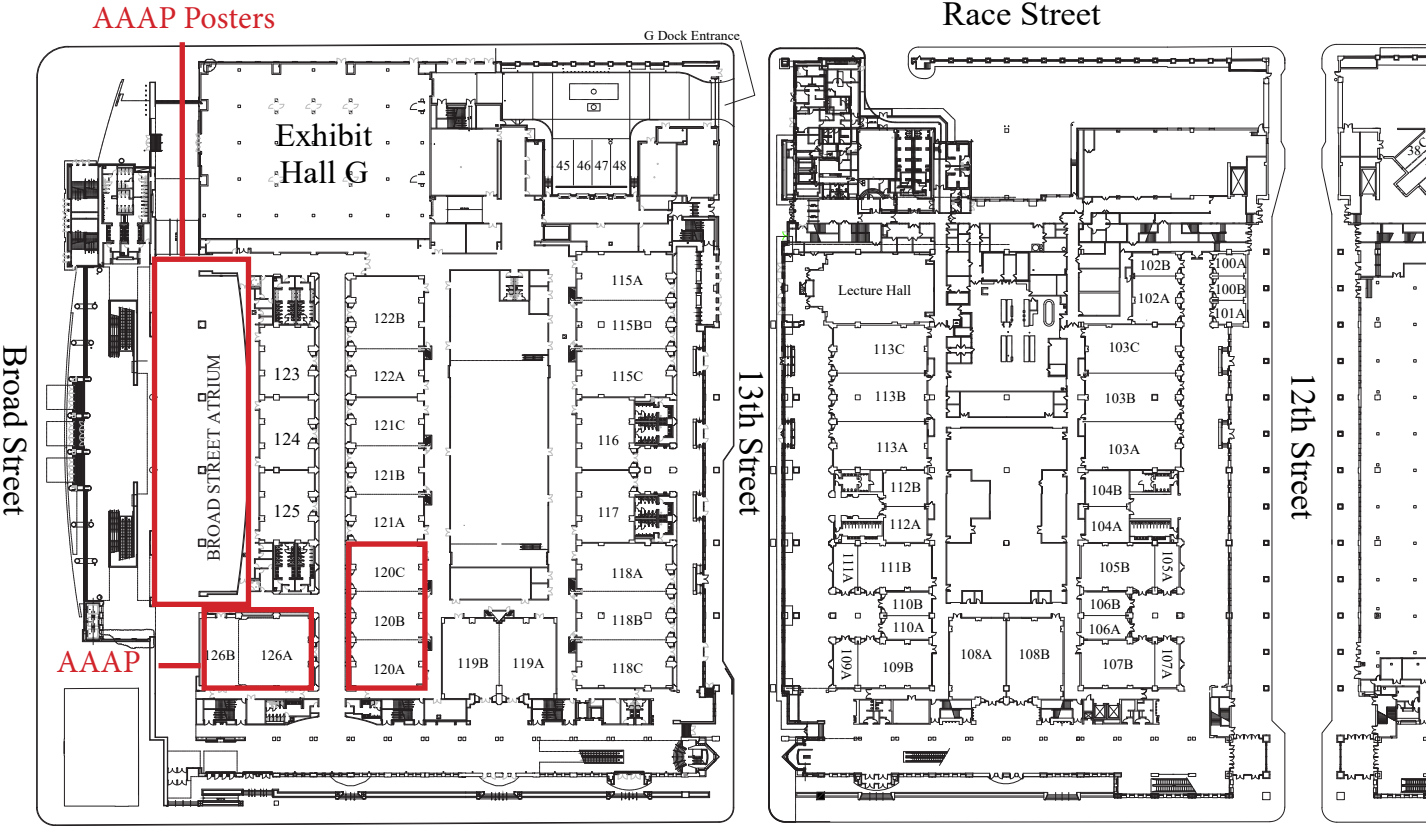
11:00 AM: Philadelphia Convention Center 120 ABC  
Philadelphia Convention Center



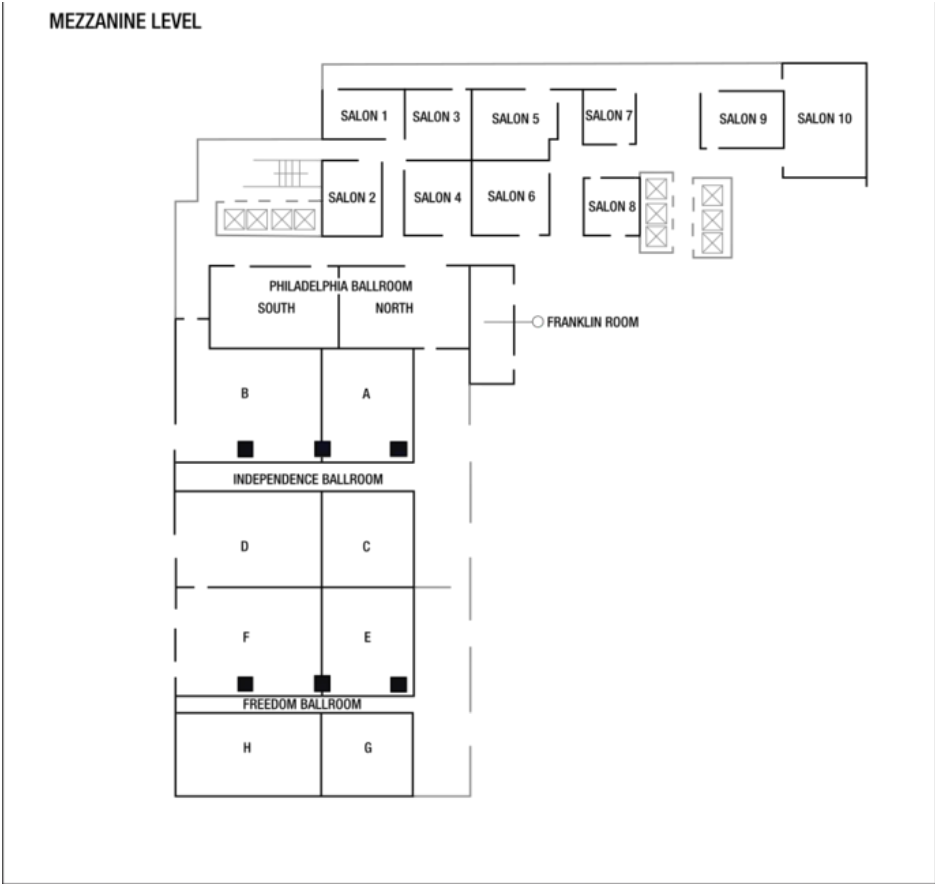
Name of Group	Meeting Date	Beg. Time	End Time	Location	Room
<b>AAAP Board of Directors Meetings</b>					
AAAP Inc. and Foundation Board of Directors	Friday, July 29	7:00 AM	5:00 PM	Sheraton	Parlor B
AAAP Past Presidents Luncheon	Monday, August 1	12:00 PM	1:30 PM	Sheraton	Salon 5-6
AAAP Committee Chairs and BOD Meeting	Tuesday, August 2	1:00 PM	5:30 PM	Sheraton	Salon 10
<b>Committee Meetings</b>					
Avian Diseases Editorial Board	Tuesday, July 12	9:00 AM	11:00 AM	Virtual	Virtual Meeting
Avian Diseases Advisory Board	Tuesday, July 12	11:00 AM	12:00 PM	Virtual	Virtual Meeting
Avian Diseases Reviewers Board	Tuesday, July 12	12:00 PM	1:00 PM	Virtual	Virtual Meeting
Preceptorship Committee	Wednesday, July 13	11:00 AM	12:00 PM	Virtual	Virtual Meeting
Diseases of Public Health Significance	Wednesday, July 20	2:00 PM	3:00 PM	Sheraton	Virtual Meeting
History Committee	Monday, July 25	4:00 PM	5:00 PM	Virtual	Virtual Meeting
Small Flocks Committee	Saturday, July 30	8:00 AM	9:00 AM	Sheraton	Freedom Ballroom E
Respiratory Diseases Committee	Saturday, July 30	8:00 AM	9:00 AM	Sheraton	Independence Ballroom AB
Education Committee	Saturday, July 30	8:00 AM	9:00 AM	Sheraton	Freedom Ballroom F
AAAP Auditing Committee	Saturday, July 30	8:00 AM	9:00 AM	Sheraton	Salon 2
Avian Diseases Manual Editorial Board	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Salon 5
Diversity & Inclusion Committee Meeting	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Independence Ballroom C
Animal Welfare Committee	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Philadelphia Ballroom North
AAAP Foundation Scholarship Committee	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Independence Ballroom D
Awards Committee	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Salon 6
LAC Committee	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Salon 10
Outreach Committee	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Salon 9
Membership Committee	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Philadelphia Ballroom South
Food Safety Committee	Saturday, July 30	9:00 AM	10:00 AM	Sheraton	Freedom Ballroom F
Research Priorities Committee	Saturday, July 30	10:00 AM	11:00 AM	Sheraton	Salon 10
Epidemiology Committee	Saturday, July 30	10:00 AM	11:00 AM	Sheraton	Freedom Ballroom F
Tumor Virus Committee	Saturday, July 30	10:00 AM	11:00 AM	Sheraton	Freedom Ballroom GH
Enteric Diseases Committee	Saturday, July 30	10:00 AM	11:00 AM	Sheraton	Philadelphia Ballroom North
Toxic, Infectious, Miscellaneous & Emerging Diseases Committee	Saturday, July 30	10:00 AM	11:00 AM	Sheraton	Independence Ballroom AB
Therapeutics, Biologics and Bioprotection Committee	Saturday, July 30	10:00 AM	11:00 AM	Sheraton	Freedom Ballroom E
AAAP Foundation Development Committee	Saturday, July 30	10:00 AM	11:00 AM	Sheraton	Independence Ballroom C

<b>Program Events</b>					
Scientific Program Poster Room	Friday, July 29	8:00 AM	5:00 PM	PCC	Broad Street Atrium
Histopathology/Case Report Interest Group	Friday, July 29	1:00 PM	5:00 PM	Marriott	Franklin Hall 13
Small Flocks Interest Group	Friday, July 29	1:00 PM	5:00 PM	Marriott	Franklin Hall 12
Mentor/Mentee Breakfast (Invitation Only)	Saturday, July 30	7:00 AM	8:00 AM	Sheraton	Horizons Rooftop Ballroom
AAAP Committee Chair/BOD Meeting	Saturday, July 30	7:00 AM	8:00 AM	Sheraton	Philadelphia Ballroom North
AAAP Symposium	Saturday, July 30	11:30 AM	4:00 PM	PCC	120 ABC
AAAP Opening Session	Saturday, July 30	4:15 PM	4:30 PM	PCC	120 ABC
AAAP Scientific Program Keynote Address	Saturday, July 30	4:30 PM	5:15 PM	PCC	120 ABC
AAAP Welcome Reception and Poster Session	Saturday, July 30	5:15 PM	6:30 PM	PCC	Broad Street Atrium
AAAP Diversity & Inclusion Dinner and Meeting	Saturday, July 30	6:30 PM	8:00 PM	Sheraton	Philadelphia Ballroom North
AAAP New Member Meet & Greet	Sunday, July 31	5:30 PM	6:30 PM	Sheraton	Philadelphia Ballroom South
AAAP Women's Network Committee Meeting	Sunday, July 31	6:30 PM	9:00 PM	Sheraton	Horizons Rooftop Ballroom
Yoga	Monday, August 1	6:30 AM	7:30 AM	Sheraton	Horizons Rooftop Ballroom
AAAP Lasher-Eckroade History Lecture	Monday, August 1	10:15 AM	10:45 AM	PCC	120 ABC
AAAP Business Meeting	Monday, August 1	10:45 AM	12:00 PM	PCC	120 ABC
AAAP Awards Reception before Dinner	Monday, August 1	5:30 PM	6:00 PM	Sheraton	Liberty Ballroom Foyer
AAAP Awards Banquet	Monday, August 1	6:00 PM	8:00 PM	Sheraton	Liberty Ballroom A
Wellness Talk	Tuesday, August 2	11:00 AM	12:00 PM	PCC	120 ABC
<b>ACPV</b>					
ACPV Board of Governors Meeting	Monday, August 1	7:00 AM	10:00 AM	Sheraton	Independence Ballroom C
ACPV Annual Meeting/Breakfast	Tuesday, August 2	7:00 AM	8:30 AM	Sheraton	Horizons Rooftop Ballroom
<b>Invitation Only</b>					
Association of Veterinarians in Broiler Production Meeting	Friday, July 29	8:00 AM	3:00 PM	Marriott	Grand Ballroom E
Association of Veterinarians in Turkey Production	Friday, July 29	8:00 AM	5:00 PM	Marriott	Grand Ballroom A
Association of Veterinarians in Egg Production	Friday, July 29	12:00 PM	5:00 PM	Marriott	Grand Ballroom F
Association of Poultry Primary Breeder Veterinarians	Saturday, July 30	11:30 AM	1:30 PM	Sheraton	Philadelphia Ballroom South
NC Veterinarians and NCSU Students and Alumni	Sunday, July 31	7:00 AM	8:00 AM	Sheraton	Independence Ballroom C
MAM and MAHM Alumni Association	Tuesday, August 2	5:30 PM	7:00 PM	Sheraton	Philadelphia Ballroom North

# Convention Center



# Sheraton Philadelphia Downtown



**2021-2022  
AAAP Foundation  
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[www.aaap.info/foundation](http://www.aaap.info/foundation)

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**AAAP Representatives to AVMA**

**AVMA Animal  
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Lloyd Keck 2023  
Joel Cline 2023 (Alternate)

**AVMA Animal  
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Nancy Reimers 2022 (Alternate)

**AVMA Clinical Practitioners  
Advisory Committee**

Rick Phillips 2020  
Megan Lighty 2021 (Alternate)

**AVMA Committee for Disaster and  
Emergency Issues**

Brian Wooming 2022

**AVMA Committee on Antimicrobials**

Randall Singer 2022  
Hector Cervantes 2022 (Alternate)

**AVMA Convention  
Education Program Committee**

Natalie Armour 2024  
Tak Ninno 2024 (Alternate)

**AVMA Food Safety  
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Douglas Fulnecheck 2023  
Daniel Wilson 2022 (Alternate)

**AVMA House of Delegates**

Katherine Weathers 2022

**AVMA Legislative  
Advisory Committee**

Suzanne Y. Dougherty 2022  
Jose Linares 2022 (Alternate)

**AAAP Representatives to Allied Organizations**

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

Mohamed El-Gazzar 2022

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

David A. Pyle 2022

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

Randall Singer 2022

**United States Animal Health  
Association (USAHA)**

Eric Gingerich 2022

**International Poultry Welfare Alliance  
(IPWA)**

Ken Opengart 2022

**Animal Agriculture Coalition  
(AAC)**

Jose Linares 2022

**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

**Center for Disease Control (CDC)**

Denise Heard 2023

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**Awards**

Hector Cervantes 2022

**Kenneth Eskelund Preceptorship**

Karen Grogan 2022

**Poultry Scholarship**

Francene Van Sambeek 2022

**Development Committee**

Geoffrey Lossie 2023

**Avian Bioscience Travel Scholarship**

Erica Spackman 2023

## AAAP Constitutional Committee Chairs

[www.aaap.info/committees](http://www.aaap.info/committees)

### Auditing

Karen Burns Grogan

### Nominating

Eric Jensen

### Resolutions

Frederic J. Hoerr

## AAAP Task Force Committee Chairs

### Animal Welfare and Management Practices

Sara Reichelt 2022

### Bylaws Review

Patty Dunn 2024

### Diseases of Public Health Significance

Claude Hebron 2024

### Diversity & Inclusion

Valerie Marcano 2023

### Therapeutics, Biologics, and Bioprotection

Eric Gonder 2022

### Education

Teresa Morishita 2022

### Enteric Diseases

Alex Zocche 2022

### Epidemiology

Louise Dufour-Zavala 2022

### Food Safety

Bob Evans 2022

### History of Avian Medicine

Yuko Sato 2022

### Legislative Advisory

Suzanne Dougherty 2026

### Membership

Julie Kelly 2022

### Program Advisory

Natalie Armour 2024

### Respiratory Diseases

Rodrigo Gallardo 2024

### Research Priorities

Joel Cline 2023

### Tumor Virus

Algis Martinez 2024

### Toxic, Infectious, Miscellaneous and Emerging Diseases

Elizabeth Beilke 2024

### Small Flocks

Annika McKillop 2022

### Women's Network

Holly Sellers 2022

### Outreach

Bernard Beckman 2022

### Committee Review

Bruce Stewart-Brown

## 2021-2022 AAAP

### Board of Directors

[www.aaap.info/aaap-board-of-directors](http://www.aaap.info/aaap-board-of-directors)

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AAAP President 2023

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### Julie Helm

Director 2024

### Holly Sellers

Associate Member Director 2024

### Naola Ferguson-Noel

Director 2025

### Simone Stoute

Director 2025

### Ashley Hallowell

Student Director 2022

## AAAP Publication Board Chairs

### Avian Diseases Advisory Board

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### Avian Diseases Editorial Board

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### Avian Diseases Manual

Martine Boulianne

### Avian Histopathology Manual Board

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### Gross Pathology of Avian Disease

Tahseen Abdul-Aziz

### Biosecurity Manual Board

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### Diseases of Poultry Editorial Board

David E. Swayne

### Isolation of Avian Pathogens Manual Board

Susan Williams

# Saturday, July 30, 2022

## AAAP Symposium: Current Respiratory Challenges in Poultry...A Perspective from the Field

Room	120ABC
11:30 AM	<b>Introduction and Welcome</b> Dr. Rodrigo Gallardo
Moderator	Dr. Alejandro Banda
11:35 AM	<b>Effects of the House of Environment Management on Respiratory Health</b> Dr. Guillermo Zavala, <i>Avian Health International, LLC</i>
12:05 PM	<b>New Developments on Mass Vaccine Application Methods</b> Dr. Brian Jordan, <i>University of Georgia</i>
Moderator	Dr. Mark Jackwood
12:35 PM	<b>Discussion Panel on Current Problems Associated with Infectious Bronchitis</b> Panelists: Dr. Phil Stayer, <i>Sanderson Farms</i> Dr. David French, <i>University of Georgia</i> Dr. Carl Heeder, <i>Mountaire Farms</i> Dr. Deirdre I. Johnson, <i>Perdue Farms</i> Dr. Charles Corsiglia, <i>Foster Farms</i> Dr. Tyler Gamble, <i>Pilgrims</i>
1:15 PM	Break
Moderator	Dr. Simone Stoute
1:30 PM	<b>Current Topics on Fowl Cholera</b> Dr. Mark Bland, <i>Cutler Associates</i>
2:10 PM	<b>New developments on infectious coryza</b> Dr. Rodrigo Gallardo, <i>University of California, Davis</i>
2:40 PM	<b>Major respiratory issues of turkeys</b> Dr. Eric Gonder, <i>Butterball</i>
Moderator	Dr. Maricarmen Garcia
3:10 PM	<b>Discussion Panel on current problems associated with infectious laryngotracheitis</b> Panelists: Dr. Louise Dufour-Zavala, <i>Georgia Poultry Lab</i> Dr. Mark Burleson, <i>Wayne Farms</i> Dr. Donald Ritter, <i>Poultry Business Solutions LLC</i> Dr. Nancy Reimers, <i>Cutler Associates</i>
3:50 PM	<b>Final Announcements</b> Dr. Rodrigo Gallardo
4:00 PM	Adjourn

## Scientific Program Begins

Room	120ABC
4:15 PM	<b>Opening Session</b>
4:30 PM	<b>Keynote Speaker:</b> Douglas Fulnechek, <i>Zoetis</i> <b>Poultry, Salmonella, Campylobacter, and Food Poisoning</b>
5:15 PM	<b>Welcome Reception &amp; Poster Session</b>



# Sunday, July 31, 2022

Room	120 ABC	126 AB
Topic	Avian Influenza	Enteric Health
Moderator	Christina Leyson	John Schleifer
8:00 AM	<p><b>Session Keynote:</b>  <b>Global Evolution and Intercontinental Spread of H5Nx clade 2344b High Pathogenicity Avian Influenza Viruses since 2020</b>            David Swayne, <i>US Department of Agriculture</i></p>	<p><b>Comparison of Antimicrobial Susceptibility Testing of Clostridium perfringens by the Agar Dilution and the Broth Microdilution Methods</b>            Martine Boulianne, <i>Université de Montréal</i></p>
8:15 AM		<p><b>Natural Prevention of Coccidiosis and Necrotic Enteritis in Experimentally Infected Broilers and Analysis of Gene Expression in Intestinal Tissue Samples</b>            Felipe Mendy, <i>BIOVET S.A.</i></p>
8:30 AM	<p><b>Evaluation of Licensed and In-House Vaccines Against Recent H5 Low Pathogenicity Avian Influenza viruses</b>            Miria Criado, <i>University of Georgia</i></p>	<p><b>Effect of A Feed Sanitizer on The Control of Necrotic Enteritis in Broilers</b>            Enrique Montiel, <i>Anitox Corporation</i></p>
8:45 AM	<p><b>Effect of co-infection of low pathogenic avian influenza H9N2 virus and Avian pathogenic E. coli on H9N2 vaccinated commercial broiler chickens.</b>            Wael Elfeil, <i>Suez Canal University</i></p>	<p><b>Experiences using a Recombinant Attenuated Salmonella Vaccine to control Necrotic Enteritis in Commercial Broilers</b>            Andrea Zedek, <i>Huvepharma</i></p>
9:00 AM	<p><b>Development and Characterization of a Non-transmissible H5N2 Live Attenuated Avian Influenza Virus Vaccine Based on Altered Viral M2/M42 Ion Channel Expression That Protects Against Highly Pathogenic Virus Challenge</b>            Darrell Kapczynski, <i>USDA-ARS-Southeast Poultry Research Laboratory</i></p>	<p><b>Beneficial effects of tea extract and cinnamon oil on avian coccidiosis</b>            Inkyung Park, <i>USDA-ARS</i></p>
9:15 AM	<p><b>Phylogenetic analysis of H5N1 clade 2.3.4.4b HPAI viruses in wild birds and poultry in US in 2022</b>            Sungsu Youk, <i>U.S. National Poultry Research Center, ARS-USDA</i></p>	<p><b>The impact of Salmonella Typhimurium and coccidiosis vaccine on microbiome and intestinal integrity markers in broiler chickens</b>            Andrea Pietruska, <i>Auburn University</i></p>
9:30 AM	<p><b>Investigation of a Low Path Influenza Outbreak on a Turkey Breeder Farm</b>            Marion Garcia, <i>Hybrid Turkeys</i></p>	<p><b>Differential Analysis of Jejunal mRNA of Broiler Chickens Challenged with Eimeria maxima with or without Clostridium perfringens</b>            Nima Emami, <i>University of Georgia</i></p>
9:45 AM	<p><b>Dust as a Vehicle and Surveillance Sample of H5N8 Highly Pathogenic Avian Influenza Virus (Clade 2.3.4.4b) in Poultry Farms, France, 2021</b>            Jean-Luc Guerin, <i>ENVT, University of Toulouse</i></p>	<p><b>Identification of arthropod vectors of Histomonas meleagridis and Heterakis gallinarum in broiler breeder farms</b>            Maria Tereza Bethonico Terra, <i>Auburn University</i></p>
10:00 AM	<b>Break</b>	
Topic	Avian Influenza	Enteric Health
Moderator	Darrell Kapczynski	Enrique Montiel
10:15 AM	<p><b>Temperature and pH stability of low and high pathogenicity avian influenza viruses</b>            Christina Leyson, <i>Southeast Poultry Research Laboratory</i></p>	<p><b>Focal Duodenal Necrosis: identification of Gram-negative rod-shaped bacteria in intestinal lesions</b>            Yu-Yang Tsai, <i>The University of Georgia</i></p>

10:30 AM	<b>Addressing common obstacles to bird transfer movements during a highly pathogenic avian influenza outbreak – a cross-commodity approach</b> Rosemary Marusak, <i>University of Minnesota</i>	<b>An Update on Turkey Viral Enteritis Diagnostic Cases in Commercial Turkey Poults in California</b> Shayne Ramsubeik, <i>California Animal Health and Food Safety Laboratories Turlock, UC Davis</i>
10:45 AM	<b>Comparison of the pathogenicity in chickens and turkeys of a US 2022 wild bird H5N1 HPAI virus, clade 2.4.4.4b, and two previous clade 2.3.4.4 H5N8 HPAI viruses</b> Mary Pantin-Jackwood, <i>Southeast Poultry Research Laboratory</i>	<b>Surveillance and diagnosis of turkey coronavirus using environmental bootie swabs</b> Becky Tilley, <i>Butterball LLC</i>
Topic	<b>Immunology</b>	<b>Salmonella</b>
Moderator	Darrell Kapczynski	Enrique Montiel
11:00 AM	<b>Development of a High Interferon-Inducing Live Attenuated Influenza Vaccine for In Ovo Vaccination of Chickens</b> Amir Ghorbani, <i>The Ohio State University</i>	<b>Understanding NPIP's Pullorum-Typhoid Clean Programs</b> Elena Behnke, <i>USDA National Poultry Improvement Plan</i>
11:15 AM	<b>Systemic and mucosal lymphoid immune responses during Clostridium perfringens-induced necrotic enteritis in broiler chickens</b> Ravi Kulkarni, <i>North Carolina State University</i>	<b>Genetic characterization of Salmonella Infantis recovered from comminuted turkey samples collected by the USDA Food Safety and Inspection Service between 2019 and 2021</b> Roxana Sanchez-Ingunza, <i>RSI Poultry Veterinary Consulting LLC</i>
11:30 AM	<b>Characterizing Pro- and Anti-viral Mirna Regulated Pathways for Newcastle Disease Virus Replication</b> Abhijeet Bakre, <i>USDA</i>	<b>Impact of a New Vaccination Approach in Pullets and Broiler Breeder Layers to Reduce Salmonella Contamination in Broilers.</b> Jaime Ruiz, <i>Elanco Animal Health</i>
11:45 AM	<b>How Many Antigens Can You Give a Pullet: A Field Study Assessing How Multiple Vaccines Influence Antibody Titers</b> Gunnar Dunnam, <i>Mississippi State University</i>	<b>Comparison of Whole Cell Bacteria and SRP Salmonella Vaccines in Broiler Chickens: Evaluation of Protection Against Homologous and Heterologous Salmonella Strains</b> G Ritter, <i>Poultry Business Solutions LLC</i>
12:00 PM	<b>Lunch Break</b>	
Room	<b>120 ABC</b>	
Topic	<b>HPAI Focus</b>	
Moderator	Ivan Alvarado	
1:00 PM	<b>Vaccine Options for Highly Pathogenic Avian Influenza in the United States</b> David Suarez, <i>USDA</i>	
Room	<b>120 ABC</b>	<b>126 AB</b>
Topic	<b>Vaccinology</b>	<b>Case Reports</b>
Moderator	Ivan Alvarado	Yuko Sato
1:15 PM	<b>Pasteurella multocida Vaccines with Lower or No Post Vaccination Reaction Adjuvants in a Fowl Cholera Challenge Model</b> Charles Hofacre, <i>Southern Poultry Research Group, Inc.</i>	<b>Outbreak Of Multiple Subtypes Of Low-Pathogenic Avian Influenza In Waterfowl And Gamebird Flocks</b> Carmen Jerry, <i>UC Davis</i>
1:30 PM	<b>Experiences with a safe live Pasteurella multocida vaccine</b> Chris Morrow, <i>Bioproperties</i>	<b>Case Report: Investigating Unusual Outbreaks of Neurologic Disease in Broiler Chickens</b> Natalie Armour, <i>Mississippi State University</i>
1:45 PM	<b>Vaccination Trials in a Midwestern Heavy Tom Complex Using a Clostridium septicum Bacterin/Toxoid</b> Andrew Smith, <i>Butterball</i>	<b>My Birds Seemed Terrified!</b> Martha Pulido Landinez, <i>Mississippi State University</i>

2:00 PM	<b>Development of a Novel Vaccine Strategy Against Necrotic Enteritis by Synergizing Immune-enrichment and Immunostimulation in Broiler Chicks</b> Hemlata Gautam, <i>University of Saskatchewan, Canada</i>	<b>Cleaning up an Outbreak</b> Laura Tensa, <i>Cargill</i>
2:15 PM	<b>Effect of Coccidial Vaccines on the Stability of Salmonella and Viral Live Attenuated Vaccines</b> Alejandro Banda, <i>Mississippi State University</i>	<b>Histomonas meleagridis outbreak &amp; transmission pathway investigation on a private farm in Tennessee, United States</b> Richard Gerhold, <i>University of Tennessee College of Veterinary Medicine</i>
2:30 PM	<b>The Case of the Missing Intestines: Peck-Outs in Broiler Breeders</b> Christina Lindsey, <i>Aviagen</i>	<b>A Pestilential Poult Problem</b> Jacob Carlson, <i>Select Genetics</i>
2:45 PM	<b>Protection of Ultifend® &amp; Rispens vaccine against Infectious Bursal Disease Virus Variant E Challenge</b> Olivia Faulkner, <i>Ceva</i>	<b>Case report: Clinical investigation of a turkey barn with a recurrent history of histomoniasis</b> Vijay Durairaj, <i>Huvepharma Inc</i>
3:00 PM	<b>Break</b>	
<b>Room</b>	<b>120 ABC</b>	<b>126 AB</b>
<b>Topic</b>	<b>Reovirus</b>	<b>Case Reports</b>
<b>Moderator</b>	Richard Fulton	Jarra Jagne
3:15 PM	<b>Genetic and Antigenic Relatedness of Avian Reovirus Variants</b> Sofia Egana, <i>UC Davis</i>	<b>Increased Cull Eggs in an Upper Midwest Turkey Breeder Operation</b> Benjamin Wileman, <i>Select Genetics</i>
3:30 PM	<b>Antigenic Variation and In Vitro Neutralization of Avian Reovirus Isolates from Mississippi</b> Rebecca Mackey, <i>Poultry Research and Diagnostic Lab, Mississippi State University</i>	<b>Investigation into an Outbreak of Turkey Coronavirus and Histomonas Infections on Several Turkey Farms</b> Brian Wooming, <i>Cargill Protein</i>
3:45 PM	<b>Genetic, Antigenic, and Pathotypic characterization of newly emerging Turkey Hepatitis Reovirus</b> Sunil Mor, <i>University of Minnesota</i>	<b>Investigating urolithiasis in broiler breeders</b> Randi Clark, <i>Sanderson Farms</i>
<b>Topic</b>	<b>Diagnostics</b>	<b>Case Reports</b>
<b>Moderator</b>	Richard Fulton	Jarra Jagne
4:00 PM	<b>Session Keynote:</b> <b>Get the flu out of here...HPAIV environmental stability in outbreak waste and environmental testing strategies</b> Erica Spackman, <i>SEPRL-USDA-ARS</i>	<b>Broiler breeder pullets: wrong diet, high mortality, unusual lesions!</b> Tahseen Abdul-Aziz, <i>Rollins Animal Disease Diagnostic Laboratory</i>
4:15 PM		<b>Case Report: Kinda Wish it was the M Word!</b> Sara Throne, <i>Simmons Foods Inc</i>
4:30 PM	<b>Nanopore Sequencing: A Promising Tool for Fast Identification and Accurate Characterization of IBV Directly From Clinical Samples</b> Brittany Skaggs, <i>Iowa State University College of Veterinary Medicine</i>	<b>Case Report: HPAI in a Maryland Broiler Farm</b> Michael Quist, <i>University of Georgia, PDRC</i>
4:45 PM	<b>Fast Identification of Emerging Avian Viruses Using Nanopore Sequencing Device</b> Guillaume Croville, <i>ENVT - University of Toulouse</i>	<b>What Are Your Chickens Drinking?</b> Kurt Dobson, <i>George's Inc.</i>

# Monday, August 1, 2022

Room	120 ABC	126 AB
Topic	<b>Diagnostics</b>	<b>Case Reports</b>
Moderator	Christina Lindsey	Carrie Cremers
8:00 AM	<b>This is How Today's Commercial Meat type and Egg Type Chickens Became ALV-Free</b> Guillermo Zavala, <i>Avian Health International, LLC</i>	<b>Case Report of Lessons Learned with Mycoplasma Synoviae Surveillance</b> Philip Stayer, <i>Sanderson Farms</i>
8:15 AM	<b>Biomarkers for Rapid Identification of White Chick Syndrome (Astrovirus) Cases at the Hatchery</b> Daniel Venne, <i>Couvoir Scott Itée</i>	<b>Epidemiologic Considerations from an HPAI outbreak in Dubois County Indiana</b> Duane Murphy, <i>Farbest Farms</i>
8:30 AM	<b>Infectious bronchitis virus and chicken laryngotracheitis infectious virus in backyard poultry located around breeder poultry farms in Brazil</b> Helena Lage Ferreira, <i>University of Sao Paulo</i>	<b>Reed Rumsey Award Winner: A peculiar Avibacterium paragallinarum Infection in Layers with Complete Absence of any Clinical Presentation of Infectious Coryza</b> Amro Hashish, <i>Iowa State University</i>
Topic	<b>Epidemiology</b>	<b>Pathology</b>
Moderator	Christina Lindsey	Carrie Cremers
8:45 AM	<b>Epidemiological investigation of MS in broiler breeders using the 14 NPIP biosecurity principles</b> Louise Dufour-Zavala, <i>GPLN</i>	<b>West Nile Virus Infection in a Developer Pekin Duck Flock</b> Richard Fulton, <i>Michigan State University</i>
9:00 AM	<b>Development of a multilocus sequence typing scheme for Avibacterium paragallinarum</b> Mostafa Ghanem, <i>University of Maryland-College Park</i>	<b>Reoccurrence of West Nile Virus Infection in Pekin Breeder Ducks Associated with a Drop in Egg Production</b> Mayra Tsoi, <i>Michigan State University</i>
9:15 AM	<b>A time-space investigation for better understanding the epidemiology of Ornithobacterium rhinotracheale in commercial turkeys in Iowa</b> Yuko Sato, <i>Iowa State University</i>	<b>An unusual case of systemic Histomoniasis in a backyard turkey poult</b> Emily Pittman, <i>Georgia Poultry Laboratory Network</i>
9:30 AM	<b>Multistate Psittacosis Outbreak at Chicken Slaughter Plants— Virginia and Georgia, 2018</b> Christine Szablewski, <i>CDC</i>	<b>Black Livers at Processing in Broiler Chickens</b> Veronica Nguyen, <i>Department of Population Health and Reproduction, UC Davis School of Veterinary Medicine</i>
9:45 AM	<b>Turkey Coronavirus Enteritis: Lessons and Experiences From the Field</b> Eric Orozco, <i>Butterball</i>	<b>Spontaneous Testicular Teratoma and Facial Xanthomas in a Spitzhauben Rooster</b> Jarra Jagne, <i>Cornell University Animal Health Diagnostic Center</i>
10:00 AM	<b>Break</b>	
Room	<b>120 ABC</b>	
10:15 AM	<b>History Lecture: The History of Poultry Breeding</b> Jim McKay, <i>EW Group</i>	
10:45 AM	<b>Business Meeting</b>	
12:00 PM	<b>Lunch</b>	
Room	<b>120 ABC</b>	
Topic	<b>HPAI Focus</b>	
Moderator	Alejandro Banda	
1:00 PM	<b>Epidemiology of the 2022 H5N1 HPAI outbreak in the U.S.</b> Julie Gauthier, <i>USDA</i>	

Room	120 ABC	126 AB
Topic	Infectious Bronchitis Virus	Coccidiosis
Moderator	Alejandro Banda	Jaime Ruiz
1:15 PM	<b>Session Keynote:</b> <b>IBV surveillance as a tool in a disease prevention program</b> Rodrigo Gallardo, <i>University of California, Davis</i>	<b>Session Keynote:</b> <b>Using Eimeria Lesion Scores and Fecal Oocyst Counts in Addition to Final Body Weight as Parameters in Floor Pen Studies</b> Rüediger Hauck, <i>Auburn University</i>
1:30 PM		
1:45 PM	<b>Assessment of infectious bronchitis virus (IBV) exposure risks in broiler chicken using spatial analysis, machine learning, and risk factor analysis.</b> Andrea Arruda, <i>The Ohio State University</i>	<b>OPGs: What do they mean?</b> Hector Cervantes, <i>The University of Georgia</i>
2:00 PM	<b>Proactive management of Infectious Bronchitis Virus (IBV) challenge in commercial broilers: Lessons learned from field cases</b> Matilde Alfonso, <i>Ceva Animal Health</i>	<b>Validation a Portable Cell Counter for Enumeration of Eimeria species of Chickens</b> Rocio Crespo, <i>North Carolina State University</i>
2:15 PM	<b>Comparison of Infectious Bronchitis Virus Surveillance Profiles in Layers, Broiler Breeders, and Broilers</b> Brian Jordan, <i>The University of Georgia</i>	<b>Evaluation of Litter Moisture Analyzers and the Effects of Litter Moisture on Cycling of Coccidiosis Vaccine</b> Nicholas Brown, <i>Huvepharma Inc</i>
2:30 PM	<b>The Costs of Controlling DMV/1639: A Comparison of Vaccination Strategies and Their Effects on Broiler Livability, Vaccine Clearance, and Performance</b> Blayne Mozisek, <i>Merck Animal Health</i>	<b>Analyzing Nanopore NGS Data of Vaccine and Field Isolate Eimeria for Identification</b> Benjamin Jackwood, <i>UGA</i>
2:45 PM	<b>Evaluating the Effects of IBV Maternal Antibodies on the Development of False Layer Syndrome</b> Adrea Mueller, <i>University of Georgia</i>	<b>In Ovo Vaccination of Chickens Against Eimeria Maxima Infection Using Recombinant EmaxIMP1 Protein Linked to Nanoparticles</b> Mark Jenkins, <i>ARS-USDA</i>
3:00 PM	<b>Break</b>	
Topic	Infectious Bronchitis Virus	Coccidiosis
Moderator	Brian Jordan	Don Ritter
3:15 PM	<b>Vaccine Interaction and Protection Elicited by IBV Maternal Antibodies Against Early Challenge with DMV/1639</b> Rachel Jude, <i>University of California, Davis</i>	<b>Control of Poultry Coccidiosis by Vaccination in Pigmented Broilers in Mexico</b> Francisco Rios-Cambre, <i>MSD Salud Animal Mexico</i>
3:30 PM	<b>Evaluation of antibody response and virus shedding following Infectious Bronchitis Virus (IBV) vaccination with Ma5 and DMV/1639 in SPF layers</b> Roel Becerra, <i>University of Georgia Poultry Diagnostic &amp; Research Center</i>	<b>Everything Comes Down to Poo - Most Effective Form of Vaccination Application Using a Commercially Available Live Coccidia Vaccine</b> Jolene Tourville, <i>Jennie-O Turkey Store</i>
3:45 PM	<b>Infectious Bronchitis ELISA antibody titers as an indicator of productive impact in naturally infected broiler flocks</b> Jorge Chacon, <i>Ceva Animal Health</i>	<b>Comparison of Broiler Performance Between Various Coccidia Vaccination Programs Using a Novel Rapid Oocyst-Per-Gram Enumeration Method</b> Andrew Bishop, <i>Amick Farms</i>
4:00 PM	<b>Tracing Genomic Mutations in Spike Proteins of Infectious Bronchitis Virus (IBV) for Predictions of Neutralizing Epitopes and/or Vaccine Development</b> Kim Bouwman, <i>University of Georgia</i>	<b>Effect of a Blend of Essential Oils on Growth Performance and Intestinal Lesions during a mixed Eimeria Challenge or Vaccination in Two Studies</b> Sharon Heins Miller, <i>Devenish Nutrition LLC</i>

4:15 PM	<b>Assessment of mixing coccidia and infectious bronchitis live vaccines for day of age application in chickens</b> Robert Beckstead, <i>Ceva Animal Health</i>	<b>The Impact of Coccidiosis Control Programs on the Field Performance of US Poultry Farms</b> Ha-Jung Roh, <i>Merck Animal Health</i>
Topic	<b>Wealth of Knowledge</b>	<b>Coccidiosis</b>
Moderator	Brian Jordan	Don Ritter
4:30 PM	<b>Changes to the 2021 OIE Chapter on Avian Influenza and the Economic and Trade Impacts of High Pathogenicity Avian Influenza on the U.S. Poultry Industry</b> Fidelis Hegngi, <i>USDA, APHIS</i>	<b>Production of chicken tumor necrosis factor-<math>\alpha</math> (TNF-<math>\alpha</math>) in coccidiosis and necrotic enteritis</b> Hyun Lillehoj, <i>USDA</i>
4:45 PM	<b>Quantifying Antimicrobial Use in Poultry Production</b> Randall Singer, <i>University of Minnesota</i>	<b>Changes in gut microbiome, immunity, antioxidant capacity and parasite fecundity induced by Oraltreatment of transgenic <i>Bacillus subtilis</i>-cNK2 in <i>E. acervulina</i>-infected broiler chickens</b> Samiru Wickramasuriya, <i>USDA-Agricultural Research Service</i>

# Tuesday, August 2, 2022

Room	120 ABC	126 AB
Topic	<b>Wealth of Knowledge</b>	<b>Infectious Bursal Disease</b>
Moderator	Rosemary Marusak	Kalen Cookson
8:00 AM	<b>Report of the Research Priorities Committee 2022 survey results</b> Joel Cline, <i>Wayne Farms LLC</i>	<p align="center"><b>Session Keynote:</b>  <b>Isolation and Characterization of Antigenic Variant Infectious Bursal Disease Viruses in the United States</b>            Milos Markis, <i>AviServe LLC</i></p>
8:15 AM	<b>Does this “Stuff” Work? An Applied Poultry Researcher’s Perspective on Experimental Design</b> Matthew Jones, <i>Southern Poultry Research Group, Inc.</i>	
8:30 AM	<b>Investigating true fertility of ‘clear’ eggs at transfer</b> Isabella Hannay, <i>University of Georgia PDRC</i>	<b>Evaluating The Antigenic Relatedness Of Diverse Infectious Bursal Disease Virus Strains</b> Vishwanatha Reddy Avalakuppa Papi Reddy, <i>The Pirbright Institute</i>
8:45 AM	<b>Electrostatic Application of a Bound Residual Antimicrobial to Broiler Breeder Eggs: Impact on Hatchability, Chick Quality and 7-day Mortality</b> Mary Thompson, <i>UGA Poultry Diagnostic &amp; Research Center</i>	<b>Assessment of a Variant IBDV Challenge in Chickens Utilizing Combinations of Recombinant HVT and Live Attenuated IBD Vaccines</b> John ElAttrache, <i>Ceva Animal Health</i>
9:00 AM	<b>Controlled Exposure utilizing a Hemolytic <i>Ornithobacterium rhinotracheale</i> Strain in Commercial Hen Turkeys to Protect Against a Field Challenge</b> Jessica Walters, <i>Virginia Department of Agriculture and Consumer Services</i>	<b>Broiler Protection and Performance Trials of the Newest HVT-IBD Recombinant Vaccine Against AL2 and Group-6 IBDV Challenges</b> Kalen Cookson, <i>Zoetis</i>
9:15 AM	<b>First Week Broiler Mortality: Trends, Lesions, Etiologies and Recommendations</b> Jose Linares, <i>Ceva Animal Health</i>	<b>Deciphering the Mode of Action of MB-1, a Live Hatchery Vaccine against Gumboro Disease</b> Yossi Wein, <i>The Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem</i>
9:30 AM	<b>Applications Used to Help Control and Eradicate Low Pathogenic Avian Influenza From Commercial Turkey Farms</b> Carrie Cremers, <i>Jennie-O Turkey Store</i>	<b>Flow Cytometric Analysis of T Regulatory Cells in the Bursa Of Fabricius Of Chickens Infected With IBDV</b> Salik Nazki, <i>The Pirbright Institutue</i>
9:45 AM	<b>Outreach Efforts and Newcastle Vaccine Efficacy to Promote Gamefowl Wellness in Southern California</b> Alejandra Figueroa, <i>UC Davis School of Veterinary Medicine</i>	<b>Evaluation of Host Genetic Resistance to Infectious Bursal Disease Virus</b> Julia Blakey, <i>USDA- ARS USNPRC</i>
10:00 AM	<b>Break</b>	
Room	120 ABC	126 AB
Topic	<b>Welfare</b>	<b>ILT/Marek’s</b>
Moderator	Eric Gonder	Rocio Crespo
10:15 AM	<b>Session Keynote:</b> <b>Welfare Frameworks: History, Evolution and Practical Implementation</b>	<b>Session Keynote:</b> <b>Comparison of Marek’s Disease Virus Challenge Strains in Commercial Broiler-type Chickens</b>
10:30 AM	Katherine Weathers, <i>Cobb-Vantress, Inc</i>	John Dunn, <i>USDA-ARS-USNPRC</i>

10:45 AM	<b>The Barnyard Perspective of Animal Welfare: Learning from each other</b> Angela Baysinger, <i>Merck Animal Health</i>	<b>Reed Rumsey Award Winner: In ovo vaccination with HVT accelerates immunocompetence in chickens</b> Allison Boone, <i>North Carolina State University, College of Veterinary Medicine and North Carolina Veterinary Diagnostics</i>
11:00 AM	<b>Wellness Talk: Options for Loan Forgiveness</b> Megan Lighty, <i>Penn State University</i> Annika McKillop, <i>USDA APHIS</i> Dan Wilson, <i>Wilson Veterinary Co.</i> Kevin Maschek, <i>Pilgrim's Pride</i> Alex Strauch, <i>Alexander Strauch Consulting</i> Michaela Olson, <i>Wilson Veterinary Co</i>	<b>Efficacy of a new trivalent vHVT-IBD-ILT vaccine administered to day-old pullets against virulent ILTV challenge performed at two time points</b> Andrea Delvecchio, <i>Boehringer Ingelheim AH</i>
11:15 AM		<b>HVT-ILT Recombinant Vaccines: Dynamics of Replication and Protection in Commercial Broilers</b> Ivan Alvarado, <i>Merck Animal Health</i>
11:30 AM		
12:00 PM	<b>Lunch Break</b>	
<b>Room</b>	<b>120 ABC</b>	
<b>Topic</b>	<b>HPAI Focus</b>	
<b>Moderator</b>	Nancy Reimers	
1:00 PM	<b>Update on HPAI in the US</b> Mia Torchetti, <i>National Veterinary Services Laboratories</i>	
<b>Room</b>	<b>120 ABC</b>	<b>126 AB</b>
<b>Topic</b>	<b>Welfare</b>	<b>ILT/Marek's</b>
<b>Moderator</b>	Nancy Reimers	Mohamed El-Gazzar
1:15 PM	<b>Cage Free Housing for Laying Hens: Floor Substrate Provided During Rearing Influences Welfare Parameters</b> Marisa Erasmus, <i>Purdue University</i>	<b>Comparing ILT Live Vaccine Efficacy Through Drinking Water and Eye Drop by On-Site PCR Test</b> Keat Fu, <i>Aviagen Inc.</i>
1:30 PM	<b>Applying the Assessment of Key Indicators in Layer Chicken Systems for Improved Welfare</b> Joe Sullivan, <i>Herbruck's</i>	<b>Lt Serology in Georgia Flocks in the Absence of a Broiler Outbreak</b> Len Chappell, <i>Georgia Poultry Laboratory Network</i>
1:45 PM	<b>Understanding welfare of laying hens in different types of cage-free housing systems</b> Darrin Karcher, <i>Purdue University</i>	<b>Expression of Interferons and Interferon-Stimulated Genes (ISGs) in Larynx, Trachea, and Conjunctiva of Chickens Ocularly Inoculated with Live Attenuated Vaccines and Virulent Strains of Infectious Laryngotracheitis Virus (ILTV)</b> Daniel Maekawa Maeda, <i>University of Georgia</i>
<b>Topic</b>	<b>Welfare</b>	<b>Bacteriology</b>
<b>Moderator</b>	Nancy Reimers	Mohamed El-Gazzar
2:00 PM	<b>Emphasizing Welfare Outcomes and KWIs: NCC Broiler and Broiler Breeder Welfare Guidelines Update and Audit Changes</b> Ashley Peterson, <i>National Chicken Council</i>	<b>Session Keynote: Campylobacter hepaticus and its Role in the Emergence of Spotty liver disease in Layers</b> Silke Rautenschlein, <i>Clinic for Poultry, University of Veterinary Medicine, Hannover</i>
2:15 PM		
2:30 PM	<b>Broiler Chicken Welfare: Overview of Key Welfare Indicators Used in Broiler Production Systems and a Practical Approach to Achieve Continuous Improvement</b> Kathleen Long, <i>Maple Leaf Foods</i>	<b>Does a Post-biotic Product have a Protective Effect Against APEC Challenge?</b> Catherine Logue, <i>Univ of Georgia</i>
2:45 PM	<b>The Importance of Key Welfare Indicators in Driving Continuous Improvement in Animal Welfare Outcomes</b> Ken Opengart, <i>Tyson Foods</i>	<b>Enterococcus faecalis Modulates Virulence of Avian Pathogenic E. coli by Stimulating Growth and Production of Capsular Polysaccharides</b> Grayson Walker, <i>NC State University</i>
3:00 PM	<b>Break</b>	



Room	120 ABC	126 AB
Topic	Welfare	Bacteriology
Moderator	Kabel Robbins	Martine Boulianne
3:15 PM	<b>Effects of novel Pulsed Alternating Wavelength System (PAWS) on welfare and skeletal quality of laying hens</b> <i>Brittney Emmert, Purdue University</i>	<b>Identification of Novel Genes Involved in the Biofilm Formation Process of Avian Pathogenic Escherichia coli (APEC)</b> <i>Meaghan Young, University of Georgia</i>
3:30 PM	<b>Understanding Outcomes-Based Welfare Assessments and Internal Audits in Turkey Production Environments</b> <i>Molly Parker, Butterball, LLC</i>	<b>Early turkey mortality related to infection with Streptococcus gallolyticus</b> <i>Ann Wooming, Church and Dwight</i>
3:45 PM	<b>Potential Welfare Issues Affecting Turkey Husbandry and Well-Being</b> <i>Helen Wojcinski, Wojcinski Poultry Health Consulting</i>	<b>Genotypic Classification of Avibacterium paragallinarum, the Causative Agent of Infectious Coryza</b> <i>Ana da Silva, University of California, Davis</i>
4:00 PM	<b>Evaluation of Foot Pads throughout Production in Commercial Turkeys</b> <i>Kabel Robbins, Butterball, LLC</i>	<b>Development of Core Genome Multilocus Sequence Typing (cgMLST) Scheme for Genotyping of Pasteurella multocida</b> <i>Mohamed El-Gazzar, Iowa State University</i>
4:15 PM	<b>“Good as Hell”: A Discussion Regarding Toe Treatments of Hen Poult</b> <i>Katie Stumvoll, Jennie-O Turkey Store</i>	<b>Case Report: Is The Prevalence of Clostridium Septicum Dermatitis and Septicemia Underestimated in Commercial Egg Layers?</b> <i>Michaela Olson, Wilson Veterinary Company</i>
4:30 PM	<b>A Comparison of Various Euthanasia Devices and Methods in Turkey Hens</b> <i>Brian Wooming, Cargill Turkey &amp; Cooked Meats</i>	<b>Assessing Two Fertile Eggshell Interventions With Luminometry</b> <i>Ricardo Munoz, Neogen Corporation</i>
4:45 PM	<b>Welfare Communication Tools for Field Veterinarians</b> <i>Nancy Reimers, Cutler Associates</i>	<b>Stress during Rearing-Laying Transition changes Gut Microbiota Profile, Intestinal Cytokine Expression and Skeletal Properties in Commercial Laying Hens</b> <i>Prafulla Regmi, University of Georgia</i>
5:00 PM	<b>Adjourn</b>	

# AAAP Posters

## Antimicrobial/Antibiotic Resistance

**1: Minimal inhibitory concentrations of avilamycin to Clostridium perfringens isolates from broiler chicken farms before and after the approval of Surmax® Premix (Avilamycin) in Canada**

Eric Parent, *Elanco Canada*

**2: The protective role of Coli-vac, a heptavalent vaccine against extraintestinal avian pathogenic Escherichia coli (APEC) infection**

Wael Elfeil, *Suez Canal University*

**3: Chicken Gut Microbiota Dynamics after Amoxicillin and Thiamphenicol Treatment**

Andrea Laconi, *University of Padua*

## Avian Influenza

**4: Infection of H5N6 HPAIV and evaluation of inactivated H5N6 HPAI vaccine on ducks**

Seojeong An, *Konkuk University of Veterinary Medicine*

**5: Antigenic Characterization of Low Pathogenic Avian Influenza Virus H9N2 isolated in the Republic of Korea**

Andrew Cho, *Konkuk University*

**6: Evaluation protection of H5 vaccination regimes against early challenge with HPAI-H5N8 Clade 2.3.4.4**

Wael Elfeil, *Suez Canal University*

**7: Live Recombinant NDV-Vectored H5 Vaccine Protects Chickens and Domestic Ducks from Lethal Infection of the Highly Pathogenic H5N6 Avian Influenza Virus**

Heesu Lee, *Konkuk University, Seoul*

**8: Stepwise adaptation of Hemagglutinin of H5N2 Highly pathogenic avian influenza virus in chickens**

Sungsu Youk, *USDA ARS US Natl Poultry Research Ctr*

## Bacteriology

**9: Molecular characterization of few Avibacterium paragallinarum isolates from different US states using whole genome sequencing**

Mostafa Ghanem, *The Ohio State University*

**10: Epidemiological Surveillance Of Chlamydotheca Psittaci In Wild Birds From Perú**

Rosa Gonzalez, *San Marcos University, Lima-peru*

**11: Does the Nutritionist have a role to play in Managing Campylobacter jejuni in Broilers?**

Matthew Jones, *Southern Poultry Research Group*

**12: High Mortality Outbreaks in Broiler Chickens Caused by Highly Virulent and Multidrug Resistant Escherichia coli**

Christopher Poulos, *Animal and Plant Health Agency*

## Case Reports

**13: Isolation and Characterization of Goose Tembusu Virus in Taiwan**

Hui-Wen Chen, *National Taiwan University*

**14: Imposter false layer syndrome**

Emily Pittman, *Georgia Poultry Laboratory Network*

## Coccidiosis

**15: Sensitivity of Eimeria Field Isolates in the United States: An update on responses to current practices**

Luis Gomez, *Phibro*

**16: Alternatives Treatments for Coccidiosis and Necrotic Enteritis Management**

Greg Mathis, *Southern Poultry Research, Inc.*

**17: Intestinal Integrity (I2) Correlations to Chicken Gut Health**

Francene Van Sambeek, *Elanco Animal Health*

## Diagnostics

**18: Utilization of the i-STAT1 handheld clinical analyzer and VetScan2 to compare blood values in normal vs. recumbent turkey hens at point of lay**

Jewell Bremer, *Select Genetics*

**19: Evaluation of Flongle and MinION Flow Cells for the Whole-Genome Sequencing of Avian Influenza A Virus in Clinical Samples**

Iryna Goraichuk, *USDA/ARS/SEPRL*

**20: FTA Card Use as a Sample Collection Method to Type Avibacterium paragallinarum**

Rachel Jude, *University of California, Davis*

**21: Analysis of diagnoses for broiler chicken flocks in Korea between 2017 and 2021**

chung-hyun Kim, *QIA*

**22: Identification of the causative agent in broiler chicken showing neurological symptoms**

Hye-Ryoung Kim, *APQA*

**23: Infectious bronchitis molecular surveillance in layer farms in Southern California**

Evelin Saenz, *UCDAVIS*

## **Enteric Health**

**24: Feed quality assessment with the use of glucose oxidase vs antibiotics**

Josue Sanchez, *excelling SA de CV*

**25: Ileal mucosal microbiota in commercial turkey poults**

John Ngunjiri, *Center for Food Animal Health, The Ohio State University*

**26: Avian Bioscience Award Winner: Effects of different methionine to cysteine ratios on the gut health, oxidative status, gene expression of nutrient transporters, and tight junction proteins of broiler chickens challenged with Eimeria spp**

G Liu, *Univeristy of Georgia*

## **ILT/Marek's Disease**

**27: Longitudinal Study of Infectious Laryngotracheitis Virus (ILTV) in Commercial Laying Farms from Sao Paulo State – Brazil**

Renato Luciano, *Biological Institute - Advanced Center of Poultry Research*

**28: Characterization of the Backyard (Non-Commercial, Non-Quota) Poultry Population in Alberta, Canada, and the Submission Level Prevalence of Infectious Laryngotracheitis Within this Sector**

Heather Van Esch, *Government of Alberta, Ministry of Agriculture, Forestry and Rural Economic Development*

**29: Evaluation of the impact of injector device on Marek's disease vaccine delivery by subcutaneous route**

Andrea Delvecchio, *Boehringer Ingelheim AH*

**30: Use of a Novel Medium to Grow Chicken Embryo Fibroblasts that Increases the Yield of Marek's Disease Vaccines**

Isabel Gimeno, *North Carolina State University*

## **Immunology**

**31: Assessment of Seroconversion In Commercial Layers During The Rearing Period Using Three Different Elisa Kits After Administration Of An Immune-Complex Vaccine (Novamune®) At One-Day-Old.**

Oscar Sanabria, *Ceva*

**32: Comparison of Transcriptional Analysis, ELISA, and Biological Assays of Avian Type I IFN**

Chang Lee, *Southeast Poultry Research Lab, USDA-ARS*

**33: Immunometabolic regulation of CpG-ODN-induced antimicrobial trained immunity in chickens**  
Iresha Subhasinghe, *University Of Saskatchewan*

**34: The impact of antibiotic growth promoters on intestinal health during a subclinical necrotic enteritis challenge in broilers**  
Shailes Bhattarai, *University of Georgia*

## **Infectious Bronchitis Virus**

**35: Phylogenetic Analysis of Infectious Bronchitis Virus Circulating in Colombia From 2015 to 2021**  
Oscar Sanabria, *Ceva*

**36: Isolation, Genotyping and Evaluation of Pathogenicity of Different Egyptian Infectious Bronchitis Viruses**  
Manal Afify, *Faculty of Veterinary Medicine, King Salman International University*

**37: Homologous and heterologous live-attenuated vaccines strategy to reduce infectious bronchitis virus transmission**  
Robert Beckstead, *Ceva Animal Health*

**38: Isolation of Infectious Bronchitis virus variant strain from commercial layer birds showing cystic oviduct in India**  
Namdeo Bulbule, *Venkateshwara Hatcheries Pvt Ltd*

**39: Real World Evidence: Economic Assessment of the Impact of Q1-like Infectious Bronchitis Variant in a Broiler Productive Zone in Peru**  
Claudia Carranza, *Ceva Animal Health*

**40: Data Management as a Strategy for Serological Monitoring of Infectious Bronchitis in broiler farms**  
Jose Perez, *SPM, NCSU*

**41: A broad protection spectrum against relevant strains can be achieved by the combination of Mass-type and BR-I-type infectious bronchitis vaccine strains**  
Jorge Chacon, *Ceva Animal Health*

**42: Persistence and intensity of Infectious Bronchitis Virus Vaccine Strain replication and its association with safety aspects**  
Jorge Chacon, *Ceva Animal Health*

**43: Complete Genome Analysis of Two Live Attenuated Infectious Bronchitis Virus Vaccine Candidates Provide Insight Into the Attenuation Mechanism**  
Yun Jeong Choi, *Konkuk University*

**44: Genome Sequence Variations of Infectious Bronchitis Virus Serotypes from Commercial Broilers in Mexico**  
Henry Kariithi, *USDA-ARS*

**45: Surveillance of Infectious bronchitis virus occurred in Korea, 2021**

Hyun-jin Kim, *Avian Disease Laboratory, Konkuk University College of Veterinary Medicine*

**46: Detection of GI-13 of infectious bronchitis virus in layer chickens in Brazil**

Helena Lage Ferreira, *University of Sao Paulo*

**47: Development of a live attenuated vaccine for Indonesian QX-like IBVs (GI-19) using heat-adapted attenuation platform**

Hyuk-chae Lee, *KHAV*

**48: Development of a Highly-Sensitive NGS Method for Analysis of the Complete S1 Region of the Spike Gene from Infectious Bronchitis Viruses Directly from Field Samples**

Derek Moormeier, *Ceva Animal Health*

**49: Detection of Novel Infectious Bronchitis Viruses in Layers in Mexico and their Control by Using a Synergistic Live Vaccine Combination**

Francisco Rios-Cambre, *MSD Salud Animal Mexico*

## **Infectious Bursal Disease**

**50: Very virulent IBDV can efficiently replicate and be transmitted in layer-type naive chickens up to 16 weeks of age**

Christophe Cazaban, *Ceva Animal Health*

**51: Comparison of IBD Antibody ELISA Titers using Kits from Various Vendors**

Brenda Glidewell, *Georgia Poultry Laboratory*

**52: Developing a Novel Method for Sequencing and Genotyping of Infectious Bursal Disease Virus Directly from Field Samples**

Julia McElreath, *Ceva Animal Health*

**53: Presence and Distribution of Infectious Bursal Disease viruses belonging to Genotypes 2 and 5 in Mexico**

Francisco Rios-Cambre, *MSD Salud Animal Mexico*

## **Mycoplasma**

**54: Ms-H Vaccine (Vaxsafe MS) Protection in Broiler Breeders.**

Francisco Perozo, *Boehringer Ingelheim*

**55: Monitoring of Mycoplasma gallisepticum live vaccine -K Strain –**

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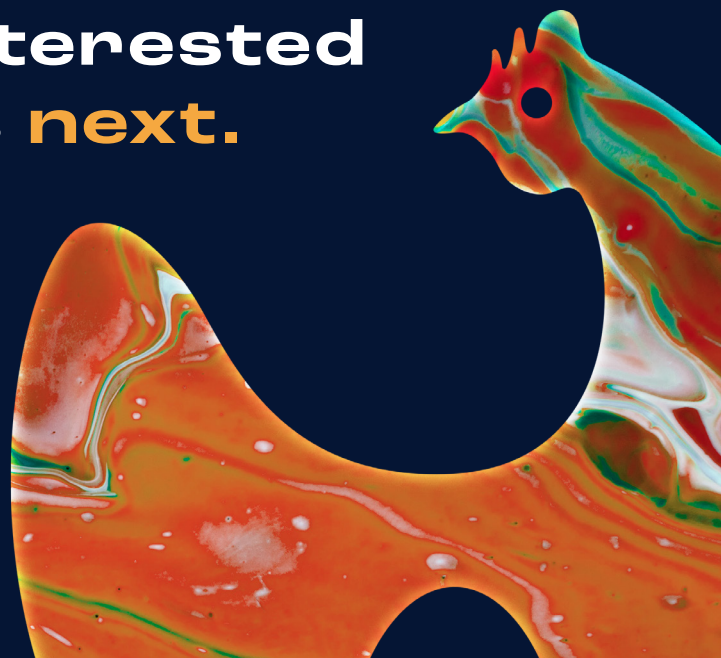
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