

# Friday, August 2, 2019

Room		Renaissance Ballroom West	
8:00 AM	Opening Session		
8:20 AM	<b>Session Keynote: Cases Selected from a Career in Poultry</b> Oscar Fletcher, <i>NC State University</i>		
Room		Renaissance Ballroom East	Renaissance Ballroom West
Topic	Enteric Health		Case Report
Moderator	Hyun Lillehoj		Enrique Montiel
9:00 AM	<b>Investigations of Influencing Factors on the Gut Health and Microflora Composition in Layers</b> Silke Rautenschlein, <i>Clinic for Poultry, University of Veterinary Medicine, Hannover</i>		<b>Respiratory Disease and Bacterial Septicemia of Broilers Linked to Three Specific Breeder Flocks</b> David French, <i>Sanderson Farms, Inc.</i>
9:15 AM	<b>The Effects of Direct-Fed Microbial Supplementation, as an Alternative to Antibiotics, on Growth Performance, Intestinal Immunity, and Epithelial Barrier Integrity in Broiler Chickens Infected with Eimeria maxima</b> Inkyung Park, <i>USDA-ARS</i>		<b>Respiratory Disease and Bacterial Septicemia of Broilers Linked to Three Specific Breeder Flocks</b> Jose Linares, <i>Ceva Animal Health</i>
9:30 AM	<b>Mechanism of Action of Antibiotic Growth Promoters: Alteration of Immune Response and Intestinal Metabolome</b> Hyun Lillehoj, <i>USDA-ARS</i>		<b>Itch Alert! There Mite Be A Problem</b> Robinette Gilbert, <i>Sanderson Farms, Inc.</i>
9:45 AM	<b>Efficacy of Supplemented Bacillus subtilis DSM 17299 in Broiler Chickens Fed Standard and Energy, Protein and Amino Acid- Reduced Diets</b> John Schleifer, <i>Chr-Hansen, Inc.</i>		<b>I Need You to Call Me Now!</b> Eric Heskett, <i>Case Farms</i>
10:00 AM	Break		
Topic	Avian Influenza		Case Report
Moderator	Blanca Lupiani		Donald Ritter
10:15 AM	<b>Development of a Novel Avian Influenza Live Virus Vaccine Based on Disruption of M2/M42 Gene Expression</b> Darrell Kapczynski, <i>USDA-ARS-Southeast Poultry Research Laboratory</i>		<b>Are those Necks Really Crooked?</b> Danny Magee, <i>CVM Poultry Research &amp; Diag Lab</i>
10:30 AM	<b>Broader Protection from a Recombinant Live Vectored Vaccine than Inactivated Avian Influenza Vaccines in Chickens against Diverse H5 Highly Pathogenic Avian Influenza Viruses</b> Miria Criado, <i>USDA</i>		<b>Implications of Campylobacter Hepaticus in Organic Laying Facilities</b> Lisa Tenny, <i>Kansas State University</i>
10:45 AM	<b>Improvement of an NS1-truncated Live Attenuated Influenza Vaccine by Selection of Viral Subpopulations with Enhanced Interferon-inducing Capability</b> Amir Ghorbani, <i>The Ohio State University</i>		<b>Multiple Barns with High Mortality in a Large Multi-Age Layer Complex</b> Mohamed El-Gazzar, <i>Iowa State University</i>
11:00 AM	<b>Importance of Vaccine seed strain matching for the control of H9N2 avian influenza</b> David Suarez, <i>Southeast Poultry Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture</i>		<b>Analysis of Three Clinical Cases Related to Ionophore Toxicity in Broiler Chickens</b> Martha Pulido Landinez, <i>Mississippi State University</i>

11:15 AM	<b>Assessing Protection Induced by Maternally Derived Antibodies against Highly Pathogenic Avian Influenza H7N3 Virus</b> Stivalis Cardenas-Garcia, <i>University of Georgia</i>	<b>Three Times a Charm? Three Different Clinical Presentations of Calcium Toxicity in Meat Type Chickens.</b> Philip Stayer, <i>Sanderson Farms</i>
11:30 AM	<b>Avian Influenza H6 Virus-like Particles Confers Potent Immunogenicity and Protective Efficacy in Chickens</b> Hui-Wen Chen, <i>National Taiwan University</i>	<b>Feed Refusal Leading to Spiking Mortality Syndrome in Broiler Chickens</b> Marie Severyn, <i>Amick Farms</i>
11:45 AM	<b>Mutations in PB1, NP, HA and NA Genes Contribute to Altered Pathogenicity and Viral Shedding of H5N2 Highly Pathogenic Avian Influenza Virus in Chickens and Mallards</b> Sungsu Youk, <i>U.S. National Poultry Research Center, ARS-USDA</i>	<b>Egg Drop Syndrome (Adenovirus 127) in Layers</b> Sherrill Davison, <i>University of Pennsylvania</i>
12:00 PM	<b>Lunch Break</b>	
<b>Room</b>	<b>Renaissance Ballroom East</b>	<b>Renaissance Ballroom West</b>
<b>Topic</b>	<b>Avian Influenza</b>	<b>Case Report</b>
<b>Moderator</b>	Maricarmen Garcia	Richard Fulton
1:15 PM	<b>Overlapping Genes of the Avian Influenza Virus M Segment: Role of M2/M42 in Evolution of Highly Pathogenic Avian Influenza Virus</b> Karen Segovia, <i>ARS-USDA</i>	<b>The Saga Continues: Broiler Variant Reovirus in Eastern North Carolina. Why Did it Happen?</b> Erin Riley, <i>Sanderson Farms Inc.</i>
1:30 PM	<b>The Molecular Determinants of Antibody Recognition and Antigenic Variations of the HA of H9N2 Viruses</b> Silvia Carnaccini, <i>UGA - PDRC</i>	<b>Chicks Exhibiting Drunken Behavior</b> Jean-Pierre Vaillancourt, <i>University of Montreal</i>
1:45 PM	<b>Determining Molecular Markers of Avian Influenza Virus Adaptation in Poultry by Full Genome Sequencing of Different Lineage Viruses</b> Mary Pantin-Jackwood, <i>Southeast Poultry Research Lab, US National Poultry Research Center, US Dept. of Agriculture</i>	<b>An Outbreak of Very Virulent Infectious Bursal Disease Associated with Severe Mortality in 9-week-old Pullets in California.</b> H Shivaprasad, <i>University of California, Davis</i>
2:00 PM	<b>In Vivo and In Vitro Differences Between Two H5N8 Highly Pathogenic Avian Influenza Viruses Clade 2.3.4.4</b> Christina Leyson, <i>Southeast Poultry Research Laboratory</i>	<b>Clinical Investigation of False Laying Syndrome in Commercial Egg Layers</b> Corine Giroux, <i>Hickman's Family Farms</i>
2:15 PM	<b>Alterations in H5 Highly Pathogenic and Low Pathogenic Recombinant Hemagglutinin Tissue Tropism associated with Increasing Age in Selected Anseriformes and Galliformes Bird Species</b> Carmen Jerry, <i>University of Georgia, PDRC</i>	<b>Case study - Investigation of Aspergillosis Related Mortality in Commercial Layer Pullets - Diagnose Rare Things Rarely</b> Albert Payne, <i>1010 Consulting Group</i>
2:30 PM	<b>Challenges in Environmental Sampling and the Use of the VetMAX Gold AI Detection Kit</b> Len Chappell, <i>Georgia Poultry Laboratory Network</i>	<b>Botulism in Turkeys, Is It More Common Than We Realize?</b> Kabel Robbins, <i>Butterball, LLC</i>
2:45 PM	<b>Persistence of LPAI in Carcass Composting and Bedding Litter Treated with Acidifier Amendment</b> Alejandra Figueroa, <i>University of California, Davis</i>	<b>A Case Report of Rotavirus A Hepatitis in California Pigeons</b> Simone Stoute, <i>University of California Davis</i>
3:00 PM	<b>Break</b>	

# Friday, August 2, 2019

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

# Saturday, August 3, 2019

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

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

# Sunday, August 4, 2019

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

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

# Sunday, August 4, 2019

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

# Monday, August 5, 2019

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



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

2:15 PM	<b>Host Adaptation Affects the Transmission of Virulent Newcastle Disease Viruses in Chickens</b> Helena Lage Ferreira, <i>US National Poultry Research Center, SEPRL</i>	<b>Developing and Application of Real Time PCR Protocols to Differentiate Mycoplasma synoviae Vaccine Strains</b> Mohammadreza Ehsan, <i>University of Georgia</i>
2:30 PM	<b>Molecular-Epidemiological and Evolution Study of the Newcastle Disease Virus Causing Outbreaks in California in 2018</b> Kiril Dimitrov, <i>USDA/ARS/USNPRC/SEPRL</i>	<b>Infectious Bronchitis in Immunologically Naive Breeding Chickens and Their Progeny</b> Corissa Steimling, <i>The Pennsylvania State University Animal Diagnostic Laboratory</i>
2:45 PM	<b>Evaluation of Protection against AL-2 like Infectious Bursal Diseases Virus using a Dual Recombinant HVT-ND-IBDV Vaccine Along and in Combination with a Live 89/03 and Two Plaque Intermediate Standard Strains of IBDV Vaccine</b> Andres Montoya, <i>Merck Animal Health</i>	<b>Infectious Laryngotracheitis Prevalence in California Backyard Chicken Flocks and Strain Differentiation by ICP4 Sequencing, 2007-2017.</b> Julia Blakey, <i>California Animal Health and Food Safety Lab- UC Davis</i>
3:00 PM	<b>Break</b>	
<b>Room</b>	<b>Renaissance Ballroom East</b>	<b>Renaissance Ballroom West</b>
<b>Topic</b>	<b>Virology</b>	<b>Management</b>
<b>Moderator</b>	Kristen Roza-Sutherland	Becky Tilley
3:15 PM	<b>Study of pathogenesis of Infectious Bursal Disease Virus (IBDV): Comparison between a South American Variant and a Classic Strain</b> Ariel Vagnozzi, <i>INTA</i>	<b>Evaluation of Enrichments for Meat-type Chickens</b> Katherine Barger, <i>Cobb Vantress Inc</i>
3:30 PM	<b>Cell-mediated Immune Responses in the Eye Associated Lymphoid Tissues of Chickens after Vaccination or Infection with Infectious Laryngotracheitis Virus (ILT)</b> Maricarmen Garcia, <i>The University of Georgia, Athens GA</i>	<b>Effects of Sanitation Water Treatments During Broiler Growth-Out</b> Ricardo Munoz, <i>Neogen</i>
3:45 PM	<b>Interpretation of Real-time PCR Data from Clinical Specimens Suspected for Vaccinal Laryngotracheitis Virus Infection.</b> Arun Kulkarni, <i>Georgia Poultry Laboratory</i>	<b>What are You Doing to Day-Old Poults</b> Ben Wileman, <i>Select Genetics</i>
4:00 PM	<b>Efficacy of Innovax-ILT (recombinant HVT-LT) Vaccine when Administered Alone or in Combination with a Chicken Embryo Origin (CEO) Vaccine</b> Daniel Maekawa Maeda, <i>University of Georgia</i>	<b>Implementation and Evaluation of a Biosecurity Audit Tool Within a Large Turkey Company</b> Molly Parker, <i>Butterball, LLC</i>
4:15 PM	<b>The Role of Vaccination on Transmission of Marek's Disease Virus in Poultry</b> John Dunn, <i>USDA-ARS-ADOL</i>	<b>Impact of Downtime on Performance and Livability in Commercial Turkey Flocks</b> Elise Gerken, <i>Jennie-O Turkey Store</i>
4:30 PM	<b>Are Birds Expressing Cas9 and Guide RNAs against Marek's Disease Virus (MDV) Resistant to MDV Challenge?</b> Karel Schat, <i>Cornell University</i>	<b>Pullet Vaccination Evaluations: The Good, the Bad, and the Ugly</b> Timothy Cummings, <i>Zoetis</i>
4:45 PM	<b>Next Generation Sequencing (NGS) of Haemorrhagic Enteritis Virus (HEV) Obtained from Spleens of Turkeys Raised in Western Canada</b> Victor Palomino-Tapia, <i>University of Calgary</i>	<b>Comparison of the Circadian Rythm of Broiler Brreders and Commercial Layers During Lay on Different Biochemical Parameters with an Emphasis on Shell Formation</b> Daniel Venne, <i>Couvoir Scott Ltée</i>
5:00 PM	<b>Adjorn</b>	

# Posters

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

## Antimicrobial

- 1. Reducing Microbial Load on Hatching Eggs Using a Dry Hydrogen Peroxide Gas System**  
Julia McElreath, *University of Georgia*
- 2. Efficacy of Sodium Formate (Amasil NA), Monobutyryn, Other Glycerides, and Glycerol (SiloHealth 104,) and Bacitracin Methylene Disalicylate (BMD) on Intestinal and Processed Parts Bacteria Count when fed to Broiler Chickens Challenged with Mild Coccidia**  
Michael Coelho, *BASF Corp*
- 3. Are You Ready for an FDA Inspection? Ensuring a Valid VCPR for Poultry Prescriptions and Protocols**  
Steven Clark, *Devenish Nutrition, LLC*
- 4. Prevalence and Antimicrobial Resistance of Fecal Commensal E. coli and Salmonella Isolates Obtained from Ontario Small Poultry Flocks**  
Csaba Varga, *Ontario Ministry of Agriculture Food and Rural Affairs*
- 5. Antimicrobial Resistance Patterns in Campylobacter Species Isolated From Poultry Production Facilities in Alberta**  
Karen Liljebjelke, *University of Calgary*
- 8. Outbreaks of Low Pathogenic Avian Influenza H7N3 in Turkeys in California.**  
H Shivaprasad, *University of California, Davis*
- 9. Vaccine Protection of Commercial Broilers Vaccinated with an Avian Influenza Vector Vaccine rHVT-H5 and an Inactivated H5N2 Vaccine and Challenged with the Mexican H5N2 Highly Pathogenic Avian Influenza Virus (HPAIV)**  
Luiz Sesti, *Ceva Animal Health*
- 10. Chimeric Virus-Like Particle Vaccine Elicits Strong Antibody Response against Different Clades of H5 Highly Pathogenic Avian Influenza Viruses**  
Dong-Hun Lee, *Department of Pathobiology & Veterinary Science, University of Connecticut*
- 11. Genetic Characterization and Transmissibility of the First H9N2 Avian Influenza Virus in Indigenous Chickens from Kenyan Live Bird Markets**  
Henry Kariithi, *USDA-ARS*
- 12. Pathogenicity and Transmission of Clade 2.3.4.4 H5Nx Highly Pathogenic Avian Influenza Viruses in Chickens.**  
Junghoon Kwon, *U.S. National Poultry Research Center*

## Avian Influenza

- 6. Risk Assessment of Avian Influenza Virus Dissemination in Duck Farms in France**  
Kateri Bertran, *ENVT, University of Toulouse*
- 7. Prevention and Control of Avian Influenza Through Biosecurity, Surveillance, Early Detection, and Rapid Response: It Is Easier Said Than Done**  
Nathaniel Tablante, *University of Maryland College Park*
- 13. Development and Comparison of Two Primary Chicken Tracheal Cell Culture Systems for the Study of Avian Influenza Virus Infection**  
Emily Aston, *University of California-Davis*
- 14. Extended Laboratory Exercise on Surge Capacity of Highly Pathogenic Avian Influenza (HPAI) Virus Testing**  
Stephanie Forrester, *Georgia Poultry Laboratory Network*

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

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

**Bacteriology**

15. **Characterization of the duodenal microbiota in egg layers with Focal Duodenal Necrosis using next generation sequencing**  
Monique Franca, *UGA*
16. **Molecular Characterization of Avian Pathogenic E. coli (APEC) from Turkey Cellulitis**  
Catherine Logue, *University of Georgia*
17. **Complete Genome Sequence of Mycoplasma iowae (MI) type strain 695**  
Mostafa Ghanem, *The Ohio State University*
18. **Outbreaks of infectious endocarditis in mule duck: epidemiological study and potential etiological role of Streptococcus pluranimalium**  
Jean-Luc Guerin, *ENVT, University of Toulouse*
19. **Pathogenicity of Avibacterium paragallinarum Isolates with Different Nicotinamide Adenine Dinucleotide Requirements of South Korea**  
Ok-Mi Jeong, *Animal and Plant Quarantine Agency*
20. **Effect of a Feed Incorporated Phytobiotic on Intestinal Lesions in Poultry Challenged with Clostridium perfringens**  
Sherry Layton, *Vetanco BV Science*
21. **Mycobacterial Infection in a Pet Zebra Finch**  
Kristen Hill-Thimmesch, *Purdue University*
22. **Identification of Gallibacterium Anatis in Egg Producing Hens Using the PCR Test in Los Altos de Jalisco, Mexico**  
Alejandro Hori, *Boehringer Ingelheim Animal Health*

**Case Reports**

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

24. **Mycotoxins Toxicity in Laying Hens**

Andres Rodriguez-Avila, *BioARA SA*

25. **Chronic Mycosis in a Backyard Hen**

Laura Morman, *Purdue University Indiana Animal Disease Diagnostic Lab*

**Diagnostics**

26. **A Summary of Epidemic Pattern of Increased Infectious Bronchitis Virus Isolations in Broiler and Layer Chickens in Pennsylvania**  
Huaguang Lu, *The Pennsylvania State University*
27. **Identification and Lineage Typing of Infectious bronchitis virus in clinical samples by real-time MinION Nanopore sequencing**  
Salman Latif Butt, *University of Georgia, Athens*
28. **Poultry Vaccines: Innovative Serological Assays for Diagnosis and Vaccination Monitoring for H5, H7 and H9 Avian Influenza A**  
Laure Papaix, *IDvet*
29. **Validation of Two New Real-Time Avian Influenza PCR Kits**  
Gwenlllyan Slacum, *BioChek USA Corp.*
30. **Optimization Of The Protocol For Detection of Turkey Arthritis Reovirus by RT-PCR**  
Robert Porter, *Univ of Minnesota*
31. **Use of an Infectious Laryngotracheitis Virus gB Protein Elisa kit to Assess the Serological Response to Vaccination**  
Fernando Lozano, *CEVA ANIMAL HEALTH*
32. **MinION sequencing to genotype US strains of infectious laryngotracheitis virus**  
Stephen Spatz, *US National Poultry Research Center, Agricultural Research Service, United States Department of Ag*
33. **Isolation, identification and genomic characterizations of two different genotypes of avian paramyxoviruses 1 isolated from live bird markets in Tanzania in 2012**  
Iryna Goraichuk, *USDA-ARS-USNPRS-SEPRL*

34. **Expression and characterization of chicken anemia virus proteins as ELISA antigens**  
Linda Michel, *The Ohio State University*
35. **A Retrospective Study (2016-2017) of Neoplastic Diseases Diagnosed in Backyard Chickens Submitted to the Alabama Department of Agriculture and Industries Veterinary Diagnostic Laboratory System**  
Erfan Chowdhury, *Alabama Veterinary Diagnostic Laboratory System*
36. **In vivo testing of a qPCR for the specific detection of a new MDV serotype-1 vaccine (RN1250 strain) administered at day-old chicks**  
Andrea Delvecchio, *Boehringer Ingelheim AH*
37. **Evaluation of an Easy and Rapid Detection of Avian Leukosis Virus Subgroup J (ALV-J) by Fully Automated POCKIT™ Central PCR System**  
Keat Fu, *Aviagen Inc.*
38. **A Portable Microdevice for Size-based Virus Enrichment**  
Huaguang Lu, *The Pennsylvania State University*
39. **Isolation and TEM examination of unknown duck viruses**  
Huaguang Lu, *The Pennsylvania State University*
40. **Validation of real time PCR reagents to identify Salmonella spp. DNA in enriched cultures**  
Jantina De Vylder, *BioChek*
41. **A Comprehensive Comparison of Multiple MG/MS Real Time PCR Assays**  
Heather Failyer, *Georgia Poultry Laboratory Network*
42. **Diagnostic Service for Avian Pathogenic Escherichia coli (APEC) Identification in Georgia: Comparison of Gene Profiles with Tissue of Isolation.**  
Nicolle Barbieri, *University of Georgia*
45. **Next-generation random Sequencing for Identification and Characterization of Infectious Agents in broilers with Hypoglycemia and Spiking Mortality Syndrome**  
Iryna Goraichuk, *USDA/ARS/SEPRL*
46. **Why a Quality Management System is Valuable in a Poultry Laboratory**  
Brenda Glidewell, *GA Poultry Lab*
47. **Isolation of Salmonella sp. in Poultry Tissue Samples using the MSRV Method**  
Bridgeth Flores, *GA Poultry Lab*
48. **Development of Multiplex Polymerase Chain Reaction for Detection of Avian Leukosis Virus, Reticuloendotheliosis Virus, Marek's Disease Virus and Chicken Infectious Anemia Virus in Korean Native Chicken**  
You-Chan Bae, *Animal and Plant Quarantine Agency*

## Enteric Health

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

## Food Safety

50. **The Effectiveness of a Feed Grade Sodium Formate in Feed or Drinking Water in Reducing Salmonella heidelberg Colonization of Broilers**  
Charles Hofacre, *Southern Poultry Research Group, Inc.*
51. **Estimating Salmonella Numbers to the Processing Plant: a Correlation of Salmonella Enumeration of Bootsocks, Ceca and Carcass Rinses from Broiler Chickens**  
Charles Hofacre, *Southern Poultry Research Group, Inc.*
52. **Salmonella enterica Subsp. enterica Serovar Typhimurium Weakens Avian Blood Macrophage-like Monocytes Functions In Vitro**  
Elya Abbaszadeh, *The University of Tehran*

53. **Salmonella Field Isolates: A Retrospective Analysis of Salmonella Serotypes Association with Common Field Isolation Media of Poultry Flocks in the Southern United States**  
Carolyn Miller, *Consultant*

54. **What to do with that Salmonella Culture over the Weekend**  
Doug Waltman, *Georgia Poultry Laboratory Network*

55. **Comparing Salmonella spp. Isolated Based on Organ Type**  
Kathryn Burden, *GA Poultry Lab*

### **Immunology**

56. **Development of Sandwich ELISA for Differential Detection of Chicken Heterodimeric Cytokines, Interleukin-12 and -23**  
Woohyun Kim, *USDA-ARS*

57. **Development of novel monoclonal antibodies against chicken interleukin- 4 and alternative activation of macrophage-like cells in chickens**  
Atul Chaudhari, *USDA-ARS*

58. **Development of Poultry-Specific Immune Reagents**  
Hyun Lillehoj, *Animal Biosciences and Biotechnology Laboratory, Beltsville Agricultural Research Center, United States*

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

61. **Comparison of toll-like receptor (TLR) 3 mediated immune responses in wild-type and TLR3 knockout chicken and quail fibroblast cell lines**  
Mahesh K.C., *The Ohio State University*

62. **Expression and Characterization of Chicken Perforin and Granzyme A**  
Charles Li, *Beltsville Agricultural Research Center / ARS / USDA*

63. **Effect of In Ovo Vaccination with HVT on IFN-gamma and TLR-3 Transcripts in the Spleen and Lung of Chicken Embryos**  
Allison Boone, *North Carolina State University, College of Veterinary Medicine and North Carolina Veterinary Diagnostics*

64. **Identification of nucleotide-binding oligomerization domain like receptor pyrin domain containing 3 inflammasome in chickens**  
Ching Ching Wu, *School of Veterinary Medicine, National Taiwan University, Taipei, Taiwan*

65. **Development Of The Immune System In Broiler Breeders: Impact Of IBDV Vaccination and Feeding Programs**  
Enrique Montiel, *Boehringer Ingelheim*

66. **Correlation Between the Level of Maternal Antibodies in Broilers Against Chicken Anemia Virus and Infectious Bursal Disease Virus with Respect to the Time of Egg Storage and the Age of the Breeders**  
Xanat Alicia Roa Garcia, *Boehringer Ingelheim Animal Health Mexico*

67. **Comparison of the Serological Response of Three Tetravalent Commercial Inactivated Vaccines in Breeders**  
Bruno Garcia, *San Marcos University*

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

### **Marek's Disease Virus**

69. **The effects of CVI988 Marek's disease vaccine in eliciting transcription of IFN-gamma and TLR-3 in turkey embryos**  
Jewell Bremer, *North Carolina State University CVM*

70. **Effect of Challenge with Oncogenic Marek's Disease Virus on the Replication of Marek's Disease Vaccines**  
Rachel Reese, *North Carolina State University CVM*

71. **Study of the efficacy and replication of recombinant vector vaccines using herpesvirus of turkey (rHVT) when combined with other Marek's disease vaccines**  
Aneq Lucia Cortes, *North Carolina State University, CVM*

72. **Role of Meq-vIL8 in the Pathogenesis of Marek's Disease Virus**  
Blanca Lupiani, *Texas A&M University*

### **Parasitology**

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

74. ***Eimeria tenella* Elongation Factor-1a (EF-1a) co-administered with chicken IL-7 (chIL-7) DNA vaccine emulsified in Montanide Gel 01 adjuvant enhanced immune response to *E. acervulina* infection in broiler chickens.**  
Alfredo Panebra, *USDA*

75. **Evaluation of a Potential Universal Subunit Coccidiosis Vaccine to Protect Against Mixed *Eimeria* spp Challenge**  
Sherry Layton, *Vetanco/BV Science*

76. **Histomoniasis in broiler breeders in Peru**  
Nelly Cribillero, *San Marcos University*

77. **Populations of *Eimeria tenella* Express Resistance to Commonly Used Anticoccidial Drugs in Southern Nigeria**  
Agatha Ojimekwe, *University of Port Harcourt*

### **Pathology**

78. **Mycotoxicosis by T-2 Toxin in Broiler Breeders in Peru**  
Eliana Icochea, *UNMSM*

79. **A Cervical Mass in an Adult Backyard Hen**  
Kristen Hill-Thimmesch, *Purdue University*

80. **Description of round cell neoplasia in psittacine birds to characterize diagnostic features**  
Daniel Gibson, *The University of Guelph*

81. **Neoplasia in Small Poultry Flocks in Ontario**  
Leonardo Susta, *University of Guelph*

82. **Histologic and Histomorphometric Evaluations of Disarticulation-Associated Femoral Head Separation in Clinically Normal Broilers: Documentation of Underlying Predisposing Cartilage Abnormalities**  
Floyd Wilson, *MVRDL*

83. **Production Trial Analysis in Commercial Layers Using Mortality Survey Analytics and Cumulative Mortality**  
Frederic Hoerr, *Veterinary Diagnostic Pathology, LLC*

### **Vaccinology**

84. **Protection Conferred by Infectious Bronchitis Virus Spike Ectodomain**  
Ramon Zegpi, *Auburn University*

85. **Oral DNA vaccination with vaccine encoding turkey coronaviral spike protein containing neutralizing epitope delivered by attenuated *Salmonella* with the boost of spike protein**  
Tsang Long Lin, *Purdue University, CVM*

86. **Characterization of mode of action of MB-1 – a live hatchery vaccine against Gumboro disease.**  
Ehud Ashash, *Phibro Animal Health Corporation*

87. **Construction and Efficacy of A Recombinant HVT-ND Vaccine against NDV and MDV Challenges in SPF and NDV Challenge in Broiler Birds**  
Sing Rong, *Zoetis*

88. **Onset of Immunity of A Recombinant HVT-ND against of a Velogenic NDV Challenge in SPF Birds**  
Sing Rong, *Zoetis*

89. **Evaluation of attenuated fowl adenovirus vaccines against Inclusion Body Hepatitis in chicken**  
Van Dam Lai, *Chungbuk National University, CVM*

90. **Compatibility evaluation of two Fowl Pox Vectorized Vaccines against the Avian Influenza Virus H7N3 and H5N2 administered simultaneously.**  
Lilia Castellanos, *Boehringer Ingelheim Animal Health Mexico*
91. **A Fowlpox-vectored H7 Influenza Vaccine to Help Combat H7N3 Avian Influenza Virus Circulating in Mexico.**  
Justin Widener, *Boehringer Ingelheim Animal Health*
92. **Seroconversion and Vaccine Take Monitoring in SPF Birds Vaccinated, Alone or Combination, with Different HVT Vector Vaccines Against Newcastle or Avian Influenza (H5 or H7) Viruses and an Inactivated Reverse Genetics Vaccine Against the Avian Influenza Vi**  
Luiz Sesti, *Ceva Animal Health*
94. **Assesment of a Novel 4 Way Inactivated Vaccine for Broiler Breeders.**  
Francisco Perozo, *Merial*
95. **Verification of in Ovo Vaccination Using Next Generation Sequencing and a Traffic Light- Style Scoring System**  
Elise Myers, *Merck Animal Health*
96. **Optimization of antibody avidity index estimation using logistical regression models**  
Ramon Zegpi, *Auburn University*
97. **Field safety of in ovo and subcutaneous administration of Innovax-ND-IBD (HVT-ND-IBD) vaccine in commercial Broilers**  
Matthew Stock,
138. **Development of a Genotype-Matched Vaccine Against Virulent Newcastle Disease Virus**  
Dana Goldenberg, *USDA ARS*
99. **Virus neutralization of the Canada/17-099269/17 strain of Infectious Bronchitis Virus using antisera to known vaccine strains**  
Andrew Bishop, *University of Georgia PDRC*
100. **Broiler Study Evaluating Protection Against A Contemporary DMV/1639 Isolate By A Commercial GA08 Vaccine Either By Itself Or In Combination With Other IB Vaccines**  
Kalen Cookson, *Zoetis*
101. **Genetic and Pathologic Characterization of Recombinant TC07-2-like and Q1-like Infectious Bronchitis Viruses in Korea**  
So Youn Youn, *Animal and Plant Quarantine Agency*
102. **Intestinal tropism of an IBV isolate is not explained by spike protein binding specificity**  
Saiada Farjana, *Auburn University*
103. **Serology and Molecular Diagnostics as Tools to Assess Losses Induced by Infectious Bronchitis (IB) in Broiler Farms**  
Jorge Chacón, *Ceva Animal Health*
104. **Control of Production Losses in Commercial Layer Flocks Infected with the BR-I Variant Strain of Infectious Bronchitis Virus in Brazil**  
Jorge Chacón, *Ceva Animal Health*
105. **Infectious Bronchitis Virus (IBV) in Peru: a 10-year molecular epidemiological survey (2009 to 2018)**  
Claudia Carranza, *USP / Ceva Animal Health*
106. **Economic Estimation of Direct Disease Cost of an IBV Outbreak in a Grandparent Flock in Brazil**  
Claudia Carranza, *USP / Ceva Animal Health*
107. **Persistence of Infectious Bronchitis and Newcastle Disease Vaccine virus by In Situ Hybridization**  
Alejandro Banda, *Mississippi State University*
108. **Seroconversion of Two ND Vaccination Programs**  
Bruno Garcia, *San Marcos University*

## Virology

98. **IBV DMV/1639/11 causing cystic oviducts in egg layers: Prevalence and risk factors in Eastern Canada laying flocks**  
Eric Parent, *Université de Montréal, Saint-Hyacinthe, Canada*



109. **Virulent Newcastle disease virus efficiently replicates in chicken feathers and is readily identified by rRT-PCR and virus isolation**  
Kiril Dimitrov, *USDA/ARS/USNPRC/SEPRL*
110. **Evaluation of Factors Influencing Marek's Disease Vaccine Titer Variability**  
Blanca Lopez de Juan Abad, *North Carolina State University*
111. **Vaccinal efficacy of Gallid alphaherpesvirus 3 strain 301B/1 from BAC clone against Marek's disease virus challenge**  
Taejoong Kim, *USDA-ARS-USNPRC*
112. **Use of HVT vector to express protective antigens from important viral pathogens**  
Sanjay Reddy, *Texas A & M University*
113. **Current Infectious Bursal Disease Virus Circulation in Mexican Poultry. A Molecular Survey**  
Francisco Rios-Cambre, *MSD Salud Animal Mexico*
114. **New Introduction of a Very Virulent Infectious Bursal Disease Virus in the USA**  
Daral Jackwood, *The Ohio State University*
115. **Towards the Construction of Sigma C epitope-based Vaccine for Avian Reoviruses**  
Joseph Giambrone, *Auburn University*
116. **Pathogenicity of a variant Reovirus isolate close to Classical strains obtained from Clinical case of Viral Arthritis in Northwest Canada.**  
Victor Palomino-Tapia, *University of Calgary*
117. **Characterizing the etiological agent of guinea fowl viral pancreatitis**  
Jean-Luc Guerin, *ENVT, University of Toulouse*
118. **Defining the Host Range of Aquatic Bird Bornavirus through In Vitro Replication Kinetics and Lesion Development In Ovo**  
Alex Leacy, *University of Guelph*
119. **A Preliminary Survey of Hemagglutinating Viruses from Penguins, Great Grebes and Petrels in the Coast of the District of Pinamar, Argentina.**  
Celina Buscaglia, *Comision de Investigaciones Cientificas de la Provincia de Buenos Aires*
120. **Evaluation of Infectious Bronchitis Virus (IBV) Infection in Broilers Fed Availa®Zn**  
Brian Ladman, *University of Delaware*

## Wealth of Knowledge

121. **Non-biological factors impacting efficacy of Direct Fed Microbials in commercial poultry production**  
James Barton, *Adisseo*
122. **Peptidoglycan: An issue in chicken intestinal tract that has been overlooked.**  
Tina Yun-Ting Wang, *DSM*
123. **Toward Understanding the Respiratory Microbiota of Poultry**  
Chang-Won Lee, *Food Animal Health Research Program, The Ohio State University*
124. **Field Experiences in Preventing Bacterial Bone Disease in Broiler Chickens**  
Marie Severyn, *Amick Farms*
125. **Big Data in Poultry Production: Harnessing Information Regardless of Scale**  
Albert Payne, *Simple Ag Solutions*
126. **Using Telemedecine for Training and for Collaborative Initiatives in the Field**  
Jean-Pierre Vaillancourt, *University of Montreal*
127. **Incorporating the New NPIP SubPart J into the State's Plan.**  
Douglas Anderson, *GPLN*
128. **Industry Strategies for Inclusion Body Hepatitis Control in Peru.**  
Francisco Perozo, *Merial*
129. **Poultry Health Management Schools: Continuing Education For the Poultry Health Professional**  
Robert Porter, *Univ of Minnesota*

130. **The effects of downtime on key chicken production parameters**  
Timothy Buisker, *Smart Data Science Solutions*
131. **Characterization of the Demographics and Prevalence of Poultry Pathogens in Ontario, Canada Small Poultry Flocks**  
Marina Brash, *Animal Health Laboratory*
132. **Causes of Morbidity and Mortality in Small Flocks in Ontario**  
Leonardo Susta, *University of Guelph*
133. **Review and statistical analysis of trends in common diseases of pet/hobby chickens submitted to the Georgia Poultry Lab Network**  
Christopher Gaudette, *North Carolina State University CVM*
134. **Mycotoxin Prevalence in the 2018 Latin American Corn Crop**  
Eduardo Vicuna, *BIOMIN*
135. **Megabacteriosis, *Macrorhabdus ornithogaster* and *Mycobacterium genavense* in a Zoo Budgerigar, *Melopsittacus undulatus*, Flock**  
Richard Fulton, *Michigan State University*
136. **A Historical Snapshot of Turkey Production in the USA**  
Joan Schrader, *Poultry Veterinarian & Consultant*