

AAAP/AVMA Symposium & Scientific Program



Washington, D.C.
July 14-18, 2007



BOARD OF DIRECTORS

President	Patricia Wakenell
President-Elect	Fred Hoerr
Secretary-Treasurer	Charles Hofacre
Director-Northeast	Patty Dunn
Director-South	Hector Cervantes
Director-Central	Ching Ching Wu
Director-Western	Stewart Ritchie
Director-at-Large	Mick Fulton
Director-at-Large	Travis Cigainero
Past President	Robert Owen

FOUNDATION BOARD

Robert Owen, Chair	Patty Dunn
Bob O'Conner, Vice Chair	Robert Eckroade
Mark Bland	Yan Ghazikhanian
Bruce Calnek	Fred Hoerr
Hector Cervantes	Charles Hofacre
Travis Cigainero	Stewart Ritchie
Mick Fulton	Pat Wakenell
John Donahoe	

American Association of Avian Pathologists
2007
Athens, GA 30602-4875
Phone: (706) 542-5645
Fax: (706) 542-0249
Email: aaap@uga.edu
Website: <http://www.aaap.info>

Table of Contents

Special Presentations.....	7
----------------------------	---

Schedule of Events – AAAP/AVMA Meeting	8
--	---

AAAP Scientific Program	9
-------------------------------	---

Poster Session.....	16
---------------------	----

Abstracts -

Monday, July 16, 2007

Session A.....	24
----------------	----

Session B	37
-----------------	----

Tuesday, July 17, 2007

Session A.....	50
----------------	----

Session B	58
-----------------	----

Wednesday, July 18, 2007

Session A.....	66
----------------	----

Session B	73
-----------------	----

Posters.....	80
--------------	----



In Advance for Your Support to the Upcoming Annual Meeting in Washington, D.C.

Diamond (>\$10,000)

Intervet
Fort Dodge
Merial Select

Platinum (\$5,000-\$10,000)

Biomune
Charles River Spafas

Gold (\$1,000-\$4,999)

American College of Poultry Veterinarians (ACPV)
AgTech Products, Inc.
Alltech
Alpharma
Assn. of Poultry Primary Breeder Veterinarians
Assn. of Veterinarians in Layer Production
Aviagen
Cobb-Vantress
Cutler Associates, Inc.
Elanco Animal Health
Embrex
Hubbard
Huvepharma, Inc.
IDEXX
Jones-Hamilton
Lohmann Animal Health International
Mississippi State University, College of Veterinary Medicine
National Chicken Council
National Turkey Federation
North Carolina State University, College of Veterinary Medicine
Novus
Poultry Diagnostic and Research Center, The University of Georgia
Schering-Plough
Sunrise Farms
Synbiotics
University of Pennsylvania, College of Veterinary Medicine
Western Poultry Disease Conference (WPDC)
West Vets

Thank You!

Continued from page 4.

In Advance for Your Support to the Upcoming Annual Meeting in Washington, D.C.

Silver (<\$999)

Bayer Animal Health
Colorado Quality Research, Inc.
Hatch Tech
Kemin Agrifoods North America
MAM Alumni Association of University of Georgia
Mountaire Farms
Perdue Farms
Sanderson Farms
Wayne Poultry

Tuesday, July 17, 2007 – 5:00 til 11:00 PM

AAAP's 50th Anniversary & Awards Banquet

&

The Fabulous HubCaps

Sponsored by Cobb-Vantress and Merial Select



**A Sincere Thank You to
Intervet, Inc.**

for sponsoring the

**AAAP Welcome Reception
at the**

**Grand Hyatt Hotel
Independence A Room**

**on Saturday evening,
July 14, 2007
5:00 – 11:00 pm**

**Please be sure to thank Intervet
and all of our sponsors**



Poster Presenters – VERY IMPORTANT -

Posters must be set up before **7:00 AM on Sunday, July 15th** and removed promptly at **12:00 PM on Wednesday, July 18th.**

Presenters should be available each morning and during scheduled breaks in the scientific program to discuss their posters.

SPECIAL PRESENTATIONS

Monday, July 16, 2007

8:00 AM

Keynote Speaker: John Glisson

“The Future of Veterinary Medicine and Poultry Production”

Tuesday, July 17, 2007

10:00 AM

Lasher History Lecture: Richard Witter

“Origin and Evolution of the American Association of Avian

Pathologists: 50 Years of Dedication and Accomplishment”

1:00 PM

Reed Rumsey Award Presentation: M. F. Abdul-Careem

“Cellular and Cytokine Responses Associated with

Dinitrofluorobenzene-induced Contact Hypersensitivity in Chicken”

Tuesday, July 18, 2007

10:00 AM

Richard Rimler Memorial Paper: H. M. Yassine

“Interspecies Transmission: Host Range Determinants of Swine H3N2

Influenza A Virus Transmission from Pigs to Turkeys”



AAAP Schedule of Events – Grand Hyatt (Washington, D.C.)

Date / Time	Meeting Name	Room Assignments
Friday, July 13, 2007		
6:45 am – 5:00 pm	AAAP Board of Directors Meeting	Latrobe
Saturday, July 14, 2007		
6:45 am – 12:00 pm	AAAP Board of Directors Meeting	Latrobe
1:00 pm – 5:00 pm	AAAP Foundation Board Meeting	Latrobe
7:00 am – 8:00 pm	ACPV Exam	Roosevelt/Wilson
7:00 am – 8:00 pm	ACPV Exam # 2	Cabin John
7:00 am – 10:00 pm	ACPV Exam # 3 – (Exam Grading Room)	Arlington
8:00 am – 5:00 pm	Association of Veterinarians in Broiler Practice	(Breakfast-Renwick) Constitution C (Lunch-Renwick)
12:00 pm – 5:00 pm	Association of Veterinarians in Turkey Production	Arlington
1:00 pm – 4:00 pm	AAAP-CAST	Constitution E
2:00 pm – 4:00 pm	AAAP Membership Committee	Potomac
2:30 pm – 5:00 pm	AAAP Histopathology/ Case Report Interest Group	Conference Theater
3:00 pm – 4:00 pm	AAAP Education Committee	Bulfinch
3:00 pm – 4:30 pm	AAAP Biologics Committee	Washington Boardroom
3:00 pm – 5:00 pm	AAAP Poultry Research Priorities Committee	Renwick
3:30 pm – 5:30 pm	AAAP Avian Diseases Editorial Board Meeting	Constitution A
4:00 pm – 5:00 pm	AAAP Electronic Information Committee	Potomac
6:00 pm – 10:00 pm	AAAP – Intervet Reception	Independence A
Sunday, July 15, 2007		
7:00 am – 8:00 am	AAAP Awards Committee	Potomac
7:00 am – 8:30 am	Georgia MAM Alumni Breakfast	Constitution CD
11:30 am – 1:30 pm	Association of Primary Poultry Breeder Veterinarians Luncheon	Arlington/Cabin John
12:00 pm – 1:00 pm	AAAP Drugs & Therapeutic Committee	Renwick
12:00 pm – 1:30 pm	California Poultry Medicine Alumni	Constitution E
2:00 pm – 6:00 pm	ACPV Board Meeting	Renwick
3:00 pm – 4:00 pm	AAAP-AVMA Liaison Committee	Arlington
3:00 pm – 4:00 pm	AAAP Epidemiology Committee	Washington Boardroom
3:00 pm – 4:30 pm	AAAP Food Safety Committee	Cabin John
3:15 pm – 4:30 pm	AAAP History Committee	Potomac
3:15 pm – 5:15 pm	AAAP Animal Welfare Committee	Burnham
3:15 pm – 5:15 pm	AAAP Respiratory Diseases Committee	Constitution A
4:00 pm – 5:00 pm	AAAP Biotechnology Committee	Constitution E
4:00 pm – 5:00 pm	AAAP Diseases of Poultry Committee	Arlington
4:00 pm – 5:30 pm	AAAP Enteric Diseases of Poultry Committee	Roosevelt
4:00 pm – 5:00 pm	AAAP Toxic, Infectious, Miscellaneous & Emerging Diseases (TIME) Committee	Washington Boardroom
4:00 pm – 5:00 pm	AAAP Tumor Virus Committee	Wilson
7:30 pm – 11:00 pm	NC State University Poultry Health Management	Constitution CD
Monday, July 16, 2007		
7:00 am – 8:00 am	AAAP Eskelund Preceptorship Committee	Arlington
7:00 am – 9:00 am	Association of Veterinarians in Egg Production	Burnham
3:00 pm – 4:00 pm	AAAP Task Force on Future of AAAP	Washington Boardroom
Tuesday, July 17, 2007		
7:00 am – 9:00 am	ACPV Reception / Annual Meeting	Constitution AB
10:30 am – Noon	AAAP Business Meeting	(Convention Center) Room 207
5:00 pm – 11:00 pm	AAAP 50th Anniversary & Awards Banquet	Independence A
Wednesday, July 18, 2007		
6:45 am – Noon	AAAP Board of Directors Meeting	Farragut Square

BIOTECHNOLOGY – IMPACT ON AVIAN HEALTH

AAAP 50th Anniversary Symposium – July 15, 2007

Sponsoring AAAP Committee: Biotnology committee

The contributions of biotechnology to avian health have been substantial, especially in the areas of diagnostics and vaccine development. The goal of this symposium is to summarize and demonstrate the uses of current technology, acknowledge some of the challenges, and to suggest its future potential.

8.00 – 8.05 a.m. Welcome – **Calvin Keeler**

Diagnostics

8:05 – 8:20 a.m. Overview – How has biotechnology advanced in 15 years, what are some of the challenges, and what does the future hold – **Daral Jackwood**

8:20 – 8:50 a.m. Biotechnology and its impact on the diagnostic laboratory – **Fred Hoerr**

8:50 – 9:20 a.m. Sequencing and its diagnostic uses – **Ching Ching Wu**

9:20 – 9:50 a.m. Current and future applications of quantitative PCR – **Mark Jackwood**

9:50 – 10:10 a.m. BREAK

10:10 – 10:40 a.m. Real-time quantitative PCR and AI – **Erick Spackman**

10:40 – 11:00 a.m. Microassays and future diagnostic applications – **Calvin Keeler**

Vaccines

11:00 – 11:15 a.m. Overview of developments in the last 15 Years in recombinant vaccines – **Bob Silva**

11:15 – 11:45 a.m. Recombinant vaccines – challenges, successes, and current products – **Ruud Hein**

11:45 – 12:45 p.m. LUNCH

12:45 – 1:15 p.m. BACs and Marek's vaccine developments – **Klaus Osterrider**

1:15 – 1:45 p.m. The promise of reverse genetics – **Egbert Mundt**

1:45 – 2:15 p.m. Concept to product – challenges associated with patenting, licensing and marketing recombinant products – **David Shapiro**

2:15 – 2:45 p.m. Future vaccine developments – RNAi/Immunomodulators – **David Suarez**

2:45 – 3.00 p.m. Speaker Panel

SCIENTIFIC PROGRAM

Monday, July 16, 2007 – Morning Program

	Monday, July 16, 2007 – Morning Program	
	Moderator: A. G. Rosales	
8:00 AM	Keynote Speaker: John R. Glisson	Room 207A
	The Future of Veterinary Medicine and Poultry Production	
	Moderator: Stewart Ritchie Room 207A	Moderator: Kenton Kreager Room 207B
8:30 AM	Poultry House of the Future Mark A. Dekich and Jeannine M. Harter-Dennis	Use of Molecularly Cloned Avian Leukosis Virus to Study Antigenic Variation Following Infection of Meat-Type Chickens Aly M. Fadly, Jody K. Mays, R. F. Silva, and H. D. Hunt
8:45 AM	Welfare Audits: Present and Future Needs of the Poultry Industry Ken Opengart	Diphtheritic Tumorous Growths Caused by Fowlpox Virus Containing REV Provirus Deoki N. Tripathy
9:00 AM	Annual Antibiotic Consumption in a Commercial Turkey Operation Eric Gonder and Becky Tilley	Molecular Characterization of Three Isolates of Avian Leukosis Virus Isolated From Contaminated Marek's Diseases Vaccines Taylor Barbosa, Guillermo Zavala, and Sunny Cheng
9:15 AM	Use of 4-H Project Turkeys as Serological Sentinels in North Carolina David V. Rives and Summer M. Russell	Control of Contemporary Marek's Disease Isolates Robin W. Morgan, Grace Isaacs, Mark Parcels, Milos Markis, Amy S. Anderson, Erin L. Bernberg, Sandra Cloud Rosenberger, and John K. Rosenberger
	Break 9:30 AM – 10:00AM	Break 9:30 AM – 10:00AM
	Moderator: Ken Opengart	Moderator: Susan Williams
10:00 AM	Teaching Poultry Necropsy Techniques to Afghan Veterinary Students Richard M. Fulton, Ezatullah Jaheed, and Robert M. Smith	Pathological and Viral Characterization of a Case of Splenomegaly in F Line Turkeys: Is HVT Able to Produce Disease? Devorah A. Marks, Aneg Lucia Cortes, John Barnes, Oscar J. Fletcher, and Isabel M. Gimeno
10:15 AM	Pre-Peak Lay Broiler Breeders with Impaired Mobility and High Mortality Associated with Myopathy and Hypocalcemia Valerie Rochelle Bullock, Michael P. Martin, Michael J. Wineland, Oscar J. Fletcher, and H. John Barnes	The Effect of Vaccination on Marek's Disease Virus Shedding Robert F. Silva, Abd A. El-Galil El-Gohary, and John Dunn
10:30 AM	Use of the I-Stat Serum Chemistry Analyzer for Evaluation of Flock Health in Pre-Peak Lay Broiler Breeders Michael P. Martin, Valerie R. Bullock, Michael J. Wineland, Oscar J. Fletcher, and H. John Barnes	A Comparison Between Marek's Disease Virus Production in Feather Pulp Versus Feather Follicle Epithelium (FFE) John R. Dunn, James B. Finlay, Richard L. Witter, and Robert F. Silva

Monday, July 16, 2007 – Morning Program		
	Room 207A	Room 207B
10:45 AM	Incubation Conditions and Leg Health in Large High Yield Broilers Edgar O. Oviedo-Rondón, Mike Wineland, Sarah Funderburk, Heather Cutchin, John Small, and Mike Mann	Effect of Vaccination on the Development of Marek's Disease Virus-Induced Eye Lesions Arun K.R. Pandiri, Aneq Lucia Cortes, and Isabel M. Gimeno
11:00 AM	Vertebral Canal Stenosis as a Cause of Lameness in Broilers: Additional Findings Kelli Jones, H. John Barnes, Kenneth C. Powell, and Suzanne Y. Stamey	Relationship Between Load of Marek's Disease Vaccine DNA in Peripheral Blood and Level of Protection Aneq Lucia Cortes and Isabel M. Gimeno
11:15 AM	State Quarantines of Respiratory Disease Found at Auction: Lessons Learned Donna J. Kelly	Pathogenesis of Serotype 1 Marek's Disease Vaccines in the Lung Isabel M. Gimeno and Aneq L. Cortes
11:30 AM	Chromium Associated Discoloration of Egg Yolks in a Backyard Flock H. M. Opitz, Tiffany A. Wilson, Bruce R. Hoskins, Dawna J. Beane, and Xi Wang	Recombinant Marek' disease virus lacking the oncogene Meq as a candidate for future control of Marek's disease in chickens Lucy F. Lee, Sanjay Reddy and Kenton Kreager
11:45 AM	Differential Diagnosis of Liver Hemorrhage in Laying Hens Craig Riddell	Functions of Marek's Disease Virus MicroRNAs Robin W. Morgan, Amy S. Anderson, Erin L. Bernberg, Emily Huang, Grace Isaacs, Milos Markis, and Joan Burnside
LUNCH NOON – 1:00 pm		
Monday, July 16, 2007 – Afternoon Program		
	Moderator: Hector Cervantes	Moderator: Richard Fulton
1:00 PM	Field Experiences in Commercial Broilers with an <i>In Ovo</i> Coccidiosis Vaccine Andrea J. Sinclair, David Kelly, Rebecca Poston, Cheryllyn Heggen-Peay, Larry Charniga, Lynn Murray, and Vivian Doelling	Evaluation of Different Hemagglutinin-Neuraminidase (HN) Chimeras Using a Newly Developed Reverse Genetic System Based on the Mesogenic Anhinga Newcastle Disease Virus Strain Carlos Estevez, Qingzhong Yu, Daniel King, and Patti Miller
1:15 PM	Eimeria Shedding Patterns Under Various Environmental and Coccidiosis Management Programs Linnea J. Newman and Greg F. Mathis	Newcastle Disease Virus Isolates from US Waterfowl Reveal Novel Genomic Subgroups with Diverse and Evolving Genetics L. Mia Kim, Daniel J. King, David E. Swayne, David Stallknecht, Richard D. Slemons, Janice C. Pedersen, Dennis A. Senne, Kevin Winker, and Claudio L. Afonso
1:30 PM	Comparison of <i>Eimeria</i> Species Composition Between High-Performance and Low-Performance Broiler Operations Mark C. Jenkins, Spangler Klopp, Donald Ritter, and Katarzyna Miska	Presence of Newcastle Disease Virus and Avian Influenza Virus in Wild Birds at the Peruvian Coast Armando Gonzalez, Eliana Icochea, Rosa Gonzalez, Bruno Gheri, and David Blazes
1:45 PM	Analysis of Gene Expression in the Intracellular Stages of the Poultry Parasite, <i>Eimeria acervulina</i> Katarzyna B. Miska and Raymond H. Fetterer	Isolation of Exotic Newcastle Disease Virus (ENDV) from Field Collected Flies and Experimental ENDV Infections of Three Arthropod Species Daniel J. King, Seemanti Chakrabarti, Claudio L. Afonso, Alec C. Geery, Carol J. Cardona, and David E. Swayne

Monday, July 16, 2007 – Afternoon Program		
	Room 207A	Room 207B
2:00 PM	Characterization of Novel Lytic Peptide Secreted by Intestinal Intraepithelial Lymphocytes Infected with Coccidia Hyun S. Lillehoj, Sung Hyun Lee, Doug Bannerman, and Yeong H. Hong	The Macroscopic and Microscopic Pathology Associated with Outbreaks of Exotic Newcastle Disease in Commercial Poultry, and Pigeon Paramyxovirus Infection in Laughing Doves (<i>Streptopelia Senegalensis</i>) in South Africa Neil M. Duncan and Emily P. Lane
2:15 PM	The Use of Chlorine Dioxide as a Disinfectant in a Broiler Hatchery Mark Burleson, Phil Stayer, John Smith, and Joel Tenney	A “Poult Enteritis Mortality Syndrome” in Guinea fowl: a Pathological and Etiological Study Jean-Luc Guerin, Bertrand Grenier, Cyril Boissieu, and Caroline Lacroux
	Break 2:30 PM – 3:00PM	Break 2:30 PM – 3:00PM
	Moderator: Suzanne Young Stamey	Moderator: Kate Barger
3:00 PM	Enumerating Salmonella in Poultry Samples using a DNA Sequence Capture Combined with Q-PCR Randall S. Singer and Janet M. Anderson	Newcastle Disease Virus Vaccine Potency Determination Karen A. Liljebjelke, Darrell R. Kapczynski, and Daniel J. King
3:15 PM	Is Salmonella Enterica Kentucky a Newly Emergent, Poultry Adapted Strain? John J. Maurer, Adriana Pedroso, Margie D. Lee, Holly Sellers, Erich Linnemann, and Katherine Zamperini	Avian Adeno-Associated Virus-Based Expression of the Newcastle Disease Virus HN Protein for Poultry Vaccination Francisco Perozo, Pedro Villegas, Carlos Estevez, Ivan Alvarado, and Linda Purvis
3:30 PM	Discrimination Between Strains of <i>Salmonella</i> Enteritidis PT13 and PT13a by Comparative Genome Sequencing of the Virulence Plasmid Jean Guard-Bouldin, Cesar Morales, Adam B. Olson, and Matthew W. Gilmour	Development of a Quantitative Light Cycler Real-Time PCR for the Detection of Fowl Adenoviruses Éva Nagy, Nadya Romanova, and Juan Carlos Corredor
3:45 PM	Crop Isolated Lymphoid Follicles and Ileal Peyer’s Patches in Egg-Layer Hens Challenged with <i>Salmonella</i> Enterica Enteritidis Lara E. Vaughn, Peter S. Holt, Randle W. Moore, and Richard K. Gast	Multiple Expressions of Inclusion Body Hepatitis P. A. Stayer, C. Gabriel Senties, and John El-Attrache
4:00 PM	Oligodeoxynucleotides Containing CpG Motifs (CpG-ODN) Confer Protection Against a Lethal Challenge of <i>Salmonella typhimurium</i> Septicemia in Neonatal Broilers Susantha Gomis, Azita Taghavi, Lorne Babiuk, Andrew Potter, Brenda Allan, George Mutwiri, and Andrew Van Kessel	Physiochemical and Molecular Characterization of Adenovirus-Like Virus (Isolate R11/3), The Putative Etiology of Transmissible Viral Proventriculitis James S. Guy, John Barnes, and Fred Fuller
4:15 PM	Construction and Evaluation of Recombinant <i>Salmonella</i> Vaccines Expressing <i>Eimeria</i> Antigen SO7 Vjollca Konjufca, Maria-Dolores Rodrigues, Mark Jenkins, Shifeng Wang, and Roy Curtiss III	Histopathology of Transmissible Viral Proventriculus Caused by Adenovirus-Like Virus (Isolate R11/3) H. John Barnes and James S. Guy
4:30 PM	Effects of RofenAid® Impact on Salmonella Enumeration in the Intestine and Litter and on Performance of Male Broiler Chickens after a Challenge with Salmonella and a Mixed Culture of Coccidia Sharon Heins Miller, Charles Hofacre, and Greg F. Mathis	Effect of Maternal Antibodies on Vaccine-Induced Protection of Turkey Poults Against Virulent Avian Metapneumovirus Subtype C Challenge Binu Velayudhan, Sally Noll, Sagar Goyal, David Halvorson, and Kakambi Nagaraja
4:45 PM	ADJOURN	ADJOURN

Tuesday, July 17, 2007 – Morning Program		
	Room 207A	Room 207B
	Moderator: Timothy Cummings	Moderator: Alejandro Banda
8:00 AM	Molecular Characterization of Reoviruses Isolated from Broilers with Runting and Stunting Syndrome Reveals a Lack of Homogeneity with Current U.S. Vaccine Viruses Holly S. Sellers, Veronica Walker, Erich G. Linnemann, and Guillermo Zavala	IFN-α Regulates Infectious Bursal Disease Virus Induced Macrophage Activation Mahesh Khatri and Jagdev M. Sharma
8:15 AM	Extensive Analysis of Pathogenicity Island PAI_{1APEC O1} of Avian Pathogenic <i>Escherichia coli</i> Subhashinie Kariyawasam, Lisa K. Nolan, and Timothy J. Johnson	Cell-Mediated Immunity Induced by a Macrophage-Adapted Infectious Bursal Disease Virus Jagdev M. Sharma and Mahesh Khatri
8:30 AM	Analysis of the Complete Genome Sequence of an Avian Pathogenic <i>Escherichia coli</i> Timothy J. Johnson, Subhashinie Kariyawasam, Yvonne Wannemuehler, Paul Mangiamale, Sara J. Johnson, Curt Koetkott, Jerod A. Skyberg, Aaron M. Lynne, James E. Johnson, and Lisa K. Nolan	Identification of Infectious Bursal Diseases Viruses from Several Countries Pedro Villegas, Linda Purvis, Francisco Perozo, and Taylor Barbosa
8:45 AM	Evaluation of Differentially Expressed Proteins Following Serum Exposure in Avian Pathogenic <i>Escherichia coli</i> Steven L. Foley, Cynthia Tyler, and Cheryl Lichti	Impact of IBD Vaccines on the Bursa and Other Immune Tissues of Commercial Broilers Enrique Montiel, Nikki Pritchard, and Julio Cruz-Coy
9:00 AM	Role of Large Plasmids in the Virulence of Avian Pathogenic <i>Escherichia coli</i> Melha Mellata and Roy Curtiss III	Challenge Studies with Infectious Bursal Disease and Chicken Anemia Virus Field Strains Linda B. Purvis, Pedro Villegas, John Smith, and Francisco Perozo
9:15 AM	<i>E. coli</i> Challenge Study in Commercial Broilers by Either Respiratory or Skin Route of Exposure and the Effect of Prior Vaccination With a Live Attenuated (aro-A) <i>E. coli</i> Kalen Cookson and Steve Davis	Efficacy of a Vectorized Commercial Vaccine Against Infectious Bursal Disease in Layers Eliana Icochea, Blanca Talavera, Elmer Dávila, Rosa Gonzalez, John Guzman, and Hermelinda Rivera
	Break 9:30 AM – 10:00AM	Break 9:30 AM – 10:00AM
	Moderator: Richard Chin	
	Lasher History Lecture: 10:00 – 10:30 AM Room 207A SPEAKER: Richard Witter Origin and Evolution of the American Association of Avian Pathologists: 50 Years of Dedication and Accomplishment	
	AAAP Business Meeting Room 207A 10:30 – 12:00 noon	
	Lunch 12:00 noon – 1:00 PM	

	Tuesday, July 17, 2007 – Afternoon Program	
	Room 207A	Room 207B
	Moderator: David Ley	Moderator: Peter Woolcock
1:00 PM	A Challenging Case of Suspected <i>Mycoplasma gallisepticum</i> Infection in Broiler Breeders Frederic J. Hoerr, Lanqing Li, Samuel Christenberry, and C. Stephen Roney	REED RUMSEY AWARD: Cellular and Cytokine Responses Associated with Dinitrofluorobenzene-Induced Contact Hypersensitivity in Chicken M.F. Abdul-Careem, D. Bruce Hunter, Melissa D. Lambourne, Hamid R. Haghighi, Niroshan Thantrige-Don, and Shayan Sharif
1:15 PM	Epidemiology of <i>Mycoplasma synoviae</i> Isolates in Georgia from 2000-Present V. A. Laibinis, S. H. Kleven, Louise Dufour-Zavala, and Guillermo Zavala	Serum and Yolk Antibody Titers in Late Stage Broiler Embryos Alan Avakian, Donald Link, and John Dickson
1:30 PM	The Evaluation of <i>Mycoplasma gallisepticum</i> Challenge Routes Naola Ferguson-Noel, Victoria A. Laibinis, Ziv Raviv, Ruth S. Wooten, and Stanley H. Kleven	Validation of a Multiplexed Fluorometric Immunoassay™ (MFIA™) for Health Monitoring of Specific Pathogen Free Chickens Joe H. Simmons, Elena Seletskaja, Theodore Girshik, Rajeev K. Dhawan, and William R. Shek
1:45 PM	Intraspecific Differentiating Real-Time PCR for <i>Mycoplasma gallisepticum</i> Live Vaccine Evaluation Stanley H. Kleven, Ziv Raviv, Scott A. Callison, and N. Ferguson-Noel	Bursal Disease-Marek's Disease Vaccine, Live Marek's Disease Virus Vector, Serotype 3, (VAXXITEK™) Vaccination Effect on NDV Vaccination Schedules in Commercial Broiler Type Birds Rafael Fernandez, Mike McCabe, Francisco Rojo, and Julio S. Cruz-Coy
2:00 PM	Effects of TS-11 Strain <i>Mycoplasma Gallisepticum</i> Vaccination in Broiler Breeders Infection and Immunity on the Breeders and Its Progeny Francisco J. Rojo, Alejandro Rojas, and Rafael J. Fernandez	Antibody-Antigen Complexes Protect Against Chicken Infectious Anemia Virus Infection Karel A. Schat, Priscilla H. O'Connell, and Michael S. Piepenbrink
2:15 PM	Effect of Selected Water Temperatures Used in <i>Mycoplasma gallisepticum</i> Vaccine Reconstitution/Dilution on Color Change Units at Selected Time Intervals Scott L. Branton, Spencer A. Leigh, William B. Roush, Jody L. Purswell, Hammed O. Olanrewaju, and Stephanie D. Collier	The Effect of Vaccination Against Chicken Anemia Virus on Colonization, Shedding and Susceptibility to Infection with <i>Salmonella typhimurium</i> in Broilers Franz Sommer and Carol J. Cardona
2:30 PM	Use of the Microdilution Method for the Detection of the In Vitro Antimicrobial Susceptibility Against Avian Mycoplasmas Ariel M. Ortiz, Ernesto P. Soto, and Clemente F. Lemus	A Study of the Viral Shed of Laryngotracheitis in Cornish Birds at the Processing Plant During a Regional Outbreak and Area Wide LT Vaccination Bret Rings and Steve Breeding
2:45 PM	Antibiotic Resistance in <i>Mycoplasma gallisepticum</i> and <i>Mycoplasma synoviae</i> Isolates from Meat-Type Turkeys in Israel Sharon Levisohn, Irina Gerchman, and Shimon Perk	Challenge Study to Evaluate Vaccine Protection against Infectious Laryngotracheitis Virus (ILTV) Andrés Rodríguez and Maricarmen García
3:00 PM	ADJOURN	ADJOURN

Scientific program will adjourn at 3:00 PM on Tuesday in order to allow time for participants to attend the

AAAP 50th Celebration Banquet and the AAAP Awards Dinner at:

Grand Hyatt Hotel – Independence A Room -- 5:00 PM

	Wednesday, July 18, 2007 – Morning Program	
	Room 207A	Room 207B
	Moderator: Kalen Cookson	Moderator: Erica Spackman
8:00 AM	Vertically Transmitted Viral Arthritis (Reovirus) in Commercial Broilers: A Field Case Report Suzanne Young Stamey, Calvin Anthony, Kevin Crider, and Todd Cartwright	Characteristics of a Novel Infectious Bronchitis Virus Isolates from Delmarva Broiler Chickens Jack Gelb
8:15 AM	An Outbreak Of Tenosynovitis in Broilers Caused by Vertically-Transmitted Reovirus J. J. Courtney, M. M. E. Andersen, G. Zavala, H. S. Sellers, and S. M. Williams	Infectious Bronchitis Viruses Isolated in California 2004-2006 Peter R. Woolcock and Carol J. Cardona
8:30 AM	Unusual Case: Hemochromatosis Due to Lead Poisoning in a Wild Mallard Duck Scott D. Fitzgerald, Jessica S. Hoane, and Thomas M. Cooley	Pathogenesis of Infectious Bronchitis Virus in the Fully Functional Oviduct of Unvaccinated Laying Hens Kapil Chousalkar and Juliet R. Roberts
8:45 AM	Vitamin E Deficiency Induced Cardiomyopathy in Commercial Pekin Ducks Richard M. Fulton	The Dynamics of Spray Vaccination for IBV in Commercial Broilers Mark W. Jackwood, Deborah A. Hilt, and Enid T. McKinley
9:00 AM	Field Report: Acute Sodium Toxicosis in Turkey Poults Charles Corsiglia, Rocio Crespo, Richard Chin, H. L. Shivaprasad, Murugan Subbiah, Birgit Puschner, and Arthur Bickford	Rapid Selection in Chickens of a Subpopulation Within an Attenuated Infectious Bronchitis Virus Vaccine Vicky L. Van Santen, Haroldo Toro, and Kellye S. Joiner
9:15 AM	Effect of Novel Intestinal Anaerobes on Early Development of the Broiler Intestine Margie D. Lee, Brett Lumpkins, Youngiae Cho, and Amy Batal	Risk Factors Associated with the Prevalence of Airsacculitis in Broiler Chickens in Quebec, Canada Rachid Ankouche, Diane Brodeur, Martine Boulianne, and Jean-Pierre Vaillancourt,
	Break 9:30 AM – 10:00AM	Break 9:30 AM – 10:00AM
	Moderator: Scott Fitzgerald	Moderator: Nathaniel Tablante
10:00 AM	<i>Clostridium perfringens</i> and <i>Clostridium septicum</i> in Commercial Turkeys – Recent Findings Daniel Karunakaran	RICHARD RIMLER PAPER AWARD: Interspecies Transmission: Host Range Determinants of Swine H3N2 Influenza A Virus Transmission from Pigs to Turkeys H. M. Yassine, C-W. Lee, and Y. M. Saif
10:15 AM	Comparison of Level of Necrotic Enteritis in Broilers Vaccinated with Either an Attenuated or Non-Attenuated Live Coccidial Vaccine and Challenged with <i>Clostridium perfringens</i> Greg F. Mathis, Charles Hofacre, Jerry Chapman, and Elleen Katigbak	RCA-Free Recombinant Adenovirus-Vectored Vaccine for Mass Immunization of Poultry Against Avian Influenza H. Toro, D. C. Tang, F. Van Ginkel, and Z. Shi
10:30 AM	Innate Immune Response to <i>Clostridium perfringens</i> and <i>Eimeria maxima</i> in necrotic enteritis Model Hyun S. Lillehoj, Soon S. Park, Patricia C. Allen, Dong Woon Park, Steve Fitz-Coy, and Daniel A. Bautista	Differential Growth of Avian Influenza Virus in Chicken and Duck Cells Luciana Sarmento, Kristin Zaffuto, Mary Pantin-Jackwood, and Claudio Afonso

Wednesday, July 18, 2007 – Morning Program		
10:45 AM	Attempts to Develop an Oral Challenge Model for Gangrenous Dermatitis using <i>Eimeria maxima</i> and <i>Clostridium septicemia</i> Michelle M. Early-Andersen, Jeffery J. Courtney, and Steve R. Collett	Efficacy of Three Inactivated Vaccines Against Challenge with HPAI H5N1 Vietnam/05 Viruses in Ducks Mary J. Pantin-Jackwood, David L. Suarez, Jennifer Pfeiffer, and Luciana Sarmento
11:00 AM	Development of an Experimental Challenge Model for Cellulitis in Turkeys Anil J. Thachil, Binu T. Velayudhan, David A. Halvorson, and Kakambi V. Nagaraja	Comparison of In Vivo Innate Immune Responses in Lung and Spleen Tissue Following Infection with Asian H5N1 Avian Influenza Viruses in Ducks and Chickens Darrell R. Kapczynski and Mary Pantin-Jackwood
11:15 AM	Field Investigation of a Mycoplasma Outbreak in the Southeastern United States Guillermo Zavala, Michelle Andersen, Louise Dufour-Zavala, Victoria Leiting, and Stan Kleven	Surveillance, Testing and Epidemiology of Avian Influenza in the New York Live Bird Market System Susan C. Trock, Michelle Gaeta, Lisa Weisse, Tara Howard, Kimberley Tropea, Adam Hollowary, Sung Kim, J. Beeby, Jan Pederson, Dennis Senne, and Edward Dubovi
11:30 AM	Correlation of Experimentally Induced Colisepticemia with Septox Condemnations in Broilers Timothy S. Cummings, Marty Ewing, Floyd Wilson, and Mark Burleson	Using Resident, Wild Mallards as Sentinels for Detecting Low Pathogenic H3, H4, H5, H6, And H7 Type A Influenza Viruses Circulating in Resident, Wild Birds Richard Slemons, Jacqueline Nolting, Lloyd Alexander, and Dennis Senne
11:45 AM	Antibiotic Resistance Plasmid Eliminated from Poultry Bacteria: New Scientific Evidence to Counter the Expert Critics and Spin-Factories Steven R. Clark and Jeremy J. Mathers	Results of Avian Influenza Monitoring in Wild Birds in Maryland: 2005-2006 Cindy P. Driscoll, Larry J. Hindman, Richard Slemons, and Dennis Senne
12:00	Adjourn	Adjourn





INSTRUCTIONS FOR POULTRY POSTER PRESENTATION

The following is specific information about the 2007AVMA Poultry Poster Presentation:

Location of Poultry Poster Presentation:
Convention Center

Please refer to the Poultry Poster Program for your session number.

NOTE: Posters must be set up before 7:00 AM on Sunday, July 15th.

All posters must be removed by 12:00 PM on Wednesday, July 18th.

Dimensions: Size of the Mounting Board for Poster: 4 feet X 8 feet (48 inches x 96 inches). All posters must fit within the outer edges of the board. All boards will be double sided, so another presenter may be mounting a poster on the other side of the board at the same time.


General Information:

1. Your poster presentations must be available for viewing during the hours scheduled by the Poultry Poster Section.
2. Handouts are permitted. *Sale of any material is strictly prohibited.*
3. Poster sessions are intended to serve as informal discussions and not as lectures or paper reading sessions.
4. Pushpins will be available in the poster areas. Please do not write or paint on the poster boards.
5. Projection equipment and electrical outlets will not be provided in the poster session area.
6. One (1) complimentary convention registration will be provided for the primary author of each poster.

Poster Session
Sunday, July 15 – Wednesday, July 18, 2007
Room 206

Avian Influenza

1. **Histopathological Studies of the Respiratory System of Essential Oil-Treated Broilers Against *Mycoplasma gallisepticum* and/or H9N2 Challenges**
Elie K. Barbour, Rindala G. El-Hakim, Danyelle D. Gerges, Pia A. Nehme, Hussam A. Shalb, and Marc S. Kaadi
2. **Evaluation in Chickens of a Killed NS1 Mutant Avian Influenza Virus Vaccine**
Vinyak Brahmakshatriya, Blanca Lupiana, and Sanjay M. Reddy
3. **Comparative Pathology of H5N1 Highly Pathogenic Avian Influenza Virus Infection in Avian Species in the Orders Anseriformes and Charadriiformes**
Justin D. Brown, David E. Stallknecht, and David E. Swayne
4. **Epidemiological Studies on Avian Influenza Infection in the Migrating Wild Bird**
Seong-Hwan Byun, Min-Jeong Kim, Jeong-Nyeo Kim, and In-Pil Mo
5. **Development of Microsphere-Based Assays for the Detection of H5 and H7 Subtype Avian Influenza Virus**
Wonhee Cha, Megan Strother, Mo Saif, and Chang-Won Lee
6. **Avian Influenza Neuraminidase 1 (N1) ELISA Using Baculovirus Expressed Antigen and its Application on DIVA Vaccination Strategy**
Maricarmen Garcia, Yuru Liu, Xiuqin Xia, David E. Swayne, David L. Suarez, Mark W. Jackwood, and Egbert Mundt
7. **Determination of Pathogenicity of Jordanian Local Isolate of Avian influenza (H9N2) in Broiler-Chickens**
Saad Gharaibeh
8. **Efficacy of Inactivated Vaccine Against Low Pathogenic Avian Influenza (H9N2) in SPF and Commercial Chickens**
Bong-Do Ha, Chang-Hee Lee, Jong-Nyeo Kim, and In-Pil Mo
9. **Sequence Analysis and Phylogenetic Study of the Entire Genome of Three Avian Influenza H9N2 Subtypes from South China**
Mazhar I. Khan, Zhixun Xie, Jianbao Dong, and Xiaofei Tong
10. **Zoning as a Measure to Minimize Avian Influenza Spread During an Epidemic**
Heather Labelle, Jean-Pierre Vaillancourt, Michel Bigras-Poulin, and Alex Thompson
11. **Replication of Influenza Viruses in Chicken-Origin (DF-1) and Quail-Origin (QT-6) Cell Lines**
Chang-Won Lee, Keumsuk Hong, and Megan Strother
12. **Development of a Triplex Fluorescence Microsphere Based Immunoassay (FMIA) for the Detection of Antibodies to Avian Influenza Virus Proteins**
Blanca Lupiani, Douglas S. Watson, and Sanjay M. Reddy
13. **Ups and Downs of Implementation of an Eradication Strategy During an Outbreak of HPAI (H5N1) in Iran**
Seyed Mehdi Mirsalimi and Afshin Hedayati
14. **Efficacy and Safety of the Low Pathogenic Avian Influenza Vaccine (H9N3) in SPF Chickens**
In-Pil Mo, Jung-Eun Kim, Jeong-Hwa Shin, Seong-Hwan Byun, and Jong-Nyeo Kim
15. **Validation of a New Avian Influenza Antibody Blocking ELISA**
R. Munoz, K. Velek, A. Rice, B. Packer, S. Michaud, H. Liauw, and V. Leathers

- 
16. **Genetic and Biological Characterization of the H5N2 Virus Isolated from a Parrot**
Smitha Somanathan-Pillai, David L. Suarez, and Chang-Won Lee
 17. **Evaluation of Poultry Diagnostic Tests for Avian Influenza Virus in Duck Origin Samples**
Erica Spackman And Mary J. Pantin-Jackwood
 18. **The Importance of Educational Programs in the Prevention and Control of Avian Influenza**
Nathaniel L. Tablante
 19. **New Way to Develop Live Influenza Vaccine Candidate Strains**
Leyi Wang, Smitha Somanathan-Pillai, Megan Strother, Keumsuk Hong, Mo Saif, David Suarez, and Chang-Won Lee

Bacteria, Miscellaneous

20. **Case Report: Dactylariosis in Bobwhite Quail**
Joel Cline, J. Scott Helton, and Frederic J. Hoerr
21. **Non-Serotypable *Avibacterium paragallinarum* Infection in Commercial Layers**
A. García, F. Romo, A. M. Ortiz, and P. J. Blackall
22. **The Incidence of *Bordetella avium* in Mississippi Broilers**
Sue Ann Hubbard and Roy D. Montgomery
23. **Serotypes of *Riemerella anatipestifer* Isolated from Commercial Ducks and Vaccination of Ducks with Killed Oil Vaccine in Korea**
Seong-Joon Joh, Pornpen Pathanasophon, Yong-Kuk Kwon, Min-Chul Kim, Min-Jeong Kim, Hyuk-Man Kwon, Jae-Hong Kim, and Jun-Hun Kwon
24. **Pathogenic *Campylobacter* in Turkey Production**
Catherine M. Logue, Mohamed K. Fakhr, Jessica L. Thorsness, and Julie S. Sherwood
25. **Cutaneous Candidiasis of the Comb in a Broiler Breeder Flock**
Claudia Osorio, Oscar J. Fletcher, Michael J. Dykstra, and H. John Barnes
26. **In Vitro Adhesion Assays of *Gallibacterium* to Chicken Tracheal or Oviductal Epithelial Cells**
Saúl Ramírez, Andrea Zepeda, Vicente Vegas, Vladimir Morales, Luis Pérez, Soledad Díaz, Henrik Christensen, Anders Miki Bojesen, and Edgardo V. Soriano
27. **Detection of *Avibacterium paragallinarum* By PCR: Conditions of Nasal Swab Samples Submitted To The Diagnostic Laboratory**
Edgardo V. Soriano, Vladimir Morales, Salvador Lagunas, Simón Martínez, Celene Salgado-Miranda, and Patrick J. Blackall
28. **Peritonitis in Egg-Type Chickens Caused by *Gallibacterium anatis* and *Escherichia coli***
Darrell W. Trampel, Yvonne Wannemuehler, and Lisa K. Nolan
29. **Hemadsorption and Hemagglutination of *Ornithobacterium rhinotracheale***
Vicente Vega, Andrea Zepeda, Saúl Ramírez, Pomposo Fernández, Roberto Montes De Oca, Patrick J. Blackall, and Edgardo V. Soriano
30. **Hemadsorption and Hemagglutination of *Gallibacterium* Reference Strains**
Andrea Zepeda, Saúl Ramírez, Vicente Vega, Vladimir Morales, Martín Talavera, Henrik Christensen, Anders Miki Bojesen, and Edgardo V. Soriano



Chicken Anemia Virus

31. **Peruvian Serological Survey for Chicken Anemia Virus in Broiler Chickens**
Rosa Gonzalez, Eliana Icochea, Branko Alva, Xavier Castro Pozo, and Paola Cruz
32. **Mapping of Epitopes of VP2 Protein of Chicken Anemia Virus Using Monoclonal Antibodies**
Xiaomei Wang, Xiaoyan Wang, Honglei Gao, and Yulong Gao

E. coli

33. **Emergence of Antimicrobial Resistance, Class 1 Integrons, and R Plasmids Among Avian *Escherichia coli***
Lisa K. Nolan, Timothy J. Johnson, Yvonne M. Wannemuehler, Jennifer Scaccianoce, and Catherine M. Logue
34. **Creation of an *Escherichia coli* Plasmid Genome Database**
Paul Mangiamale, Timothy J. Johnson, Yvonne M. Wannemuehler, and Lisa K. Nolan
35. **Multiplex PCR Can Distinguish Between Virulent And Commensal Avian *Escherichia coli***
Yvonne Wannemuehler, Timothy J. Johnson, Curt Doetkott, Sandy Cloud Rosenberger, and Lisa K. Nolan

General Diseases And Management

36. **Focal Duodenal Necrosis (FDN) an Emerging Disease Affecting the Layer Industry**
Tammy A. Baltzley and Thomas G. Rehberger
37. **A Case of Acute Intoxication with Monensin in Broiler Chickens**
Elisabeta Bianu and Daniela Nica
38. **High Mortality of Newly Hatched Commercial Meat Turkeys**
Richard P. Chin, Rocio Crespo, Charles Corsiglia, H. L. Shivaprasad, Murugan Subbiah, Franz Sommer, and George L. Cooper
39. **Characterization of Broiler Carcasses Condemned at Processing Plants**
Marty Ewing, Timothy S. Cummings, Floyd Wilson, and Mark Burleson
40. **Proliferative Lung Disease in Broiler Breeder Hens**
Oscar J. Fletcher, Michael Martin, and John Barnes
41. **The Use of a Field Data Collection Software to Aid in a More Informed Decision Making Process in a Production Setting**
Luis B. Gomez and Francisco J. Obispo
42. **Addressing the Continuing Educational Needs of Poultry Producers**
Teresa Y. Morishita
43. **Accidental Poisoning of Geese with Zinc Phosphide**
Daniela Nica and Elisabeta Bianu
44. **Agroterrorism – Is the Threat to Agribusiness Real?**
Robert A. Norton and Mark D. Gorwitz
45. **Histologic Evaluation of the Extramedullary Hemopoietic Tissue in Healthy and Yolk Sac Infected Young Broilers**
C. Gabriel Senties-Cué, Floyd D. Wilson, and Danny L. Magee
46. **Early Diagnosis of Fatty Liver-Hemorrhagic Syndrome in Commercial Layers Using Clinical Biochemistry**
Hyun-Hee So, Min-Jeong Kim, Hwan-Hee Kim, and In-Pil Mo

47. Biosecurity Multimedia Training: A Follow-Up to the US Poultry & Egg Association Training Program

Jean-Pierre Vaillancourt, Gene Lambert, Andrew Rhorer, and Charles Beard

48. Effect of Breeder Flock and Management System on Sibling Turkeys

Eduardo J. Vivas, Michael P. Martin, Sophia Kathariou, Robin M. Siletzky, and John Barnes

49. Interesting Microscopic Lesions in Cases Submitted to Poultry Diagnostic And Research Center and Georgia Poultry Laboratory Network

Susan M. Williams

50. Routine Histological & Histomorphometric Finding in the Spleen and Bone Marrow of “Small Birds” and Other Carcass Cohorts Condemned at Slaughter Under the Sep-Tox Disposition Category

Floyd Wilson, Fred Hoerr, Tim Cummings, and Marty Ewing

Immunology, Immunity And Vaccines

51. Anatomic Histopathology Evaluation of Thymus, Bursa and Spleen from Broilers Chickens Raise in Reuse Litter vs New Litter

Monica Alba Chinta, Eliana E. Icochea, Pablo S. Reyna, Rosa Gonzalez, Branko Alva, Pilar Vejarano, and Antonio Tambini

52. Practical Comparison of Spray and Barrel Methods of Vaccine Administration to Broiler Breeder Pullets

Samuel P. Christenberry, Darryl M. Moore, N. Scott Vanhoy, and Clyde A. Weathers

53. Development of a Real-Time RT-PCR Assay for Turkey Cytokines

J. Michael Day and Erica Spackman

54. US Veterinary Immune Reagents Network

H. Lillehoj, J. Lunney, C. Baldwin, J. LaBresh, D. Horohov, J. Hansen, N. Miller, E. Bengten, G. Chinchar, M. Wilson, and B. Wagner

55. Interpreting ELISA Test Results

Danny L. Magee and Philip A. Stayer

56. Oligodeoxynucleotides Containing CpG Motifs (CpG-ODN) Induce Predominantly A Th1 Type Immune Response in Neonatal Chickens

Bhavinibahen Parekh, Susantha Gomis, Suresh Tikoo, Lorne Babiuk, Andrew Potter, Philip Willson, George Mutwiri, and Arshud Dar

57. Development of Recombinant Antigens for Multiplexed Serologic Monitoring of Specific Pathogen Free Chickens

Michelle L. Wunderlich, Michael J. Smith, Barry A. Bronson, Rajeev K. Dhawan, and Joe H. Simmons

Infectious Bronchitis Virus

58. Spike Gene Sequence Analysis of Infectious Bronchitis Virus Vaccine Viruses and Their Genetic Stability In Vivo

Enid T. Mckinley, Deborah A. Hilt, and Mark W. Jackwood

59. Cloning of the Pathogenic M41 Strain of Avian Infectious Bronchitis Virus as Bacterial Artificial Chromosome

Shankar P. Mondal and Elizabeth L. Buckles



Infectious Bursal Disease

- 60. The Use of Gamma Irradiation for the Inactivation of Infectious Bursal Disease Viruses**
Daral J. Jackwood, Susan E. Sommer-Wagner, and Howard Pharo
- 61. Comparison of the VP4 Sequences Among Very Virulent, Pathogenic and Attenuated Infectious Bursal Disease Viruses**
Lester Lefever and Daral J. Jackwood
- 62. DNA Vaccination Conferring Protection of Chickens Against Infectious Bursal Disease by Priming with DNA Vaccine and Boosting with Killed Vaccine**
Tsang Long Lin, Ming Kun Hsieh, and Ching Ching Wu
- 63. Evaluation of the Pathogenicity of Infectious Bursal Disease Viruses from Layer Flocks in the United States**
Daral J. Jackwood, Bollini Sreedevi, Lester J. Lefever, and Susan E. Sommer-Wagner
- 64. Bursal Disease Virus Situation in Mexico: Epidemiology and Phylogenetic Studies**
Maritza Tamayo, Mario Lechuga, and Mauricio Gonzalez
- 65. Infectious Bursal Disease Virus (IBDV) Nonstructural Protein VP5 Contributes to Virulence of Very Virulent IBDV**
Kaori Terasaki, Tsuyoshi Yamaguchi, Kenji Ohya, and Hideto Fukushi
- 66. Molecular Detection and Differentiation of Infectious Bursal Disease Virus: A Review**
Ching Ching Wu, Peter Rubinelli, Ming Kun Hsieh, and Tsang Long Lin
- 67. An Improved Method for Infectious Bursal Disease Virus Rescue using RNA polymerase II System**
Xiaomei Wang, Ziaole Qi, Yulong Gao, and Honglei Gao

Laryngotracheitis

- 68. Differentiation by RFLP and Nucleotide Sequencing of ILTV Strains Isolated During an Outbreak in São Paulo, Brazil**
Jorge Luis Chacón Villanueva, Laura Y. Villarreal, Mario S. Asayag, and Antonio J. Piantino Ferreira
- 69. In Vitro Characterization of Infectious Laryngotracheitis Virus (ILTV) Isolates from United States (US)**
Ivomar Oldoni and Maricarmen García

Miscellaneous Virus

- 70. A Duck Hepatitis Virus Type 1 is Agent Of Pancreatitis and Encephalitis in Muscovy Duckling**
Jean-Luc Guerin, Olivier Albaric, Vincent Noutary, and Cyril Boissieu
- 71. Epidemiological Studies of Adenoviral Infection in the Broiler Farms**
Jong-Nyeo Kim, Seong-Hwan Byun, Min-Jeong Kim, and In-Pil Mo
- 72. Characterization of M-Class Genome Segments of Muscovy Duck Reovirus**
Yun Zhang, Dongchun Guo, and Hongwei Geng



Mycoplasma

73. ***Mycoplasma iowae* Associated with Vertebral Chondrodystrophy in Commercial Turkeys**
David H. Ley, Eduardo J. Vivas, Oscar J. Fletcher, and H. John Barnes

Newcastle

74. **Immunoprotection of a Commercial Vaccine (VG/GA - Strain) Against Newcastle Disease in Broilers Chicken**
Eliana Icochea, Rosa Gonzalez, Pablo Reyna, Jhon Guzman, and Blanca Talavera
75. **Molecular Analysis of Velogenic Newcastle Disease Virus in Avian Species From Venezuela**
Hugo Moscoso, Mariela Brett, Rafael Fernandez, and Charles L. Hofacre
76. **Development of an Immunochromatographic Kit for the Detection of Newcastle Disease Virus**
Haan-Woo Sung, Hyuk-Moo Kwon, JG Choi, JS Oh, and In-Pil Mo

Parasitic Diseases

77. **Effect of Coccidiosis on Serum Alkaline Phosphatase Levels in Chickens**
Chris R. Buckley
78. **Changes in Immune-Related Chicken Cytokine and Chemokine Gene Expression Following *Eimeria* Infection**
Hyun S. Lillehoj and Yeong Ho Hong
79. **Kinetic Analysis of Local Gene Expression Of Duodenum Intraepithelial Lymphocytes Following Primary and Secondary *E. acervulina* Infections**
Hyun S. Lillehoj, Chul Hong Kim, Yeong Ho Hong, Dong W. Park, and Calvin L. Keeler, Jr.
80. **Cytokine Gene Expression Profile in Fayoumi Chicken After *Eimeria maxima* Infection**
Hyun S. Lillehoj, Kyung Kim Duk, Yeong Ho Hong, Dong Woon Park, and Susan J. Lamont
81. **Immunomodulatory Effect of Dietary Safflower Leaf on Coccidiosis**
Hyun S. Lillehoj, Sung-Hyen Lee, Soo-Muk Park, Dong-Woon Park, Yeong-Ho Hong, Duk-Hyung Kim, Hye-Kyung Chun, and Hong-Ju Park
82. **Comparative Coccidial Oocyst Shedding Patterns of Turkeys Given Coccivac-T**
Greg F. Mathis, Charles Broussard, and Linnea J. Newman

Pneumovirus

83. **Molecular Characterization and Phylogenetic Analysis of Subtype B Avian Metapneumovirus Detected from Brazilian Commercial Flocks**
Jorge Luis Chacón Villanueva, Antonio C. Pedroso, Laura Y. Villarreal, Paulo E. Brandão, Antonio J. Piantino Ferreira
84. **Immunization of Broiler Chickens Against Avian Metapneumovirus Infection**
Eliana Icochea, Mercedes Sialer, Raúl Guillermo, Rosa Ríos, Rosa Gonzalez, Pablo Reyna, and Jhon Guzman



Salmonella

85. **CAUTION – Diagnostic Laboratory Data on Salmonella Testing Being Presented**
Bruce R. Charlton, Hailu Kinde, and Mark Bland
86. **Plasmid Mediated Antibiotic Resistance in *Salmonella enterica* Serovar Heidelberg from Turkeys**
Aaron M. Lynne and Steven L. Foley
87. **Development and Preliminary Evaluation of a Live Recombinant Vaccine Based on the *sefABCD* Fimbrial Operon to Elicit Immune Response in Chickens Against *Salmonella enterica* Serotype Enteritidis**
K. V. Nagaraja, Vanessa Burkas, Binu Velayudhan, and David Halvorson
88. **Organic Acid Water Treatment Reduced Salmonella Horizontal Transmission in Broiler Chickens**
Marco A. Quiroz, Charles L. Hofacre, Greg F. Mathis, Julia Dibner, and Chris Knight
89. **Functions Exerted by the Type Three Secretion Systems (TTSS) During *Salmonella enteritidis* Infection of Chicken Reproductive Epithelial Cells and Macrophages**
Shuping Zhang, Shuhui Li, Mike Zhang, Hyun S. Lillehoj, Lanny Pace, and Danny Magee

Tumor Viruses

90. ***In Vitro* Transformation Properties of the Meq Protein of MDV**
Dharani K. Ajithdoss, Blanca Lupiani, Lucy Lee, and Sanjay M. Reddy
91. **Effect of Adding an Antibiotic to a Marek's Disease Vaccine**
Celina Buscaglia

New Orleans
2008