



American Association of Avian Pathologists
July 18-20, 2005
Minneapolis, Minnesota



SCIENTIFIC PROGRAM

Monday, July 18, 2005 – Morning Program	
Session A –	Session B –
Moderator: Dr. John Glisson	
8:00 AM	Keynote Speaker: Dr. Frederic J. Hoerr Room A "Clinical Aspects of Immunosuppression"
Moderator: Dr. Linnea Newman	Moderator: Dr. Jack King
8:30 AM Poultry Genetics, Health and Welfare: Primary Breeding for the Future... Gustin, Scott J., Leonard W. Fussell, and Roy P. Mutimer	Recombinant Fowlpox and Inactivated Avian Influenza Vaccines Induced Protection Against Asian H5N1 Highly Pathogenic Avian Influenza in Poultry Swayne, David E., Joan R. Beck, Michel Bublot, Nikki Pritchard, and Julio Cruz
8:45 AM Impact of Genetic Selection Strategies on the Performance, Health and Welfare of Commercial Breeders and Broilers Rosales, A. Gregorio, Derek Emerson, Barry H. Thorp, and James C. McKay	Molecular Evolution of H1N1 Influenza Viruses in the US Poultry: Implications for Molecular Diagnostics and Better Vaccine Strain Selection Jadhao, Samadhan, Dennis Senne, and David L. Suarez
9:00 AM The Impact of Seven-day Mortality on Various Components of the Broiler Profit Equation Tierce, John F., Greg Rennie, and Lloyd Keck	Protective Effect of DNA Vaccines Encoding Low Pathogenic H9N2 Avian Influenza Virus Genes fused with T-helper Cell Epitope of Newcastle Disease virus in SPF Chickens Challenged with Homologous Avian Influenza Virus Kwon, Jisun, Hyunjeong Lee, Yongho Hong, and Changseon Song
9:15 AM Effects of Temperature and Nutrition of the Neonate on Growth and Performance Lourens, S. and Donna Hill	Differentiation of Infected from Vaccinated Animals (DIVA) using Recombinant Fowlpox-H5-Avian-Influenza Vaccine and Existing Serological Tests Avellaneda, Gloria, Nikki Pritchard, Julio Cruz, Michel Bublot, Joan R. Beck, and David E. Swayne
Break 9:30 AM – 10:00AM	Break 9:30 AM – 10:00AM
Moderator: Dr. Linnea Newman	Moderator: Dr. Jack King
10:00 AM Incubation Effects on Chick Quality Meijerjof, Ron	Efficacy of Avian Influenza-Fowl Pox Vaccines, Live Fowl Pox Vector, H7 Subtype, Experimental Products Administered to One-Day-Old SPF Chickens Cruz-Coy, Julio S., Nikki Pritchard, Joan R. Beck, David E. Swayne, and Michel Bublot
10:15 AM Measurement of Stress in Broilers Stayer, Philip, Thaxton, J. Paul, Martha Ewing, and John Rice	Role of Antibodies to the Neuraminidase Protein in Protection for Avian influenza Suarez, David L.
10:30 AM Evaluation of Broiler Mobility Ewing, Martha, John Rice, Philip Stayer, Bruce Webster, and Tim Cummings	Detection of avian influenza virus by embryo inoculation or PCR Lucio-Martinez, Benjamin, Sung G. Kim and Susan C. Trock
10:45 AM Welfare Aspects of Controlled Atmosphere Stunning Webster, A. Bruce	Unusual Characteristics of Highly Pathogenic Avian Influenza Viruses of North American Lineage Senne, D.A., D.L. Suarez, J.C. Pedersen, and B. Panigraphy
11:00 AM Customer Expectations for Animal Welfare Pfalzgraf, Kellye	Characterization of Avian Influenza Virus Variants with Different Sizes of the Non-Structural (NS) Genes Lee, Chang-Won and David L. Suarez
11:15 AM Animal Welfare Audits Ewing, H. Pettit and Robert Thrash	Characteristics of 2004 Low Path H7N2 Avian Influenza Viruses from the Delmarva Peninsula in Broiler and Leghorn Chickens and Turkeys Gelb, Jr., Jack, Sandra Cloud, Brian Ladman, Kristi Moore, Conrad Pope, and John Rosenberger
AAAP Awards Luncheon 11:30 – 2:00 PM	

Monday, July 18, 2005 – Afternoon Program		
	Session A –	Session B –
	Moderator: Dr. Gregorio Rosales	Moderator: Dr. David Swayne
2:00 PM	Implementation of Programs to Address Customer Expectations Pfalzgraf, Kellye	Novel Diagnostic Tests for the Surveillance of Avian Influenza Lamichhane, Chinta M., Emily Yeh, Eric Deshaies, and Ron Sanders
2:15 PM	Animal Welfare from a Commercial Layer Production Perspective Nezworski, Jill	Investigation of an Outbreak of Avian Influenza Subtype H2N2 in Two Commercial Layer Premises in Pennsylvania (2004) Henzler, David J. and Huguang Lu
2:30 PM	Competing Demands for ammonia Management in Poultry Production Marsh Johnson, Trisha	Transmission of Low Pathogenicity Avian Influenza Virus (H6N2) Woolcock, Peter R., Carol J. Cardona, and Jinling Li
	Break 2:45 PM – 3:00PM	Break 2:45 PM – 3:00PM
	Moderator: Dr. Gregorio Rosales	Moderator: Dr. David Swayne
3:00 PM	The Difference in Disease Incidence depending on Dead Bird Disposal Methods (Rendering Versus Incinerator) Valliancourt, Jean-Pierre, David Rives, and Shannon Jennings	Identification of Key Human Activities and their Role in a Quantitative Risk Assessment Model for Highly Pathogenic Avian Influenza Vieira, Antonio, Dana Cole, Charles Hofacre, and Lee Myers
3:15 PM	The Role of Cooperative Extension in an Emergency Poultry Disease Outbreak: A Real Life Experience Tablante, Nathaniel L. and Lewis E. Carr	Surveillance and Epidemiology for Avian Influenza in the New York Live Bird Markets Trock, Susan C., Sung G. Kim, Michelle Gaeta, and Lisa Weisse
3:30 PM	Interesting Cases from the Poultry Diagnostic Laboratory Linares, Jose A.	Use of Multiplex RT-PCR to differentiate Lentogenic NDV from END Sellers, Holly S., Erich G. Linnemann, and Darrell R. Kapczynski
3:45 PM	Broiler Breeder Disease Incidence for Alabama, a 10-Year Survey Van Sambeek, Francene	Contrasting Results from Molecular and Biological Pathogenicity Assays of Newcastle Disease Virus Isolate Iowa 1519 King, Daniel J., Darrell R. Kapczynski, Claudio L. Afonso, and Andrea Placenti
4:00 PM	Growth Promoter Antibiotic Feed Additives Impact on Seven Day-Old Broiler Mortality and Early Life Performance Davis, Stephen W. Davis	REED RUMSEY AWARD: Reverse Genetics of Avian Metapneumovirus Subgroup C: Potential for Vaccine Development and Basic Studies Govindarajan, Dhanasekaran and Siba K. Samal
4:15 PM	A Field Investigation of the Total Tissue Arsenic Content of Turkeys Medicated with or without Nitarstone (Histostat®) Clark, Steven R. and James Skinner	RICHARD RIMLER MEMORIAL PAPER: Efficacy Trials of a Novel Avian Metapneumovirus Vaccine Bennett, Richard S.
4:30 PM	Ionophore Myopathy in Chickens Fitzgerald, Scott D.	Experimental Infection of SPF Laying Turkeys with Avian Pneumovirus Subtype C: Possible Role of Vertical Transmission Kapczynski, Darrell R.
4:45 PM	Assessing the Effect of Light Intensity on the Eyes and Behavior of Broilers Cummings, Timothy S., Philip A. Stayer, and Marty Ewing	The Role of Cell Mediated Immunity in Avian Pneumovirus (APV) Infection of Turkeys Liman, Martin M.R. and Silke Rautenschlein
5:00 PM	Adjourn	Adjourn

Tuesday, July 19, 2005 – Morning Program		
	Session A –	Session B –
	Moderator: Dr. Tim Cummings	Moderator: Dr. Margie Lee
8:00 AM	Control of Cellulitis in Commercial Turkeys Karunakaran, Daniel	A Subunit Vaccine for Controlling <i>Salmonella enteritidis</i> in Chickens Straub, Darren E., Daryll A. Emery, Jim D. Sandstrom, Larry M. Slinden, and Doug T. Burkhardt
8:15 AM	Effect of Organic Selenium on Broiler Chicken Feathering, Skin Strength, and Cellulitis Prevalence Boulianne, Martine and Ghislaine Roch	The Relationship Between Intestinal Persistence and Egg Contamination for Strains of <i>Salmonella enteritidis</i> and <i>S. Heidelberg</i> Gast, Richard K., Jean Guard-Bouldin, and Peter S. Holt
8:30 AM	Brown Discoloration of Processed Broiler Carcasses Lockaby, Susan B. and Frederic J. Hoerr	Use of Real-Time PCR for Monitoring <i>Salmonella</i> Muñoz, R. and P. Tyrrell
8:45 AM	Attempts to Develop a Predictable Model for Gangrenous Dermatitis in Broilers Collett, Stephen R., John R. Glisson, Charles L. Hofacre, and Stephan G. Thayer	Distribution of Fimbrial, Phage and Plasmid Associated Virulence Genes among Poultry <i>Salmonella enterica</i> Serovars Maurer, John J., Rachel Whitaker, Charles L. Hofacre, Margie D. Lee, and Marie Maier
9:00 AM	Acute Hemorrhagic Enteritis and Necrotizing Hepatitis in Two Day-Old Broilers due to a <i>Clostridium perfringens</i> Contaminated Animal Byproduct Feed Ingredient Davis, Stephen W.	Development and Evaluation of a Recombinant Strain based on the SefABCD Fimbrial Operon against <i>Salmonella enterica</i> Serovar Enteritidis in Chickens Lopes, Vanessa C., Binu T. Velayudham, Douglas N. Foster, David A. Halvorson, and Kakambi V. Nagaraja
9:15 AM	Clinical Investigation of a Runting and Stunting Syndrome in Georgia Zavala, Guillermo, Holly Sellers, and Louise Dufour-Zavala	Experimental <i>Campylobacter</i> Infection in Immunosuppressed and Normal Broilers Dhillon, A. Singh, H.L. Shivaprasad, Dennis M. Schaberg, Fonda Wier, Daina V. Bandli, and Sylvia K. Weber
	Break 9:30 AM – 10:00AM	Break 9:30 AM – 10:00AM
	Moderator: Dr. John Glisson	
	Lasher History Lecture: 10:00 – 10:30 AM	Room A
	Mr. Andrew Rhorer "History of the National Poultry Improvement Plan"	
	AAAP Business Meeting 10:30 – 12:00 noon	Room A
	Lunch 12:00 noon – 1:00 PM	

Tuesday, July 19, 2005 – Afternoon Program		
	Session A –	Session B –
	Moderator: Dr. Stephen W. Davis	Moderator: Dr. Bruce Stewart-Brown
1:00 PM	Turkey and Chicken Coccidiosis Control with the Feed Additive Amprolium Mathis, Greg F. and Hector Cervantes	Novel Clostridia that Colonize the Small Intestine of Young Broilers Lee, Margie D., Charles L. Hofacre, and Jingrang Lu
1:15 PM	High Fecal Oocyst Counts of <i>E. maxima</i> Associated with Non-Specific Enteritis and Necrotic Enteritis in Broilers Ruano, Miguel, Bruce Stewart-Brown, Douglas K. Marvil, and Henry M. Engster	Comparison of Competitive Exclusion Products on the Level of Tetracycline Resistant Coliforms in the Broiler Chicken Environment Sinclair, Andrea J., Stephen R. Collett, and Margie D. Lee
1:30 PM	Comparative Pathology of <i>Eimeria acervulina</i> and <i>E. mivati</i> of the Chicken Fitz-Coy, Steve H. and Richard Phillips	Influence of Nitric Oxide Production on Marek's Disease in Broiler Breeder Lines Schat, Karel A., Priscilla H. O'Connell, Celina Buscaglia, Keith W. Jarosinski, and Igal Pevzner
1:45 PM	The Pathogenesis and Treatment of <i>Hexamita meleagridis</i> Infection in Turkeys Bermudez, Alex J., Paula Butkeraitis, and Yvette M. Broomhead	Gene Deletion Mutants of Marek's Disease Virus: The Next Generation of Recombinant Vaccines? Lee, Lucy F., Robert Silva, Mohammad Heidari, Sanjay Reddy
2:00 PM	Blackhead Treatment in Broiler Breeder Pullets Rings, Bret and Travis Glenn	
2:15 PM	Transmission of Blackhead Disease in Chickens McDougald, L.R., J. Hu, L. Fuller, and P. Armstrong	Virus-induced Avian Atherosclerosis: past and future Fabricant, Julius
	Break 2:30 PM – 3:00PM	Break 2:45 PM – 3:00PM
	Moderator: Dr. Greg Mathis	Moderator: Dr. Ton Schat
3:00 PM	Protective Immunity Against <i>Eimeria acervulina</i> following in ovo Immunization with a Recombinant Subunit Vaccine and Cytokine Genes Lillehoj, Hyun S., Xicheng Ding, M.A. Quiroz, E. Berensee, and Rami Dalloul	Pathotyping of Russian Isolates of Marek's Disease Virus Dudnikova, E.K., Svetlana N. Norkina, Anatoly N. Vlasov, Anna Y. Slobodchuk, and Richard L. Witter
3:15 PM	Safety, Efficacy and Performance of a Live Coccidiosis Vaccine Doelling, Vivian W., Cherilyn L. Heggen-Peay, Greg R. Mathis, Alison Martin, Larry M. Charniga, and Rebecca M. Poston	Biological Characterization of a Mutant Marek's Disease Virus lacking the UL41 Gene (rMd\squareUL41) Gimeno, Isabel M. and Robert F. Silva
3:30 PM	Comparison of Safety and Efficacy of an <i>in ovo</i> Coccidiosis Vaccine Between Different Breeds of Commercial Broilers Heggen-Peay, Cherilyn L., Rebecca M. Poston, Alison G. Martin, Jim E. Hutchins, Heather E. Boyette, and Vivian W. Doelling	Comparison of Two Ostensibly Identical Recombinant MHC Haplotypes in Fully Congenic Lines in Their Response to Challenge with vvMD Wakenell, Patricia, Marcia Miller, and Robert Taylor
3:45 PM	Chicken Anemia Virus (CAV) Types from Vaccinated and Unvaccinated Commercial Broiler Flocks: Characterization and Comparison Sommer, Franz, Bruce W. Charlton, and Carol J. Cardona	Molecular Characterization of the Marek's Disease Virus vhs Gene (UL41) Silva, Robert F. and Isabel M. Gimeno
4:00 PM	Transmissible Viral Proventriculitis in North Carolina Broiler Chickens Monleon, R., Matilde Alfonso, John Radu, James S. Guy, and H. John Barnes	Functional Characterization of MDV CVI988 Meq Protein using a Retrovirus Expression System Ajithdoss, Dharani K., Sanjay M. Reddy, and Blanca Lupiani
4:15 PM	Characterization of a Novel Adenovirus Associated as the Cause of Transmissible Viral Proventriculitis of Broiler Chickens Guy, James S., John Barnes, and Lynda Smith	The Physiology of <i>in ovo</i> Vaccination Williams, Christopher J.
4:30 PM	Evaluation of the Use of a Commercial <i>Pasteurella multocida</i> Vaccine administered by the Drinking Water in Broiler Breeder Pullets Bruzual, Jose J., Andrea Sinclair, John Glisson, and Charles Hofacre	Detection of Avian Respiratory RNA Viruses by Multiplex RT-PCR Lu, Huaguang, Zhigin Xie, and Lin Lin
4:45 PM	The Interaction Between <i>E. coli</i> and Newcastle Disease Virus in Chickens Eltayeb, Amna B. and Robert P. Hanson	Disease and Lesions in the Nervous System Julian, Richard J.
5:00 PM	Adjourn	Adjourn

Wednesday, July 20, 2005 – Morning Program		
	Session A –	Session B –
	Moderator: Dr. Oscar Fletcher	Moderator: Dr. Pedro Villegas
8:00 AM	Plasmids in APEC Virulence and Antimicrobial Resistance: An Overview Nolan, Lisa K., Timothy J. Johnson, Kylie E. Siek, and Jerod A. Skyberg	Functional Characterization and Phylogenetic Comparison of the Chicken Toll-like Receptor 7 Kapczynski, Darrell R., Victoria J. Philbin, Adrian L. Smith, and Peter S. Holt
8:15 AM	Biofilm Formation on Plastic Surfaces by <i>Escherichia coli</i> Isolated from Sick and Healthy Poultry Skyberg, Jerod A., Kylie E. Siek, Curt Koetkott, and Lisa K. Nolan	Intestine Organ Culture Passaged Infectious Bronchitis Virus Strains: Effect on Specific Pathogen Free Chickens Alvarado, Ivan, and Pedro Villegas
8:30 AM	Application of Real Time-PCR in the Diagnosis of Infectious Laryngotracheitis during an Outbreak of the Disease Oldoni, Ivomar, Sylva Riblet, Kelli Jones, Scott Callison, Guillermo Zavala, and Maricarmen García	Development of a Lateral-flow Immunoassay for the Detection of IBV Antigen El-Attrache, John and Jaime Thurk
8:45 AM	Genotyping Infectious Laryngotracheitis Virus by Multiple Gene Sequencing García, Maricarmen, Sylva M. Riblet, Ivomar Oldoni, and Shulei Sun	Efficiency of Recombinant IBV DNA Vaccine in ovo with Interferon Enhancement Khan, Mazhar I. And Jaroslaw J. Fabis
9:00 AM	Characterization of a Glycoprotein C Mutant of Infectious laryngotracheitis Keeler, Jr., Calvin L., William M. Schnitzlein, Andrew E. Shaffer, Deoki N. Tripathy	Effect of Viremia and Antibody Status on Tumor Incidence, Tumor Spectrum, and Viral Distribution in Different Tissues of ALV-J Infected Meat Type Chickens Pandiri, Arun Kumar R., Willie M. Reed, and Aly M. Fadly
9:15 AM	Quantitative Profile of <i>Mycoplasma gallisepticum</i> Interaction with the Chicken Tracheal Mucosa in Vaccine Strains and Field Isolates Levisohn, Sharon, Inna Lysnyansky, Shmuel Perl, and David Yogev	Evaluation of Response of a New Experimental Line of Chickens (line 0-1) to Avian Leukosis Virus Infection Mays, Jody K., Henry Hunt, Arun Pandiri, Larry Bacon, and Aly Fadly
	Break 9:30 AM – 10:00AM	Break 9:30 AM – 10:00AM
	Moderator: Dr. Stan Kleven	Moderator: Dr. Y.M. Saif
10:00 AM	The Interference of a Non-Pathogenic Avian Mycoplasma Species with <i>Mycoplasma gallisepticum</i> (MG) Infection and Diagnosis Ferguson, Naola M., Victoria A. Leiting, Ziv Raviv, Ruth S. Wooten, and Stanley H. Kleven	Comparative Evaluation of the Pathogenicity of an Extraneous Subgroup A Avian Leukosis Virus Isolated from Commercial Marek's Disease Vaccines Fadly, Aly M., Carolyn A. Davis, Jody K. Mays, and Arun R. Pandiri
10:15 AM	Case Report: <i>Mycoplasma gallisepticum</i> Infection in Red and Gold Pheasants Kelly, Donna J.	The Emergence of New-type IBD Viruses in the United States and Comparisons to Delaware E in Vaccination/challenge Studies Cookson, Kalen, Daral Jackwood, and Joe Giambrone
10:30 AM	Epidemiological Incidence of Field Strains of <i>Mycoplasma gallisepticum</i> and <i>Mycoplasma synoviae</i> isolated from Broiler Breeders and Breeders in Colombia Moscoso, Hugo, Jaime A. Ruiz, Ivan R. Alvarado, John R. Glisson, and Charles Hofacre	Evaluation of the Protection Conferred by Coarse Spray Vaccination against Infectious Bursal Disease in Commercial Broilers Banda, Alejandro, Pedro Villegas, and Francisco Perozo

10:45 AM	<p><i>Mycoplasma synoviae</i> Control in Multi-Aged Broiler Breeder Farms using Antibiotics Therapy: Case Report</p> <p>Hong Young-ho, Jisun Kwon, Hyunjeong Lee, and Changseon Song</p>	<p>Two Bursal, B-cell Subpopulations with Different Flow Cytometry Profiles following IBDV Infection</p> <p>Petkov, Daniel I., Erich G. Linnemann, Darrell R. Kapczynski, and Holly S. Sellers</p>
11:00 AM	<p><i>Mycoplasma gallisepticum</i> in Commercial Layers</p> <p>Davison, Sherrill, Stanley H. Kleven, Eric N. Gingerich, Maricarmen Garcia, Perry L. Habecker, and Robert J. Eckroade</p>	<p>Effect of Infectious Bursal Disease Virus on Macrophages</p> <p>Sharma, Jagdev M., Mahesh Khatri, Joe M. Palmquist, and Ra Mi Cha</p>
11:15 AM	<p>Hemagglutinin Serovars of Avibacterium (<i>Haemophilus</i>) paragallinarum: Typing, Cross-protection and Virulence</p> <p>Soriano V., Edgardo</p>	<p>In ovo and Post-hatch Vaccination with a Live, Attenuated Variant Infectious Bursal Disease Virus</p> <p>Kass, Steven A., Mahesh Khatri, Ra Mi Cha, and Jagdev M. Sharma</p>
11:30 AM	<p>Oligonucleotides Containing CpG Motifs (CpG-ODN) as a Vaccine Adjuvant in Poultry</p> <p>Gomis, Susantha, Lorne Babiuk, Andrew Potter, and Brenda Allan</p>	<p>Comparative Pathogenesis of Infectious Bursal Disease Virus (IBDV) Challenge of Chickens after <i>in ovo</i> or Post hatch Vaccination</p> <p>Rautenschlein, Silke and Christine Haase</p>
11:45 AM	<p>Enhancing DNA Vaccine-Induced Production of Hemagglutinin-Specific Reference Antisera</p> <p>Pfeiffer, Jennifer and David L. Suarez</p>	<p>Role of Cellular Signaling Pathways in the Immunopathogenesis of Infectious Bursal Disease Virus</p> <p>Khatri, Mahesh, Ra Mi Cha, and Jagdev M. Sharma</p>
12:00	Adjourn	Adjourn

Poster Session
Monday, July 18 – Wednesday, July 20, 2005

Avian Influenza

1. **Detection of Antibodies in Serum and Eggs and Virus Shedding in Eggs following Infection with an H6N2 Avian Influenza Virus**
Trampel, Darrell W., En-Min Zhou, and Kyoung-Jin Yoon
2. **Variation in the H6 Hemagglutinin Genes of Avian Influenza Viruses Collected from Wild Water-fowl and Shorebirds in North America 1969-2002**
Spackman, Erica
3. **Avian Influenza of Subtype H9N2 in Poultry of Lebanon: Immunity and Infection**
Barbour, Elie K., Vatche K. Sagherian, Samar Dankar
4. **Microarray Technology for Detection of Avian Influenza**
Maughan, Michele N., Travis W. Bliss, David L. Suarez, and Calvin L. Keeler, Jr.

Bacteria, Miscellaneous

5. **An Outbreak of Avian Tuberculosis in Chuckars**
Dhillon, A. Singh, Dennis M. Schaberg, Sylvia K. Weber, Fonda Wier, and Daina V. Bandli
6. **Identification of *Bordetella avium* by PCR and Analysis of Amplicon Sequence**
Register, Karen B. and Andrew G. Yersin
7. **Efficacy of an Inactivated *Pasteurella* Vaccine for American Kestrels**
Echo, Jennifer, Patricia Wakenell, and William Ferrier
8. **Inflammatory Process in Commercial Broilers related to Skin Scratches Occurring in the Growing Period**
Alfonso, M., Bill Hewat, and H. John Barnes
9. **Otitis associated with *Salmonella arizonae* in Turkey Poults**
Shivaprasad, H.L. and P. Cortes
10. **Evaluation of Adjuvants and Route of Immunization for *Clostridium perfringens* Type A alpha toxoid Vaccine in Providing Passive Protection against Necrotic enteritis in Broiler chickens**
Dimmick, Suzan, Lindy Echtenkamp, Huchappa Jayappa, Joan Schrader, and Terri Wasmoen
11. ***Pasteurella multocida*: Serotypes from Mississippi Isolates**
Magee, Danny L.
12. **Use of Subtractive Hybridization to Detect Genomic Differences between Avian Pathogenic and Non-Pathogenic *Escherichia coli***
Kariyawasam, S. K. Siek, and L. K. Nolan
13. **Comparative Genomics and Distribution of an R Plasmid, pAPEC-O2-R, among Avian *Escherichia coli* Isolates**
Johnson, Timothy J., Kylie E. Siek, Sara J. Johnson, and Lisa K. Nolan

General Diseases

- 14. Spinal Cord Histopathology in Lame Broiler Chickens**
Hoerr, Frederic, Susan Williams, and Scott Westall
- 15. Microbiological Evaluation of Pekin Duck Baluts**
Fulton, Richard M.
- 16. Determining the Health Status of Migratory Passerines**
Newcomer, Crystal D., Teresa Y. Morishita, and Paul G. Rodewald
- 17. Survey of Poultry Disease Knowledge and Nutrition in Backyard Flock Owners**
Martin, Lori, J. David Latshaw, and Teresa Y. Morishita
- 18. Vascular Lesions in Four-Year-Old Laying Hens**
Fletcher, Oscar J. and John Barnes
- 19. Systemic Aspergillosis in Broiler Chickens**
Hubbard, Sue Ann
- 20. Dermal Melanosis in Broiler Chickens**
Crespo, Rocio and Manuel Pizarro
- 21. Immunohistochemistry in a Case of Mycotoxicosis in Red Partridges**
Crespo, Rocio, Manuel Pizarro, and Maria Castaño
- 22. Pathology of Older Laying Hens**
Barnes, H. John, Luisa Adochiles, Donna K. Carver, and Gustavo C. Rodriguez

Immunology, Immunity and Vaccines

- 23. Immunogenicity and Safety of a Novel Avian Herpesvirus Vaccine**
Schrader, Joan S., Stephanie Cook, Gary Petersen, Dianna Jerman, Linda Gergen, and Terri Wasmoen
- 24. Avian Macrophage Transcriptome Responses to Bacterial Stimuli**
Bliss, Travis W. and Calvin L. Keeler, Jr.

Infectious Bronchitis Virus

- 25. Anti-virus Functions of Halamine Fabrics: Potential Application for SARS Prevention**
Edwards, Ingrid, Patricia Wakenell, and Gang Sun
- 26. Longitudinal Field Studies of Avian Respiratory Viruses in Broilers using Type Specific Real-time RT-PCR Assays**
Lee, Hyun-Jeong, Ji-Sun Kwon, Ho-Sik Yoon, Yong-Ho Hong, and Chang-Seon Song
- 27. Serological Reactivity of Baculovirus-expressed Infectious Bronchitis Virus Nucleoprotein**
Vakharia, Vikram N., Chinta Lamichhane, and Gerard E. Edwards
- 28. Correlation of airsacculitis Condemnation Rates and IBV ELISA and HI Serology Titers in Broiler Flocks from Mississippi**
Senties-Cué, C. Gabriel, Danny L. Magee, and Robert W. Wills
- 29. Evolutionary Trends in the Group III Avian Coronaviruses**
Jackwood, Mark W. and Deborah A. Hilt

Infectious Bursal Disease

- 30. Characterization of an Infectious Bursal Disease Virus Isolated from Broilers in Ontario**
Ceren, Teresa N.
- 31. Comparison of Two Spray Vaccination Methods against Infectious Bursal Disease Virus in Broilers**
Purvis, Linda B., Pedro Villegas, and Alejandro Banda
- 32. Effect of Fixation Conditions on Immun-histochemistry of IBDV Infected Bursae**
Hamoud, Mohamed M., Pedro Villegas, and Susan M. Williams
- 33. Efficacy of Two Vaccination Programs Containing 2512 IBDV Strains against Experimental Infection with F25/70 Strain in Broiler Chickens**
Alba Chinch, Mónica, Eliana Icochea, Pablo Reyna, Rosa Gonzalez, and Claudia Perez
- 34. Study of in ovo Administered Antigen-Antibody Complex Vaccine of IBDV against Challenge F52/70 Strain in Broiler Chickens**
Icochea D'rrigo, Eliana, Mónica Alba, Pablo Reyna, Rosa Gonzalez, Susana Friborg, and Jhon Guzman

Laryngotracheitis

- 35. Isolation and Molecular Characterization of Virulent Infectious Laryngotracheitis Virus from Commercial Layer Hens in Brazil**
Chacón Villanueva, Jorge Luis, Paulo Eduardo Brandão, Laura Yaneth, Villarreal Buitrago, Antonio Jose Piantino Ferreira

Leukosis

- 36. Pathogenicity and Transmission of a Field Isolate of Reticuloendotheliosis Virus**
Barbosa, Taylor, Zavala, Guillermo, Sunny Cheng, Maricarmen García, and Susan M. Williams
- 37. The Genome of Reticuloendotheliosis Virus integrated in the Genome of Fowlpox Virus**
Singh, Pratik, William M. Schnitzlein, and Deoki N. Tripathy
- 38. Detection of Avian Leukosis Virus Subgroup J from Broilers and Broiler Breeders in Alabama: 1998-2004**
Li, Lanqing, Frederic J. Hoerr, and Michael J. Luther

Miscellaneous Virus

- 39. Evaluation of Pathogenicity of Avianpox Viruses from Endangered Hawaiian Forest Birds**
Tripathy, Deoki N. and Taejoong Kim
- 40. Identification of Turkey Astrovirus and Coronavirus Co-infections in Brazil**
Villarreal Buitrago, Laura Yaneth, Mario Sergio Assayag Junior, Paulo Eduardo Brandão, Jorge Luis Chacón Villanueva, Claudete Serrano Astolfi Ferreira, Nelva Grando, Ricardo Soncini, Marcelo Pereira, and Antonio Jose Piantino Ferreira
- 41. Molecular Characterization of turkey Astroviruses circulating in the United States**
Pantin-Jackwood, Mary J. and Erica Spackman
- 42. Avian Hepatitis E Virus and Flax as risk factors associated with Hepatitis-splenitis Syndrome in Commercial Laying Hens**
Agunos, Agnes C., Bruce Hunter, Stanley Wayne Martin, Dongwan Yoo, Sameh Youseff, and Brian Binnington

Mycoplasma

43. **Status of the ORT, ART, IB, ND, AI (H9N2), MS and MG Infection in Broiler Breeder Flocks in Iran**
Mirsalimi, Seyed Medhi and Omid Rahimzadeh
44. **Tissue Responses of SPF Chickens exposed to Live *Mycoplasma gallisepticum* (MG) Vaccines and other MG Strains**
do Nascimento, Elmiro Rosendo, Kelly C Demarque, Rogégio Tortelly, Patricia A. Pólo, Virginia L.A. Pereira, Marcelo A.F. Zuanaze, and M. Graça F. Nascimento
45. **Hematological Values on *Mycoplasma synoviae* Experimental Infection**
do Nascimento, Elmiro Rosendo, Rita C.F. Silva, Nadia R.P. Almosny, Virginia L.A. Pereira, Maria L. Barreto
46. **Evaluation of DNA Extraction Methods for *Mycoplasma gallisepticum* PCR**
Leiting, Victoria A., Maricarmen García, Naola M. Ferguson, Ziv Raviv, Ruth S. Wooten, Louise Dufour-Zavala, Guillermo Zavala, and Stanley H. Kleven
47. **The Effect of *Mycoplasma synoviae* (MS) Challenge at the Onset of Lay on Performance of Table Egg Layers**
Raviv, Ziv and S. H. Kleven

Newcastle

48. **Quantification of Newcastle Disease Virus by Real-Time RT-PCR**
Miller, Patti, Daniel J. King, and David L. Suarez
49. **Comparison of the Enzyme Linked Immunosorbent Assay and the Hemagglutination Inhibition Test for Antibody to Newcastle Disease in a Commercial Farm and Non-commercial Layers Raised in the Backyard of Poor Families from Argentina**
Buscaglia, Celina, Gabriela Prada, Verónica Prio, Graciela Prio Lofeudo
50. **Protection of Chickens from Newcastle Disease with a Recombinant Baculovirus Subunit Vaccine Expressing the Newcastle Disease Virus Fusion and Hemagglutinin-Neuraminidase Protein**
Lee, Youn-Jeong, Haan-Woo Sung, Jun-Gu Choi, Eun-Kyoung Lee, Jae-Hong Kim, Chang-Seon Song

Parasitic Diseases

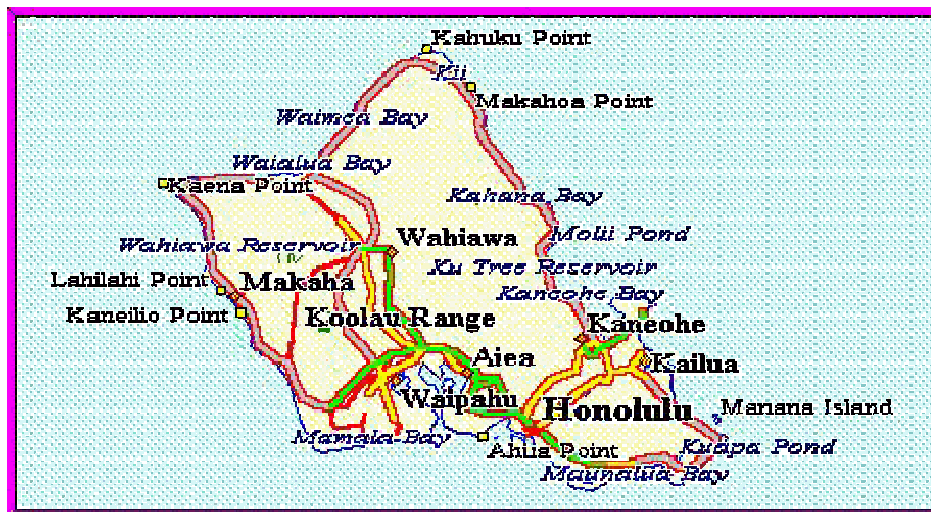
51. **Fecal Oocyst Counts as a Dynamic Tool to Monitor Coccidiosis in Broilers**
Ruano, Miguel, Bruce N. Stewart-Brown, Douglas K. Marvil, and Henry M. Engster
52. **Comparative Study of Performance Between Different Anticoccidial Drug Programs and a Vaccine Coccidiosis Control Program**
Quiroz, Marco A., Tim Cherry, Chris D. Knight, Julia J. Dibner, and Steve Mueller

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53. **Optimization of a Diagnostic RT-PCR for Avian Pneumoviruses in Specimens collected on FTA® Cards**
Thayer, Stephan G., Darrell R. Kapczynski, Hugo Moscoso, Gloria Avellaneda, and Charles L. Hofacre
54. **Immunopathogenesis of Avian Pneumovirus in Turkeys**
Cha, Ra Mi, Mahesh Khatri, Joe Palmquist, and Jagdev M. Sharma

Toxins

55. **The Environmental Fate of Arsenic in 3-Nitro ®**
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56. **A Case of Intoxication with Carbamates in Wild Geese**
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57. **A Case of Acute Intoxication with Arsenic in Poultry**
Nica, Daniela A. and Elisabeta G. Bianu



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July 15-19, 2006