### EDITOR

Jagdev M. Sharma The Biodesign Institute Arizona State University Tempe, Arizona 85287-5401

#### **BUSINESS MANAGER**

Charles L. Hofacte University of Georgia 953 College Station Road Athens, Georgia 30602-4875

### EDITORIAL BOARD

A. Banda A. J. Bermudez H. D. Chapman R. P. Chin S. Davison J. M. Day A. M. Fadly S. D. Fitzgerald O. J. Fletcher R. K. Gast L Gimeno P. Gibbs J. S. GUV F. J. Hoerr D. J. Jackwood M. W. Jackwood T. Johnson D. R. Kapczynski S. H. Kleven C. W. Lee M. Lee H. S. Lillehoi B. Lupiani L. R. McDougald L. Nolan A. Noormohammadi M. Pantin-Jackwood M. S. Parcells S. Rautenschlein S. Reddy D. L. Reynolds Y. M. Saif K. A. Schat H. Sellers H. L. Shivaprasad R. F. Silva R. Singer E. Spackman D. L. Suarez D. E. Swayne H. Toro V. van Santen P. S. Wakenell P. Wigley P. R. Woolcock C. C. Wu Q. Zhang

Avian Diseases

# An international journal dedicated to avian health

Published Quarterly by the American Association of Avian Pathologists



Vol. 54 No. 2

June 2010

Pages 787-974

Copyright 2010 by the American Association of Avian Pathologists, Inc.

4vian Diseases June 2010 Vol. 54, No. 2

## Table of Contents

Obituary—	
H. Graham Purchase	787
Invited Review—	
Clostridial Dermatitis and Cellulitis: An Emerging Disease in Turkeys. STEVEN CLARK, ROB PORTER, BRIAN MCCOMB, RON LIPPERT, STEVE OLSON, SHEILINA NOHNER, AND H. L. SHIVAPRASAD	788
Regular Articles—	
Role of <i>Clostridium perfringens</i> and <i>Clostridium septicum</i> in Causing Tutkey Cellulitis. ANIL J. THACHIL, BRIAN MCCOMB, MICHELLE M. ANDERSEN, DANIEL P. SHAW, DAVID A. HALVORSON, AND KAKAMBI V. NAGARAJA	795
Interferon α–Induced Inhibition of Infectious Bursal Disease Virus in Chicken Embryo Fibroblast Cultures Differing in Mx Genotype. Ann Marie O'Neill, Emily J. Livant, and Sandra J. Ewald	802
Host Intraspatial Selection of Infectious Bronchitis Virus Populations. RODRIGO A. GALLARDO, VICKY L. VAN SANTEN, AND HAROLDO TORO	807
Environmental Risk Factors Associated with H5N1 HPAI in Ramsar Wetlands of Europe. IRENE IGLESIAS, M <sup>a</sup> . JESÚS MUÑOZ, MARTA MARTÍNEZ, AND ANA DE LA TORRE	814
Persistent Circulation of Highly Pathogenic Influenza H5N1 Virus in Lake Qinghai Area of China. Yongdong Li, Peng Li, Fumin Lei, Shan Guo, Changqing Ding, Zhi Xin, Yubang He, Baoping Yan, Zheng Kou, Shuang Tang, Zhong Zhang, Zhihong Hu, and Tianxian Li	821
Detection of Influenza A Viruses in Eggs Laid by Infected Turkeys. S. P. S. PILLAI, Y. M. SAIF, AND C. W. LEE	830
Observations on the Gross Pathology of Eimeria praecox Infections in Chickens. P. C. ALLEN AND M. C. JENKINS	834
Influence of <i>Salmonella enterica</i> Serovar Typhimurium Infection on Intestinal Goblet Cells and Villous Morphology in Broiler Chicks. Y. O. FASINA, F. J. HOERR, S. R. MCKEE, AND D. E. CONNER	841
Subgroup J Avian Leukosis Virus Neutralizing Antibody Escape Variants Contribute to Viral Persistence in Meat- Type Chickens. A. R. PANDIRI, J. K. MAYS, R. F. SILVA, H. D. HUNT, W. M. REED, AND A. M. FADLY	848
Colonization of Avian Reproductive-Tract Tissues by Variant Subpopulations of Salmonella Enteritidis. JEAN GUARD, RICHARD K. GAST, AND RUPA GURAYA	857
A MEQ-Deleted Marek's Disease Virus Cloned as a Bacterial Artificial Chromosome Is a Highly Efficacious Vaccine. ROBERT F. SILVA, JOHN R. DUNN, HANS H. CHENG, AND MASAHIRO NIIKURA	862
Phylogenetic Analysis of the Hemagglutinin Genes of 12 H9N2 Influenza Viruses Isolated from Chickens in Iran from 2003 to 2005. F. MOOSAKHANI, A. H. SHOSHTARI, S. A. POURBAKHSH, H. KEYVANFAR, AND A. GHORBANI	870

### About the cover

The illustration on the cover is based on an article, "Detection of Influenza A Viruses in Eggs Laid by Infected Turkeys," by S. P. S. Pillai, Y. M. Saif, and C. W. Lee. The red color indicates the presence of avian influenza viral antigen in the epithelial lining of the oviduct of a 26-week-old turkey hen. The article, which begins on page 830, demonstrated the presence of low pathogenic influenza virus in the internal contents of eggs laid by virus-exposed turkey hens. The finding raises the possibility of hatchery contamination by egg-borne influenza viruses and spread of virus during movement of contaminated cracked eggs and egg flats.