

**EDITOR**

Y. M. Saif  
Food Animal Health  
Research Program  
Ohio Agricultural Research and  
Development Center  
The Ohio State University  
Wooster, Ohio 44691

**BUSINESS MANAGER**

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

**EDITORIAL BOARD**

A. Banda  
G. Browning  
H. D. Chapman  
R. P. Chin  
S. Davison  
J. M. Day  
C. Ewers  
A. M. Fadly  
S. D. Fitzgerald  
O. J. Fletcher  
M. Garcia  
R. K. Gast  
P. Gibbs  
I. Gimeno  
J. S. Guy  
F. J. Hoerr  
D. J. Jackwood  
M. W. Jackwood  
T. Johnson  
D. R. Kopczynski  
S. H. Kleven  
C. W. Lee  
M. Lee  
H. S. Lillehoj  
B. Lupiani  
L. R. McDougald  
L. Nolan  
M. Pantin-Jackwood  
M. S. Parcells  
S. Routenschein  
S. Reddy  
D. L. Reynolds  
K. Roland  
K. A. Schat  
H. L. Shivaprasad  
E. Spackman  
D. L. Suarez  
D. E. Swayne  
H. Toro  
J.-P. Vallancourt  
V. van Santen  
P. S. Wakenell  
P. Wigley  
P. R. Woolcock  
C. C. Wu  
Q. Zhang  
L. Zsak

# *Avian Diseases*

An international journal dedicated to avian health

Published Quarterly by  
the American Association of Avian Pathologists



Vol. 57 No. 3

September 2013

Pages 573-708

Copyright 2013 by the American Association of Avian Pathologists, Inc.

# *Avian Diseases*

Vol. 57, No. 3

September 2013

## Table of Contents

### *Invited Review—*

- Recent Progress in the Characterization of Avian Enteric Viruses. J. MICHAEL DAY AND LASZLO ZSAK ..... 573

### *Regular Articles—*

- Variation in the Responses of Wild Species of Duck, Gull, and Wader to Inoculation with a Wild-Bird-Origin H6N2 Low Pathogenicity Avian Influenza Virus. JOHN M. CURRAN, IAN D. ROBERTSON, TREVOR M. ELLIS, PAUL W. SELLECK, AND MARK A. O'DEA ..... 581
- Prevalence and Differentiation of Diseases in Maryland Backyard Flocks. JENNIFER M. MADSEN, NICKOLAS G. ZIMMERMANN, JENNIFER TIMMONS, AND NATHANIEL L. TABLANTE ..... 587
- Development and Validation of One-Step SYBR Green Real-Time RT-PCR for the Rapid Detection of Newly Emerged Duck Tembusu Virus. ZONGLIANG LIU, YUGUANG FU, YANHONG JI, JIANZHONG WEI, XUEPENG CAI, AND QIYUN ZHU ..... 595
- Molecular and Phenotypic Characterization of *Escherichia coli* Isolated from Broiler Chicken Flocks in Egypt. ASHRAF H. M. HUSSEIN, IBRAHIM A. I. GHANEM, AMAL A. M. EID, MOHAMED A. ALI, JULIE S. SHERWOOD, GANWU LI, LISA K. NOLAN, AND CATHERINE M. LOGUE ..... 602
- Modeling the Association of Space, Time, and Host Species with Variation of the HA, NA, and NS Genes of H5N1 Highly Pathogenic Avian Influenza Viruses Isolated from Birds in Romania in 2005–2007. MOHAMMAD ALKHAMIS, ANDRES PEREZ, NICOLE BATEY, WENDY HOWARD, GREG BAILLIE, SIMON WATSON, STEPHANIE FRANZ, RAFFAELLA FOCOSI-SNYMAN, IULIANA ONITA, RALUCA CIORANU, MIHAI TURCITU, PAUL KELLAM, IAN H. BROWN, AND ANDREW C. BREED ..... 612

### *About the cover*

David P. Anderson  
Editor, *Avian Diseases*, 1973–1994

Dave was born in Twin Falls, Idaho. He attended the University of Idaho, then Washington State University, where he received his BS in 1959 and DVM in 1961. He did his graduate work at the University of Wisconsin under Professor Robert P. Hanson and received his MS in 1964 and PhD in 1965. Dave is a Founding Diplomate of the American College of Poultry Veterinarians and a Diplomate of the American College of Veterinary Microbiologists.

Dave joined the faculty of the University of Wisconsin in the Department of Veterinary Science. During this time, Dr. Hitoshi Kawamura, who had joined him as a post-doctoral fellow, isolated a herpesvirus from turkeys that was used as the first successful vaccine for Marek's disease. Dave also served in the U. S. Army at the Meat and Dairy Hygiene School in Chicago, Illinois.

In 1969 he moved to the University of Georgia as Director of the Poultry Disease Research Center, which later became the Department of Avian Medicine. While at the university, he served as Associate Dean for Research and Graduate Affairs and Dean of the College of Veterinary Medicine before retiring in 1996. His research at Georgia and Wisconsin was devoted to environmental effects on avian respiratory diseases.

He was Editor of *Avian Diseases* from 1973 to 1994. He also served as the editor of the poultry disease section of the *Merck Veterinary Manual* for ten years. He was President of the American Association of Avian Pathologists in 1988 and received the Special Service Award from the AAAP in 1991. This fall he will be honored with membership in the World Veterinary Poultry Association Hall of Honor.

Dave has been married to Gale for 50 years and they have two children, Kathryn and Christopher, and three grandchildren. In retirement Dave enjoys hunting, fishing, taking naps, telling jokes, and being politically incorrect.