

CONTENTS

ANIMAL WELL-BEING AND BEHAVIOR

- Light intensity of 5 or 20 lux on broiler behavior, welfare and productivity
 Jean-Loup Rault, Katie Clark, Peter J. Groves, and Greg M. Cronin..... 779

GENETICS AND GENOMICS

- Further investigation of a quantitative trait locus for ascites on chromosome 9 in broiler chicken lines
 Shatovisha Dey, Sriram Krishna, Nicholas B. Anthony, and Douglas D. Rhoads..... 788

IMMUNOLOGY, HEALTH, AND DISEASE

- Effects of antimicrobial peptides on growth performance and small intestinal function in broilers under chronic heat stress
 F. Hu, X. Gao, R. She, J. Chen, J. Mao, P. Xiao, and R. Shi..... 798

METABOLISM AND NUTRITION

- Effect of exogenous xylanase, amylase, and protease as single or combined activities on nutrient digestibility and growth performance of broilers fed corn/soy diets
 A. M. Amerah, L. F. Romero, A. Awati, and V. Ravindran..... 807
- Effect of carbohydrase and protease on growth performance and gut health of young broilers fed diets containing rye, wheat, and feather meal
 F. Yan, J. J. Dibner, C. D. Knight, and M. Vazquez-Anon..... 817
- Estimation of optimal ratios of digestible phenylalanine + tyrosine, histidine, and leucine to digestible lysine for performance and breast yield in broilers
 Sebastian M. Franco, Fernando de C. Tavernari, Rosana C. Maia, Victor R. S. M. Barros, Luiz F. T. Albino, Horacio S. Rostagno, Guilherme R. Lelis, Arele A. Calderano, and Ryan Neil Dilger 829
- Estimation of the optimum digestible lysine level for Cherry Valley ducks
 Y. F. Zhou, Y. Q. Liu, H. K. Wei, and J. Peng 838
- Evaluation of enzymatically treated *Artemisia annua* L. on growth performance, meat quality, and oxidative stability of breast and thigh muscles in broilers
 X. L. Wan, Z. H. Song, Y. Niu, K. Cheng, J. F. Zhang, H. Ahmad, L. L. Zhang, and T. Wang..... 844
- Characterisation and quantification of changes in odorants from litter headspace of meat chickens fed diets varying in protein levels and additives
 Nishchal K. Sharma, Mingan Choct, Mark W. Dunlop, Shu-Biao Wu, Hardy Z. Castada, and Robert A. Swick..... 851
- Effect of zinc imprinting and replacing inorganic zinc with organic zinc on early performance of broiler chicks
 S. Mwangi, J. Timmons, T. Ao, M. Paul, L. Macalintal, A. Pescatore, A. Cantor, M. Ford, and K. A. Dawson..... 861
- Effect of supplemental fermented *Ginkgo biloba* leaves at different levels on growth performance, meat quality, and antioxidant status of breast and thigh muscles in broiler chickens
 Y. Niu, X. L. Wan, X. H. Zhang, L. G. Zhao, J. T. He, J. F. Zhang, L. L. Zhang, and T. Wang..... 869
- Maternally derived anti-fibroblast growth factor 23 antibody as new tool to reduce phosphorus requirement of chicks
 Zhouzheng Ren, Daniel E. Bütz, Jordan M. Sand, and Mark E. Cook..... 878
- Effect of white striping myopathy on breast muscle (*Pectoralis major*) protein turnover and gene expression in broilers
 Karen Vignale, Justina V. Caldas, Judy A. England, Nirun Boonsinchai, Andrew Magnuson, Erik D. Pollock, Sami Dridi, Casey M. Owens, and Craig N. Coon..... 886

Effects of dietary octacosanol supplementation on laying performance, egg quality, serum hormone levels, and expression of genes related to the reproductive axis in laying hens L. Long, S. G. Wu, F. Yuan, H. J. Zhang, J. Wang, and G. H. Qi.....	894
Estimation of the maximum safe level of feed ingredients by spline or broken-line nonlinear regression models R. A. Alhotan, D. V. Vedenov, and G. M. Pesti.....	904
Leucine and valine supplementation of low-protein diets for broiler chickens from 21 to 42 days of age I. C. Ospina-Rojas, A. E. Murakami, C. R. A. Duarte, G. R. Nascimento, E. R. M. Garcia, M. I. Sakamoto, and R. V. Nunes.....	914

MICROBIOLOGY AND FOOD SAFETY

Biodetoxification of aflatoxin B1 in cottonseed meal by fermentation of <i>Cellulosimicrobium funkei</i> in duckling diet J. Liu, W.-j. Song, N.-Y. Zhang, J. Tan, C. S. Krumm, L.-H. Sun, and D.-S. Qi.....	923
Effect of climatic elements on <i>Campylobacter</i> colonization in broiler flocks reared in southern Japan from 2008 to 2012 K. Ishihara, T. Chuma, M. Andoh, M. Yamashita, H. Asakura, and S. Yamamoto.....	931
Identification and biocide susceptibility of dominant bacteria after cleaning and disinfection of broiler houses K. Luyckx, E. Van Coillie, J. Dewulf, S. Van Weyenberg, L. Herman, J. Zoons, E. Vervaet, M. Heyndrickx, and K. De Reu.....	938
<i>Listeria monocytogenes</i> infection of HD11, chicken macrophage-like cells N. A. Jarvis, J. R. Donaldson, C. A. O'Bryan, S. C. Ricke, and P. G. Crandall.....	950
Descriptive survey and <i>Salmonella</i> surveillance of pastured poultry layer farms in California Naomi Dailey, Deb Niemeier, Carine Elkhoraibi, C. Gabriel Sentfies-Cué, and Maurice Pitesky.....	957
Influence of postbiotic RG14 and inulin combination on cecal microbiota, organic acid concentration, and cytokine expression in broiler chickens K. Y. Kareem, T. C. Loh, H. L. Foo, S. A. Asmara, and H. Akit.....	966
Egg quality in laying hens exposed to <i>Mycoplasma gallisepticum</i> F-strain attenuated vaccine L. d. S. Machado, F. F. d. Santos, C. K. Togashi, D. L. d. C. Abreu, J. C. Pimentel, L. Sesti, V. L. d. A. Pereira, and E. R. d. Nascimento.....	976
Climatic factors and prevalence of <i>Campylobacter</i> in commercial broiler flocks in Thailand S. Prachantasena, P. Charununtakorn, S. Muangnoicharoen, L. Hankla, N. Techawal, P. Chaveerach, P. Tuitemwong, N. Chokesajjawatee, N. Williams, T. Humphrey, and T. Luangtongkum.....	980
Determination of resistance and virulence genes in <i>Enterococcus faecalis</i> and <i>E. faecium</i> strains isolated from poultry and their genotypic characterization by ADSRRS-fingerprinting A. Nowakiewicz, G. Ziółkowska, A. Trościańczyk, P. Zięba, and S. Gnat.....	986
Accumulation of antibiotics and heavy metals in meat duck deep litter and their role in persistence of antibiotic-resistant <i>Escherichia coli</i> in different flocks on one duck farm Y. Lin, W. Zhao, Z. D. Shi, H. R. Gu, X. T. Zhang, X. Ji, X. T. Zou, J. S. Gong, and W. Yao.....	997

MOLECULAR AND CELLULAR BIOLOGY

Reactivation of development-related genes by the DNA methylation inhibitor 5-Aza-2'-deoxycytidine in chicken embryo fibroblasts Shihao Chen, Xuming Hu, Wenqi Zhu, Chongxin Jia, Xiao Han, Junting Yuan, Zhen Sun, Zhe Yang, Tuoyu Geng, and Hengmi Cui.....	1007
--	------

PHYSIOLOGY AND REPRODUCTION

Influence of temperature and growth selection on turkey pectoralis major muscle satellite cell adipogenic gene expression and lipid accumulation D. L. Clark, G. M. Strasburg, K. M. Reed, and S. G. Velleman.....	1015
---	------

PROCESSING AND PRODUCTS

Treatment with a low pH processing aid to reduce <i>Campylobacter</i> counts on broiler parts M. A. Landrum, N. A. Cox, D. E. Cosby, M. E. Berrang, and S. M. Russell.....	1028
---	------