

JOURNAL ARTICLES

* denotes collaborative publications from NC1170 members

1. Aguirre ME, Leyva-Jimenez H, Travis R *et al.* (2020) Evaluation of growth production factors as predictors of the incidence and severity of white striping and woody breast in broiler chickens. *Poultry Science*.
2. Al-Ajeeli MN, Hubert SM, Leyva-Jimenez H *et al.* (2020) Impacts of Dietary Protein and Prebiotic Inclusion on Liver and Spleen Gene Expression in Hy-Line Brown Caged Layers. *Animals : an open access journal from MDPI*, 10.
3. Athrey G (2020) Poultry genetics and breeding. In: *Animal Agriculture* , pp. 317–330. Elsevier.
4. Athrey G, Popkin-Hall Z, Cosme LV, Takken W, Slotman MA (2020) Species and sex-specific chemosensor gene expression in Anopheles coluzzii and An. quadriannulatus antennae. *Parasites & Vectors*, 13, 212.
5. Hubert SM, Athrey G (2020) Energy metabolism and sources of oxidative stress in wooden breast - a review. *F1000Research*, 9, 319.
6. Ma L, Li H, Hu J *et al.* (2020) Indole Alleviates Diet-induced Hepatic Steatosis and Inflammation in a Manner Involving Myeloid Cell PFKFB3. *Hepatology*.
7. Nelson JR, Ibrahim M, Sobotik EB, Athrey G, Archer GS (2020a) Effects of yeast fermentate supplementation on cecal microbiome, plasma biochemistry and ileal histomorphology in stressed broiler chickens. *Livestock Science*, 104149.
8. Nelson JR, Sobotik EB, Athrey G, Archer GS (2020b) Effects of supplementing yeast fermentate in the feed or drinking water on stress susceptibility, plasma chemistry, cytokine levels, antioxidant status, and stress and immune-related gene expression of broiler chickens. *Poultry Science*.
9. Williams T, Athrey G (2020) Cloacal Swabs Are Unreliable Sources for Estimating Lower Gastro-Intestinal Tract Microbiota Membership and Structure in Broiler Chickens. *Microorganisms*.
10. Fagundes, N. S., M. C. Milfort, S. M. Williams, M. J. Da Costa, A. L. Fuller, J. F. Menten, R. Rekaya and S. E. Aggrey, 2020. Dietary methionine level alters growth, digestibility, and gene expression of amino acid transporters in meat-type chickens. *Poultry Sci.* 99: 67-75.
11. Foutz, J.C., M. C. Milfort, A. L. Fuller, W. K. Kim, R. Rekaya, and S. E. Aggrey, 2020. Supplementation of diets with Brazil nut powder can meet dietary methionine requirement of organic broiler chickens. *Organic Agriculture* 10: 359-367 DOI: 10.1007/s13165-019-00276-0
12. Schneiders, G. H., J. C. Foutz, M. C. Milfort, A. F. A. Ghareeb, U. G. Sorhue, J. N. Richter, A. L. Fuller, S. M. Williams, R. Rekaya, and S. E. Aggrey, 2020. Ontogeny of intestinal permeability in chickens infected with *Eimeria maxima*: Implications for intestinal health. *J. Adv. in Parasitol.* 6(2) dx.doi.org/10.17582/journal.jap/2019/6.2
13. Schneiders, G. H., J.C. Foutz, A. L. Fuller, J. Nelson, R. Rekaya and S. E. Aggrey, 2020. The effect of increased temperature on viability, morphology, infectivity and development of *Eimeria tenella*. *Journal of Parasitology*. doi:10.1645/19-17
14. Bucher, M. G., B. Zwirzitz, A. Oladeinde, K. Cook, C. Pymel, G. Zock, S. E. Aggrey, C. Ritz, T. Looft, E. Lipp, G. E. Agga, and K. Sistani, 2020. Reuse poultry litter microbiome with competitive exclusion potential against *Samonella Heidelberg*. *Journal of Environmental Quality* 2020; 1-13.

15. Guo, Y., L. Chai, S. E. Aggrey, A. Oladeinde, J. Johnson and G. Zock, 2000. A machine vision-based method for monitoring broiler chicken floor distribution. Sensors 20: 3179. doi:10.3390/s20113179
16. Schneiders, G.H., J. C. Foutz, M. C. Milfort, A. F. A. Ghareeb, A. L. Fuller, R. Rekaya, S. M. Williams and S. E. Aggrey, 2020. Heat stress reduces sexual development and affects pathogenesis of *Eimeria maxima* in meat-type chickens. Scientific Reports doi: 10.1038/s41598-020-67330-w
17. Vilar da Silva, F. Gonzalez-Ceron, E. W. Howerth, R. Rekaya and S. E. Aggrey, 2020. Alteration of dietary cysteine affects activities of genes of the transsulfuration and glutathione pathways, and development of skin tissues and feather follicles in chickens. Anim. Biotechnol. 31: 203-208. <https://doi.org/10.1080/10495398.2019.1577253>
18. Dunkley, C. and S. E. Aggrey, 2020. The amino acid composition of organic soybean meal for the formulation of organic poultry feed. <http://eorganic.org/node/25491>
19. Sumreddee, P., S. Toghiani, E. H. Hay, A. Roberts, S. E. Aggrey, and R. Rekaya, 2020. Runs of homozygosity and analysis of inbreeding depression, 2020. Journal of Animal Science 98:1-11. DOI:10.1093/jas/skaa361
20. Alrubaye, A., N. S. Ekesi, A. Hasan, D. A. Koltes, R. Wideman Jr and D. Rhoads (2020). Chondronecrosis with osteomyelitis in broilers: Further defining a bacterial challenge model using standard litter flooring and protection with probiotics. Poultry Science 99 (12): 6474-6480.
21. *Alrubaye, A. A. K., N. S. Ekesi, A. Hasan, E. Elkins, S. Ojha, S. Zaki, S. Dridi, R. F. Wideman, M. A. Rebollo and D. D. Rhoads (2020). Chondronecrosis with Osteomyelitis in Broilers: Further Defining Lameness-Inducing Models with Wire or Litter Flooring, to Evaluate Protection with Organic Trace Minerals. Poultry Science 99(11): 5422-5429.
22. Baxter M.F.A., Greene E.S., Kidd M.T., Tellez-Isaias G., Orlowski S., Dridi S (2020). Water amino acid-chelated trace mineral supplementation decreases circulating and intestinal HSP70 and proinflammatory cytokine gene expression in heat-stressed broiler chickens. J Anim Sci. Mar 1;98(3). pii: skaa049. doi: 10.1093/jas/skaa049.
23. Cauble R., Greene e., Orlowski S., Walk C., Bedford M., Apple J., Kidd M., Dridi S (2020). Research Note: Dietary phytase reduces broiler woody breast severity via potential modulation of breast muscle fatty acid profiles. Poult Sci 99:4009-4015.
24. Dhamad A.E., Greene E., Sales M., Nguyen P., Beer L., Liyanage R., Dridi S (2020). 75-kDa glucose-regulated protein (GRP75) is a novel molecular signature for heat stress response in avian species. Am J Physiol Cell Physiol. 2020 Feb 1;318(2):C289-C303.
25. Ferver A., Dridi S (2020). Regulation of avian uncoupling protein (av-UCP) expression by cytokines and hormonal signals in quail myoblast cells. Comp Biochem Physiol A Mol Integr Physiol. DOI: 10.1016/j.cbpa.2020.110747
26. Flees J., Greene E., Ganguly B., Dridi S (2020). Phytogenic feed- and water-additives improve feed efficiency in broilers via modulation of (an)orexigenic hypothalamic neuropeptide expression. Neuropeptides. 2020 Jan 3:102005. doi: 10.1016/j.npep.2020.102005. [Epub ahead of print]
27. Greene E., Cauble R., Dhamad A., Kidd M., Kong B., Howard S., Castro H., Campagna S., Bedford M., Dridi S (2020). Muscle Metabolome Profiles in Woody Breast-(un)Affected Broilers: Effects of Quantum Blue Phytase-Enriched Diet. Front Vet Sci 2020

28. Greene E., Cauble R., Kadhim H., Mallmann B., Gu I., Lee S.O., Orlowski S., Sami Dridi (2020). Protective effects of the phytogenic feed additive "comfort" on growth performance via modulation of hypothalamic feeding- and drinking-related neuropeptides in cyclic heat-stressed broilers. *Domest Anim Endocrinol.* doi: 10.1016/j.domaniend.2020.106487. Epub 2020 Apr 18.
29. Greene E.S., Zampiga M., Sirri F., Ohkubo T., Dridi S (2020). Orexin system is expressed in avian liver and regulates hepatic lipogenesis via ERK1/2 activation. *Sci Rep* 2020 Nov 5;10(1):19191. doi: 10.1038/s41598-020-76329-2.
30. Kadhim, H.K., M. Kidd Jr., S.W. Kang and W.J. Kuenzel. (2020). Differential delayed responses of arginine vasotocin and its receptors in septo-hypothalamic brain structures and anterior pituitary that sustain hypothalamic-pituitary-adrenal (HPA) axis functions during acute stress. *Gen. Comp. Endocrinol.* 286:113302. doi.org/10.1016/j.ygcen.2019.113302.
31. Kang, S.W., K.D. Christensen, D. Aldridge and W.J. Kuenzel. (2020). Effects of light intensity and dual light intensity choice on plasma corticosterone, central serotonergic and dopaminergic activities in birds, Gallus gallus. *Gen. Comp. Endocrinol.* 285: 113289. doi.org/10.1016/j.ygcen.2019.113289.
32. *Kang, S.W., M.T. Kidd Jr., H.J. Kadhim, S. Shouse, S.K. Orlowski, J. Hiltz, N.B. Anthony, W.J. Kuenzel and B.C. Kong. (2020). Characterization of stress response involved in chicken myopathy. *Gen. Comp. Endocrinol.* 295:113526. doi.org/10.1016/j.ygcen.2020.113526.4
33. Kuenzel, W.J., S.W. Kang and A. Jurkevich. (2020). The vasotocin system and its role in the regulation of stress in birds. In: *Vasopressin (Vitamins and Hormones)* (Ed. G. Litwack) Vol. 113:183-216, Academic Press/ Elsevier, Oxford, UK
34. Orlowski S.K., Tabler T., Hiltz J.Z., Greene E.S., Anthony N.B., Dridi S (2020). Processing evaluation of random bred broiler populations and their common ancestor at 55 days under chronic heat stress conditions. *Poultry Science* 99, 3491-3500.
35. Rhoads DD, Robert F. Wideman J. (2020). Physiological challenges in poultry breeding, 18pp. In Aggrey SE, Zhou H, Tixier-Boichard M, Rhoads D (ed), *Advances in poultry genetics and genomics*. Burley Dodds Science Publishing, Cambridge, UK.
36. Parveen A, C Jackson, S Dey, K Tarrant, N Anthony, DD Rhoads (2020) Identification and validation of quantitative trait loci for ascites syndrome in broiler chickens using whole genome resequencing. *BMC Genetics* 21:54.
37. Shwani A, PRF Adkins, NS Ekesi, A Alrubaye, MJ Calcutt, JR Middleton, DD Rhoads (2020). Whole genome comparisons of *Staphylococcus agnetis* isolates from cattle and chickens. *Applied and Environmental Microbiology* 86(12):e00484-00420.
38. *Aljarbou, WA, England, EM, Velleman, SG, Reed, KM, Strasburg GM. 2020. Phosphorylation state of pyruvate dehydrogenase and metabolite levels in turkey skeletal muscle in normal and pale, soft, exudative meats. *British Poultry Science*. <https://doi.org/10.1080/00071668.2020.1855629> Online ahead of print
39. *Xu J, Strasburg GM, Reed KM, Velleman SG. 2020. Response of turkey pectoralis major muscle satellite cells to hot and cold thermal stress: Effect of growth selection on satellite cell proliferation and differentiation. *Comparative Biochemistry and Physiology, Part A. Molecular & Integrative Physiology*. Oct 24;252:110823. doi: 10.1016/j.cbpa.2020.110823. Epub ahead of print.

40. Horton KA, Sporer KRB, Tempelman RJ, Malila Y, Reed KM, Velleman SG, Strasburg GM. 2020. Knockdown of Death-Associated Protein Expression Induces Global Transcriptome Changes in Proliferating and Differentiating Muscle Satellite Cells. *Frontiers in Physiology* Aug 14;11:1036. doi: 10.3389/fphys.2020.01036. eCollection 2020
41. Malila Y, Uengwetwanit T, Arayamethakorn S, Srimarut Y, Thanatsang KV, Soglia F, Strasburg GM, Rungrassamee W, Visessanguan W. 2020. Transcriptional Profiles of Skeletal Muscle Associated With Increasing Severity of White Striping in Commercial Broilers. *Frontiers in Physiology* Jun 16;11:580. doi: 10.3389/fphys.2020.00580. eCollection 2020
42. Zampiga M, Soglia F, Baldi G, Petracci M, Strasburg GM, Sirri F. 2020. Muscle Abnormalities and Meat Quality Consequences in Modern Turkey Hybrids. *Frontiers in Physiology*. Jun 12;11:554. doi: 10.3389/fphys.2020.00554. eCollection 2020.
43. Fernandes, A. F. A., Dorea, J. R. R., Valente, B. D., Fitzgerald, R., Herring, W. and Rosa, G. J. M. Comparison of data analytics strategies in computer vision systems to predict pig body composition traits from 3D images. *Journal of Animal Science* 98(8): skaa250, 2020.
44. Passafaro, T. L., Lopes, F. B., Dorea, J. R. R., Craven, M., Breen, V., Hawken, R. J. and Rosa, G. J. M. Would large dataset sample size unveil the potential of deep neural networks for improved genome-enabled prediction of complex traits? The case for body weight in broilers. *BMC Genomics* 21: 771, 2020.
45. Aiken, V. C. F., Fernandes, A. F. A., Passafaro, T. L., Acedo, J. S., Dias, F. G., Dv̄rea, J. R. R. and Rosa, G. J. M. Forecasting beef production and quality using large-scale integrated data from Brazil. *Journal of Animal Science* 98(4): skaa089, 2020.
46. Fernandes, A. F. A., Dv̄rea, J. R. R. and Rosa, G. J. M. Image analysis and computer vision applications in animal sciences: an overview. *Front. Vet. Sci.* 7: 551269, 2020.
47. Fernandes, A. F. A., Turra, E. M., Alvarenga, E. R., Passafaro, T. L., Lopes, F. B., Alves, G. F. O., Singh, V. and Rosa, G. J. M. Deep Learning image segmentation for extraction of fish body measurements and prediction of body weight and carcass traits in Nile tilapia. *Computers and Electronics in Agriculture* 170: 105274, 2020.
48. Passafaro, T.L., Fernandes, A. F. A., Valente, B. D., Williams, N. H. and Rosa, G. J. M. Network analysis of swine movements in a multi-site pig production system in Iowa, USA. *Preventive Veterinary Medicine* 174: 104856, 2020.
49. Cominotte, A., Fernandes, A. F. A., Dorea, J. R. R., Rosa, G. J. M., Ladeira, M. M., van Cleeff, E. H. C. B., Pereira, G. L., Baldassinic, W. A. and Machado Neto, O. Automated computer vision system to predict body weight and average daily gain in beef cattle during growing and finishing phases. *Livestock Science* 232: 103904, 2020.
50. Mota, L. F. M., Lopes, F. B., Junior, G. A. F., Rosa, G. J. M., Magalh̄es, A. F. B., Carvalheiro, R. and Albuquerque, L. G. Genome-wide scan highlights the role of candidate genes on phenotypic plasticity for age at first calving in Nellore heifers. *Scientific Reports* 10:6481, 2020.
51. Chitakasempornkul, K., Rosa, G. J. M., Jager, A. and Bello, N. M. Investigating causal biological relationships between reproductive performance traits in high-performing gilts and sows. *Journal of Agricultural, Biological, and Environmental Statistics* 25: 1-22, 2020.

52. Roudbar, M. A., Mohammadabadi, M. R., Mehrgardi, A. A., Abdollahi-Arpanahi, R., Momen, M., Morota, G., Lopes, F. B., Gianola, D. and Rosa, G. J. M. Integration of single nucleotide variants and whole-genome DNA methylation profiles for classification of rheumatoid arthritis cases from controls. *Heredity* 124: 658-674, 2020.
53. Wu, X.-L., Li, Z., Wang, Y., He, J., Rosa, G. J. M., Ferretti, R., Genho, J., Tait Jr., R. G., Parham, J., Schultz, T. and Bauck, S. A causality perspective of genomic breed composition for composite animals. *Front. Genet.* 11: 546052, 2020.
54. He, J., Wu, X.-L., Zeng, Q., Li, H., Ma, H., Jiang, J., Rosa, G. J. M., Gianola, D., Tait Jr., R. G. and Bauck, S. Genomic mating as sustainable breeding for Chinese indigenous Ningxiang pigs. *PLoS ONE* 15(8): e0236629, 2020.
55. Pegolo, S., Momen, M., Morota, G., Rosa, G. J. M., Gianola, D., Bittante, G. and Cecchinato, A. Structural equation modeling for investigating multi-trait genetic architecture of udder health in dairy cattle. *Scientific Reports* 10: 7751, 2020.
56. Baker, L. A., Momen, M., Chan, K., Bollig, N., Lopes, F. L., Rosa, G. J. M., Todhunter, R. J., Binversie, E. E., Sample, S. J. and Muir, P. Bayesian and machine learning models for genomic prediction of anterior cruciate ligament rupture in the canine model. *G3: Genes, Genomes, Genetics* 10(8): 2619-2628, 2020.
57. Wang, Y., Wu, X.-L., Li, Z., Bao, Z. M., Tait, R. G., Bauck, S. and Rosa, G. J. M. Estimation of genomic breed composition for purebred and crossbred animals using sparsely regularized admixture models. *Frontiers in Genetics* 11: 576, 2020.
58. Li, Z., Wu, X.-L., Guo, W., He, J., Li, H., Rosa, G. J. M., Gianola, D., Tait Jr., R. G., Parham, J., Genho, J., Schultz, T and Bauck, S. Estimation of genomic breed composition of individual animals in composite beef cattle. *Animal Genetics* 51: 457-460, 2020.
59. Lopes, F., Rosa, G. J. M., Pinedo, P., Santos, J. E. P., Chebel, R. C., Galvao, K. N., Schueneman, G. M., Bicalho, R. C., Rodriguez-Zas, S., Seabury, C. M. and Thatcher, W. Genome-enable prediction for health traits using high-density SNP panel in US Holstein cattle. *Animal Genetics* 51: 192-199, 2020.
60. Li, H., Wu, X.-L., Tait Jr., Bauck, S., Thomas, D. L., Murphy, T. W. and Rosa, G. J. M. Genome-wide association study of milk production traits in a crossbred dairy sheep population using three statistical models. *Animal Genetics* 51: 624-628, 2020.
61. Cavani, L., Lopes, F. B., Giglioti, R., Bresolin, T., Campos, G. S., Okino, C. H., Gulias-Gomes, C. C., Caetaneo, A. R., Oliveira, M. C. S., Cardoso, F. F., Rosa, G. J. M. and Oliveira, H. N. Inferring phenotypic causal networks for tick infestation, Babesia bovis infection, and weight gain in Hereford and Braford cattle using structural equation models. *Livestock Science* 238: 104032, 2020.
62. Okamura, T., Ishii, K., Nishio, M., Rosa, G. J. M., Satoh, M. and Sasaki, O. Inferring phenotypic causal structure among farrowing and weaning traits in pigs. *Animal Science Journal* 91: e13369, 2020.
63. Lopes, F., Magnabosco, C. U., Passafaro, T. L., Brunes, L. C., Costa, M. F. O., Eifert, E. C., Narciso, M. G., Rosa, G. J. M., Lobo, R. B. and Baldi, F. Improving genomic prediction accuracy for meat tenderness in Nellore cattle using artificial neural networks. *Journal of Animal Breeding and Genetics* 137: 438-448, 2020.
64. Pinedo, P., Santos, J. E. P., Chebel, R. C., Galvao, K. N., Schueneman, G. M., Bicalho, R. C., Gilbert, R. O., Rodriguez-Zas, S., Seabury, C. M., Rosa, G. J. M. and Thatcher, W. Associations of reproductive indices with fertility outcomes, milk yield, and survival in Holstein cows. *Journal of Dairy Science* 103: 6647-6660, 2020.

65. Adoligbe, C., Fernandes, A., Osei-Amponsah, R., Adje, N. D., Gbedevi, R., Fonton, M.-C., Rosa, G. J. M. and Souaibou, F. S. Native chicken farming: A tool for wealth creation and food security in Benin. *International Journal of Livestock Production* 11(4): 146-162, 2020.
66. Pinedo, P., Santos, J. E. P., Chebel, R. C., Galvao, K. N., Schueneman, G. M., Bicalho, R. C., Gilbert, R. O., Rodriguez-Zas, S., Seabury, C. M., Rosa, G. J. M. and Thatcher, W. Earlylactation diseases and fertility in 2 seasons of calving across US dairy herds. *Journal of Dairy Science* 103: 10560-10576, 2020.
67. Kopke, G., Anklam, K., Kulow, M., Baker, L., Swalve, H. H., Lopes, F. B., Rosa, G. J. M. and Dopfer, D. The identification of gene ontologies and candidate genes for digital dermatitis in beef cattle from a genomewide association study. *International Jounal of Veterinary Science Research* 6(1): 027-037, 2020.
68. *Mushi, J.R., Chiwanga, G.H., Amuzu-Aweh, E.N., Walugembe, M., Max, R.A., Lamont, S.J., Kelly, T.R., Mollel, E.L., Msoffe, P.L., Dekkers, J., Gallardo, R., Zhou, H., and Muhairwa, A.P. 2020. Phenotypic variability and population structure analysis of Tanzanian free-range local chickens. *BMC Vet. Res.* 16, 360 doi.org/10.1186/s12917-020-02541-x
69. *Zhang, H., Liang, Q., Wang, N., Wang, Q., Leng, L., Mao, J., Wang, Y., Wang, S., Zhang, J., Liang, H., Zhou, X., Li, Y., Cao, Z., Luan, P., Wang, Z., Yuan, H., Wang, Z., Zhou, X., Lamont, S.J., Da, Y., Li, R., Tian, S., Du, Z., and Li, H. Microevolutionary dynamics of chicken genomes under divergent selection for adiposity. 2020. *iScience*. 23:101193. doi: 10.1016/j.isci.2020.101193.
70. *Wang, M.-S., Thakur, M., Peng, M.-S., Jiang, Y., Frantz, L.A.F., Li, M., Zhang, J.-J., Wang, S., Peters, J., Otecko, N.O., Suwannapoom, C., Guo, X., Zheng, Z.-Q., Esmailizadeh, A., Yasoda, N., Hirimuthugoda, Ashari, H., Suladari, S., Zein, M.S.A., Kusza, S., Sohrabi, S., Kharrati-Koopaei, H., Shen, Q.-K., Zeng, L., Yang, M.-M., Wu, Y.-J., Yang, X.-Y., Xue-Mei Lu, X.-M., Jia, X.-Z., Nie, Q.-H., Lamont, S.J., Lasagna, E., Ceccobelli, S., Gunwardana, H.G.T.N., Senasige, T.M., Feng, S.-H., Si, J.-F., Zhang, H., Jin, J.-Q., Li, M.-L., Liu, Y.-H., Chen, H.-M., Ma, C., Dai, S.-S., Bhuiyan, A.K.F.H., Khan, M.S., Silva, G. L. L. P., Le, T.-T., Mwai, O.A., Nawaz, M., Ibrahim, M., Supple, M., Shapiro, B., Hanotte, O., Zhang, G., Larson, G., Han, J.-L., Wu, D.-D. and Zhang, Y.-P. 2020. 863 genomes reveal the origin and domestication of chicken. *Cell Research* 30, 693–701. <https://doi.org/10.1038/s41422-020-0349-y>
71. Wolc, A., Drobik-Czwarno, W., Jankowski, T., Arango, J., Settar, P., Fulton, J.E., Fernando, R.L., Garrick, D.J. and Dekkers, J.C.M. 2020. Accuracy of genomic prediction of shell quality in a White Leghorn line. *Poultry Science*. 99: 2833-2840
72. Wolc, A., Arango, J., Rubinoff, I. and Dekkers, J.C. 2020. A biphasic curve for modeling, classifying, and predicting egg production in single cycle and molted flocks. *Poultry Science*. doi.org/10.1016/j.psj.2019.11.037
73. Wang, Y., Saelao, P., Kern, C., Jin, S., Gallardo, R.A., Kelly, T., Dekkers, J.M., Lamont, S.J., Zhou, H. 2020. Liver transcriptome responses to heat stress and Newcastle Disease virus infection in genetically distinct chicken inbred lines. *GENES* 11, 1067; doi:10.3390/genes11091067
74. *Chanthavixay, G., Kern, C., Wang, Y., Saelao, P., Lamont, S.J., Gallardo, R.A., Rincon, G., Zhou, H. 2020. Integrated transcriptome and histone modification analysis reveals

- NDV infection under heat stress affects bursa development and proliferation in susceptible chicken line. *Front. Genet.* 11:567812. doi: 10.3389/fgene.2020.567812
75. *Zhang, J., Kaiser, M.G., Gallardo, R.A., Kelly, T. R., Dekkers, J.C.M., Zhou, H., Lamont, S.J. 2020. Transcriptome analysis reveals inhibitory effects of lentogenic Newcastle disease virus on cell survival and immune function in spleen of commercial layer chicks. *Genes* 11:1003; doi:10.3390/genes11091003.
76. *Walugembe, M., Amuzu-Aweh, E.N., Botchway, P.K., Naazie, A., Aning, G., Wang, Y., Saelao, P., Kelly, T., Gallardo, R.A., Zhou, H., Lamont, S.J., Kayang, B., Dekkers, J. 2020. Genetic Basis of Response of Ghanaian Local Chickens to Infection with a Lentogenic Newcastle Disease Virus, *Frontiers Genetics* doi: 10.3389/fgene.2020.00739
77. *Del Vesco, A.P., Kaiser, M.G., Monson, M.S., Zhou, H., Lamont, S.J.. 2020. Genetic responses of inbred chicken lines illustrate importance of eIF2 family and immune-related genes in resistance to Newcastle disease virus. *Scientific Reports.* 10:6155. <https://doi.org/10.1038/s41598-020-63074-9>
78. *Deist, M.S., Gallardo, R.A., Dekkers, J.C.M., Zhou, H. Lamont, S.J. 2020. Novel combined tissue transcriptome analysis after lentogenic Newcastle disease virus challenge in inbred chicken lines of differential resistance. *Frontiers Genet.* 11:11. doi: 10.3389/fgene.2020.00011
79. Alber, A., Morris, K.M., Bryson, K.J., Sutton, K., Monson, M.S., Chintoan-Uta, C., Borowska, D., Lamont, S.J., Schouler, C., Kaiser, P., Stevens, M., Vervelde, L. 2020. Avian pathogenic Escherichia coli (APEC) strain-dependent immunomodulation of respiratory granulocytes and mononuclear phagocytes in CSF1R-reporter transgenic chickens. *Frontiers Immunol.* doi: 10.3389/fimmu.2019.03055
80. Garcia, J., Byrd J.A., and Wong E.A. 2020. Tissue-, age-, and dose-dependent changes in avian β -defensin and LEAP2 mRNA abundance in the intestines of *Salmonella* Typhimurium challenged broilers. *Animal Biotechnology.* doi 10.1080/10495398.2020.1738449
81. *Emami, N, U. Jung, B. H. Voy, and S. Dridi. 2020. Radical Response: Effects of Heat Stress-Induced Oxidative Stress on Lipid Metabolism in the Avian Liver. *Antioxidants* (Basel), Dec 30;10(1):35.
82. Mihelic, R., J. Powers, S. Das, K. H. Lamour, S. Campagna, and B. H. Voy. 2020. Genes controlling polyunsaturated fatty acid synthesis are developmentally regulated in broiler chicks. *British Poultry Science.* Oct;61(5):508-517
83. Puckett, D., M. Alquraishi, D. S. Alani, S. Chahed, V. D. Frankel, D. Donohoe, B. H. Voy, J. Whelan, and A. Bettaieb. 2020. Zyflamend, a unique herbal blend, induces cell death and inhibits adipogenesis through the coordinated regulation of PKA and JNK. *Adipocyte*, Dec;9(1):454-471.
84. Puckett, DL, M. Alquraishi, D. Alani, S. Chahed, D. Donohoe, B. H. Voy, J. Whelan, and A. Bettaieb. 2020. Zyflamend induces apoptosis in pancreatic cancer cells via modulation of the JNK pathway. *Cell Commun Signal*, Aug 14;18(1):126.
85. Voy, B. H. 2020. Developmental Programming: a Jumpstart for Broiler Production. *The Feed: Poultry Insights and Innovation from Boehringer Ingelheim*, Edition 7, December 2020

BOOK/BOOK CHAPTERS

1. Aggrey, S. E., H. Zhou, M. Tixier-Boichard, D. D. Rhoads, Editors, 2020. *Advances in Poultry Genetics and Genomics*. Burleigh Dodds Science Publishing, Cambridge, U. K. 540 pp
2. Varona, L., S. E. Aggrey, and R. Rekaya, 2020. Genomic selection in poultry breeding using Bayesian methods. In: *Advances in Poultry Genetics and Genomics*. (S. E. Aggrey, H. Zhou, M. Tixier-Boichard, D. D. Rhoads, Eds), Burleigh Dodds Science Publishing, Cambridge, U. K.
3. Rekaya, R. and S. E. Aggrey, 2020. Landscape genetics and breeding for adaptation to climate change: implications for agro-ecology. In: *Advances in Poultry Genetics and Genomics*. (S. E. Aggrey, H. Zhou, M. Tixier-Boichard, D. D. Rhoads, Eds), Burleigh Dodds Science Publishing, Cambridge, U. K.
4. Aggrey, S. E., P. B. Siegel, R. Rekaya, 2020. Breeding for sustainability and plasticity in functional traits: Reality or fiction in the midst of conflicting interests. In: *Advances in Poultry Genetics and Genomics*. (S. E. Aggrey, H. Zhou, M. Tixier-Boichard, D. D. Rhoads, Eds), Burleigh Dodds Science Publishing, Cambridge, U. K.
5. *Voy, B. H. Avian Metabolomics. Sturkie's Avian Physiology, 7th Ed., Colin Scanes, Sami Dridi, editors. (book chapter, in press)
6. *Cheng, H.H. and Lamont, S.J. 2020. Genetics of disease resistance. Pp. 90-108. In: *Diseases of Poultry*. 14th ed. D.E. Swayne, M. Boulian, C.M. Logue, L.R. McDougald, V. Nair, and D.L. Suarez, Eds. Wiley-Blackwell, Hoboken
7. Aggrey SE, Zhou H, Tixier-Boichard M, Rhoads D. (Editors). (2020). *Advances in Poultry Genetics and Genomics*. Burley Dodds Science Publishing, Cambridge, UK; p. 580.