

MIRIAM GARCIA

Associate Professor | Expertise: Livestock Nutritional Physiology

I. PERSONAL INFORMATION

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II. EDUCATION

Ph.D. Animal Sciences (Dairy Nutrition)	University of Florida
M.S. Ruminant Nutrition	National Agrarian University La Molina
Eng. Animal Science	National Agrarian University La Molina
B.S. Animal Science	National Agrarian University La Molina

III. WORK EXPERIENCE

- Associate Professor, Department of Food and Animal Sciences, Alabama A&M University, 2024-Present.
- Research Director, Phibro Animal Health and Nutrition Research Center, Corvallis, OR. 2018-2024.
- Postdoctoral Fellow, Dept. Animal Science and Industry Kansas State University, 2016-2018.
- Postdoctoral Researcher, Dept. Animal Science and Avian Sciences, University of Maryland, 2013-2016.
- Research Associate and Dairy Nutrition Consultant, Department of Nutrition, La Molina National Agrarian University, Lima, Peru, 2006-2008.
- Livestock Consultant and Extension Agent, Government of Peru, 1999-2003.

IV. AWARDS & HONORS

11. **Journal of Dairy Science (Review article: A 100-year Review: Fat feeding of dairy cows, 2017).** Article “Effects of altering the ratio of dietary n-6 to n-3 fatty acids on performance and inflammatory responses to a lipopolysaccharide challenge in lactating Holstein cows” was cited as one significant event in “100 years of fat feeding research”.
10. **Professional Animal Science Editor’s Choice** (2017 Issue 33). Review article: Ruminal microbes, microbial products, and systemic inflammation.
9. **Journal of Dairy Science Editor’s Choice** (2016 Issue 9). Article: Supplementation of essential fatty acids to Holstein calves during late uterine life and first month of life alters hepatic fatty acid profile and gene expression.
8. **Journal of Dairy Science Editor’s Choice** (2014 Issue 8). Article: Effect of supplementing essential fatty acids to pregnant nonlactating Holstein cows and their preweaned calves on calf performance, immune response, and health.
7. **Excellence for Graduate Research in Animal Sciences** (2012), Department of Animal Sciences, University of Florida.
6. **Outstanding International Student** (2010), International Center, University of Florida.
5. **Alumni Graduate Award** (2008 – 2012), College of Agricultural and Life Sciences, University of Florida.
4. **Summa Cum Laude Master Thesis** (2008), Graduate School, La Molina National Agrarian University, Perú.
3. **Meritorious Scholarship** (2004 – 2005), Concytec, Perú.
2. **Magna Cum Laude Eng. Animal Sciences Thesis** (1999), College of Animal Sciences, La Molina National Agrarian University, Perú.
1. **Valedictorian and Best Student of the Animal Sciences B.S. Class**, College of Animal Sciences, La Molina National Agrarian University, Perú.

V. REVIEWER FOR GRANTING AGENCIES

- Reviewer for the Maine Agricultural and Forest Experiment Station. 2018.
- Reviewer for the Alberta Livestock and Meat Agency Ltd. 2016.
- Reviewer for the French National Research Agency. 2015.

VI. AD-HOC REVIEWER FOR SCIENTIFIC JOURNALS

- Journal of Immunology
- PLOS one
- Journal of Dairy Science
- Journal of Dairy Research
- Journal of Animal Science and Biotechnology
- Biological Trace Element Research
- Microbiome
- BMC Veterinary Research

VII. GRANTS/FUNDS

Year	Title	Source	Amount	Investigators
2017	Does choline supplementation stimulate the responsiveness of bovine immune cells in vitro? – Phase II: Determine the mechanism(s) of action of choline and choline products	Balchem Inc.	\$25,000	B. Bradford M. Garcia
2017- 2019	Is orosomucoid a mechanistic link between inflammation and impaired intake during the transition period?	USDA	\$483,000	B. Bradford M. Garcia B. Whitlock J. Daniel
2016	Does choline supplementation stimulate the responsiveness of bovine immune cells in vitro? – Phase I: Does choline have an impact at all?	Balchem Inc.	\$20,000	B. Bradford M. Garcia
2016- 2015	Implementation of new technologies to evaluate the immune response of Alpacas under different nutritional statuses	Peruvian Ministry of Productivity	\$20,000	M. Garcia C. Gomez
2015- 2016	Effect of the supplementation of chromium on bovine mammary epithelial cells function under inflammatory challenge in vitro	Kemin Industries Inc.	\$81,843	K. Moyes M. Garcia
2015	The effect of dietary chromium propionate on macrophage function for dairy cows in mid-lactation	Kemin Industries Inc.	\$47,178	K. Moyes M. Garcia
2007	Improvement of feather meal nutritional value by processing with keratinase enzymes and its evaluation in broiler and Tilapia diets	Peruvian Funds for Investigation, Science, and Technology	\$55,000	C. Gomez C. Vilchez V. Vergara M. Garcia

VIII. INVITED PRESENTATIONS

11. **M. Garcia.** 01-04-18. Nutritional strategies to optimize the health and productivity of dairy cows during the transition period. Arequipa Dairy Producers. Santa Rita de Sigüas, Arequipa, Perú.
10. **M. Garcia.** 01-04-18. The short and long-term impact of nutrition and management of preweaned dairy heifers. Arequipa Dairy Producers. Santa Rita de Sigüas, Arequipa, Perú.
9. **M. Garcia.** 8-23-2017. Effect of Nutrition on Health and Reproduction. RAPCO Dairy Nutrition Short Course. International Grains Program Conference Center, Manhattan, Kansas.

8. **M. Garcia.** 4-23-2017. Inflammation and immunity of dairy cows during the transition period. Nutriquest Technical Team. Des Moines, Iowa.
7. **M. Garcia.** 3-14-2017. Inflammation and immune activation during periods of stress in dairy cattle. ASAS Midwestern Section. Omaha, Nebraska.
6. **M. Garcia.** 12-17-2015. Update on nutritional immunity of dairy cows during the transition period. Department of Nutrition, La Molina National Agrarian University, Perú.
5. **M. Garcia.** 8-20-2013. Applying biochemical and molecular techniques to improve the productivity of dairy cattle. Department of Nutrition, La Molina National Agrarian University, Perú.
4. **M. Garcia.** 2007. Some Aspects of Mountain Sickness in Cattle. Fifth Congress of Animal Science Students. Cajamarca, Perú.
3. **M. Garcia.** 2007. Short course: Strategic ration formulation for dairy cattle. Extension program, La Molina National Agrarian University. Lima, Perú.
2. **M. Garcia.** 2007. Analysis of particle size in corn silage and its relationship with milk composition in dairy farms. In conference: Strategies to optimize energetic intake in lactating dairy cows. Extension program, La Molina National Agrarian University. Lima, Perú.
1. **M. Garcia.** 2006. Strategic feeding of dairy cattle based on their physiological stage. Short course: Intensive management of Dairy Cattle. Lima, Perú. Extension program, La Molina National Agrarian University. Lima, Perú.

IX. PEER REVIEW ARTICLES

31. Saddoris-Clemons, Kari, Saheed Osho, **Miriam Garcia**, and Brooke Humphrey. 2024. Effects of Dietary Inclusion of a Proprietary Combination of Quillaja saponaria and Yucca schidigera on Intestinal Permeability and Immune Response in Broiler Chickens during a Coccidia Challenge. *Animals* 14:1737.
30. Osho, S., K. Bolek, K. Saddoris-Clemons, B. Humphrey, and **M. Garcia**. 2023. Impact of a direct-fed microbial supplementation on intestinal permeability and immune response in broiler chickens during a coccidia challenge. *F. Microbiol*, 14.
29. Jiang, Y., J.D. Chapman, B. Humphrey, and M. Garcia., 2023. Effects of OmniGen® PRO on ruminal fermentation, stress, and inflammation of Holstein cattle induced with a subacute ruminal acidosis. *Frontiers in Animal Science*, 4, p.1202609.
28. Marins, T.N., Calix, J.O., Orellana Rivas, R.M., Bernard, J.K., **Garcia, M.**, Chapman, J.D., Kirk, D.J. and Tao, S. 2023. Effect of withdrawing an immunomodulatory feed additive from lactating cow diets on peripheral blood mononuclear cell proliferation. *J. Animal Sci.* p.skad187.
27. Huzzey, J. M., J. P. Jarrett, E. D. Sharman, **M. Garcia**, J. D. Chapman, and D. J. McLean. 2023. Effects of OmniGen AF feed supplementation on glucocorticoids, blood leukocyte messenger RNA abundance, and energy metabolism in overstocked Holstein dairy cows. *Animal* 17:100805.
26. **Garcia, M.**, S.R. Montgomery, S.J. Moisés, G.A. Hanzlicek, L.E. Hulbert, and B.J. Bradford. 2021. Effects of milk feeding strategies on short-and long-term productivity of Holstein heifers. *J. Dairy Sci.* 104:4303-4316.
25. Brown, W.E., **M. Garcia**, L.K. Mamedova, K.R. Christman, M.G. Zenobi, C.R. Staples, B.M. Leno, T.R. Overton, B.K. Whitlock, J.A. Daniel, and B.J. Bradford. 2021. Acute-phase protein α -1-acid glycoprotein is negatively associated with feed intake in postpartum dairy cows. *J. Dairy Sci.* 104:806-817.
24. Gregg, B. A., P. A. Parker, K. M. Waller, L. G. Schneider, **M. Garcia**, B. Bradford, J. A. Daniel, and B. K. Whitlock. 2019. Effects of central and peripheral administration of an acute-phase protein, α -1-acid-glycoprotein, on feed intake and rectal temperature in sheep. *J. Animal Sci.* 97:4783-4791.
23. Jolazadeh A., T. Mohammadabadi, M. Dehghan-banadaky, M. Chaji, and **M. Garcia**. 2019. Effect of supplementation fat during the last weeks of uterine life and preweaning time on performance, ruminal fermentation, blood metabolites, passive immunity and health of the newborn calf. **British J. Nutr.** 122:1346-1358.
22. Jolazadeh A., T. Mohammadabadi, M. Dehghan-banadaky, M. Chaji, and **M. Garcia**. 2019. Effect of supplementing calcium salts of n-3 and n-6 fatty acid to pregnant nonlactating cows on colostrum composition, milk yield, and reproductive performance of dairy cows. **Anim. Feed Sci. Tech.** 247:127-140.

21. **Garcia M.**, L. K. Mamedova, B. Barton, and B. J. Bradford. 2018. Choline regulates the inflammatory response of bovine immune cells and alters the mRNA abundance of enzymes and receptors involved in its metabolism. **Frontiers Immunol.** **9:2448.**
20. Scholte, C., D. Nelson, **M. Garcia**, S. Linden, T. Elsasser, S. Kahl, Y. Qu, and K. M. Moyes. 2018. Recombinant bacteriophage endolysin, PlyC, is non-toxic and does not alter blood neutrophil oxidative response in lactating dairy cows. **J. Dairy Sci.** **101: 6419-6423.**
19. Qu, Y., T. Elsasser, S. Kahl, **M. Garcia**, C. Scholte, E. Connor, G. Schroeder, and K. M. Moyes. 2018 The effects of feeding mixed tocopherol oil on whole-blood respiratory burst and neutrophil immunometabolic-related gene expression in lactating dairy cows. **J. Dairy Sci.** **101:4332-4342.**
18. Martel, C. A., L. K. Mamedova, J. E. Minton, **M. Garcia**, C. Legallet, and B. J. Bradford. 2018. Effects of TNF receptor blockade on in vitro cell survival and response to negative energy balance in dairy cattle. **J. Anim. Sci. Biotech.** **9:6.**
17. **Garcia, M.**, B. J. Bradford, and T.G. Nagaraja. 2017. Review: Ruminant microbes, microbial products, and systemic inflammation. **P. Anim. Sci.** **33:635-650.**
16. **Garcia, M.**, Y. Qu, C. M. Scholte, D. O'Connor, W. Rounds, and K. M. Moyes. 2017. Regulatory effect of dietary intake of chromium propionate on the response of monocyte-derived macrophages from Holstein cows in mid-lactation. **J. Dairy Sci.** **100:6389-6399.**
15. Abdelatty, A. M., M. E. Iwaniuk, **M. Garcia**, K. M. Moyes, B. B. Teter, P. Delmonte, A. K. G. Kadegowda, M. A. Tony, F. F. Mohamad, and R. A. Erdman. 2017. Impact of short-term feed restriction on milk components and mammary lipogenic gene expression in mid-lactation Holstein dairy cows by extraction of total RNA from milk fat. **J. Dairy Sci.** **100:4000-4013.**
14. **Garcia, M.**, M. L. Power., and K. M. Moyes. 2017. Immunoglobulin A and nutrients in milk from great apes throughout lactation. **Am. J. Primatology.** **79:e22614.**
13. **Garcia, M.**, L. F. Greco, J. E. P. Santos, W. W. Thatcher, and C. R. Staples. 2016. Programming effect of dietary fatty acids on performance of Holstein heifers from birth through first lactation. **Anim. Feed Sci. Tech.** **222:64-74.**
12. **Garcia, M.**, L. F. Greco, A. L. Lock, J. E. P. Santos, W. W. Thatcher, and C. R. Staples. 2016. Supplementation of essential fatty acids to Holstein calves during late uterine life and first month of life alters hepatic fatty acid profile and gene expression. **J. Dairy Sci.** **99:7085-7101.**
11. **Garcia, M.**, T. H. Elsasser, L. Juengst, Y. Qu, B. J. Bequette, and K.M. Moyes. 2016. Short Communication: Amino acid supplementation and stage of lactation alter utilization of nutrients by blood neutrophils from lactating dairy cows in vitro. **J. Dairy Sci.** **99:3777-3783.**
10. **Garcia, M.**, B. J. Bequette, and K M. Moyes. 2015. Hepatic metabolic response of Holstein cows in early and mid-lactation is altered by nutrient supply and lipopolysaccharide in vitro. **J. Dairy Sci.** **98:7102-7114.**
9. **Garcia, M.**, Y. Qu, X. Zhu, T. Elsasser, and K.M. Moyes. 2015. Glucose supplementation has minimal effects on blood neutrophil function and gene expression in vitro. **J. Dairy Sci.** **98:6139-6150.**
8. **Garcia, M.**, T. H. Elsasser, D. Biswas, and K.M. Moyes. 2015. The effect of citrus-derived oil on bovine blood neutrophil function and gene expression in vitro. **J. Dairy Sci.** **98:918-926.**
7. Greco, L.F., J.T. Neto, A. Pedrico, R.A. Ferrazza, F.S. Lima, R.S. Bisinotto, N. Martinez, **M. Garcia**, E.S. Ribeiro, G.C. Gomes, J.H. Shin, M.A. Ballou, W.W. Thatcher, C.R. Staples, and J.E.P. Santos. 2015. Effects of altering the ratio of dietary n-6 to n-3 fatty acids on performance and inflammatory responses to lipopolysaccharide challenge in lactating Holstein cows. **J. Dairy Sci.** **98:602-617.**
6. Alava, E. I., Y.C. Newman, L.E. Sollenberger, C.R. Staples. L.E. Ortega, M. Beseggio, E.N. Alava, and **M. Garcia**. 2015. Rotational stocking rate of Tifton 85 Bermudagrass and supplementation level effects on performance of replacement dairy heifers. **Agron. J.** **107:388-394.**
5. **Garcia, M.**, J.H. Shin, A. Schlaefli, L.F. Greco, F. P. Maunsell, J.E.P. Santos, and C.R. Staples. 2015. Increasing intake of essential fatty acids from milk replacer benefits performance, immune responses, and health of preweaned Holstein calves. **J. Dairy Sci.** **98:458-477.**
4. **Garcia, M.**, L.F. Greco, M.G. Favoreto, R.S. Marsola, D. Wang, J.H. Shin, E. Block, W. W. Thatcher, J.E.P. Santos, and C.R. Staples. 2014. Effect of supplementing essential fatty acids to pregnant nonlactating cows on calf performance, immune response, and health. **J. Dairy Sci.** **97:5045-5064.**
3. **Garcia, M.**, L.F. Greco, M.G. Favoreto, R.S. Marsola, L.T. Martins, R.S., Bisinotto, J.H. Shin, A.L. Lock, E. Block, W. W. Thatcher, J.E.P. Santos, and C.R. Staples. 2014. Effect of supplementing fat to pregnant

nonlactating cows on colostral fatty acid profile and passive immunity of the newborn calf. **J. Dairy Sci.** **97:392-405.**

2. Bartl. K., C. Gómez, **M. Garcia**, T. Aufdermauer, M. Kreuzer, H.D. Hess and H.R. Wettstein. 2009. Effect of diet type on performance and metabolic traits of Peruvian local and introduced cow types kept at 200 and 3600 m of altitude. **Livestock Science** **122:30–38.**
1. Bartl. K., C. Gómez, T. Aufdermauer, **M. Garcia**, M. Kreuzer, H.D. Hess and H.R. Wettstein. 2008. Milk fatty acid profile of Peruvian Criollo and Brown Swiss cows in response to different diet qualities fed at low and high altitude. **Arch. Anim. Nutr.** **62:468–484.**

X. PUBLISHED ABSTRACTS

78. Markey, J.A., Rudd, J., Snider, T., Montelongo, M., Humphrey, B., Chapman, J.D., Sharman, E.D., **Garcia, M.**, Reuter, R.R., Beck, P.A. and Foote, A.P., 2024. Effects of feeding an immunomodulatory feed additive (NutraGen) on metabolite concentrations and cortisol production in calves following exposure to a combination bovine respiratory disease challenge. *J. Animal Sci.* 102 E-Suppl.3:64-65.
77. Markey, J.A., Rudd, J., Snider, T., Montelongo, M., Humphrey, B., Chapman, J.D., Sharman, E.D., **Garcia, M.**, Reuter, R.R., Beck, P.A. and Foote, A.P., 2024. Effects of feeding an immunomodulatory feed additive (NutraGen) on serum cytokine and antibody concentrations in calves following exposure to a combination bovine respiratory disease challenge. *J. Animal Sci.* 102:E-Suppl.3:62-63.
76. Oyeade, A.O. E. Hass, **M. Garcia**, J.D. Chapman, and B.D. Humphrey. 2024. Effects of time of rumen collection and dietary NDF on rumen fermentation in vitro. *J. Dairy Sci.* Vol.107. E-Suppl.1:383.
75. Oyeade, A.O., **M. Garcia**, S. Bascom, K. Sadoris-Clemons, and B.D. Humphrey. 2024. A sodium and calcium aluminosilicate-containing bentonite adsorbent (AB20) decreased mycotoxin absorption in dairy cattle. *J. Dairy Sci.* Vol.107. E-Suppl.1:380.
74. Oyeade, A.O. E. Hass, J.D. Chapman, B.D. Humphrey, and **M. Garcia**. 2024. Effects of MicroLife® Rover direct-fed microbial on nutrient utilization in dairy heifers. *J. Dairy Sci.* Vol.107. E-Suppl.1:280.
73. Oyeade, A.O. E.D. Sharman, **M. Garcia**, J.D. Chapman, and B.D. Humphrey. 2023. Effect of feeding 25(OH)D3 with a negative DCAD diet to non-pregnant Holstein dry cows for 84 days on calcium metabolism, vitamin D metabolites, and health. *J. Dairy Sci.* Vol.106. E-Suppl.1:376.
72. Markey, J.A., Gong, W., Schneid, K.N., Liuzzo, A., Farran, G., Rudd, J., Snider, T., Montelongo, M., Humphrey, B., Chapman, J.D. and Sharman, E.D., **Garcia, M.**, Reuter, R.R., Beck, P.A. Foote, A.P., Bruno, K., and Wilson, B.K. 2022. Effects of Feeding Nutragen on Clinical Signs and Leukocytes in Calves Following Natural Exposure to Bovine Viral Diarrhea Virus and Subsequent Mannheimia Haemolytica Infection. *J. Animal Sci.*100.
71. Y. Jiang, **M. Garcia**, and B.D. Humphrey. 2022. Impact of Virginiamycin on Rumen Fermentation and Methane Production in a Lactation Diet. *J. Animal Sci.* 100:399.
70. **Garcia, M.**, J. Chapman, and B. Humphrey. 2022. Whole-blood transcriptomic signature e during early lactation of Holstein cows fed an immunomodulatory feed additive. *J. Dairy Sci.* 105. Suppl. 1:350.
69. **Garcia, M.** Y. Jiang, J.D. Chapman, and B.D. Humphrey. 2022. Effect of feed restriction and an immunomodulatory feed additive in performance, immune markers, and gut barrier integrity in wethers. *J. Dairy Sci.* Vol.105. E-Suppl.1:305.
68. **Garcia, M.**, K. P. Zanzalari, J. D. Chapman, and B. D. Humphrey. 2022. Effect of feeding an acidogenic diet with calcidiol during the dry period on calcium mobilization and serum vitamin D metabolites. *J. Dairy Sci.* Vol.105. E-Suppl.1:249.
67. Boyer, Y. Jiang, A. Blakeney, D. Nuzback, and **M. Garcia**. 2021. Effects of different sources of Zn on in vitro ruminal fermentation and digestibility of a lactation diet. *J. Animal Sci.* 99. Suppl.3:466.
66. Boyer, A.R. H. Roberts, D. Nuzback, and **M. Garcia**. 2021. Broilers as an animal model to assess different copper, manganese and zinc mineral sources on absorption. *J. Animal Sci.* 99. Suppl.3:294.
65. Jiang, Y., J.D. Chapman, E. Sharman, B. Humphrey, and **M. Garcia**. 2021. Effects of OmniGen Pro on biomarkers on rumen fermentation parameters of Holstein cattle fed and early-lactation diet. *J. Dairy Sci.* Vol.104. E-Suppl.1:325.
64. Jiang, Y., J.D. Chapman, E. Sharman, B. Humphrey, and **M. Garcia**. 2021. Effects of OmniGen Pro on biomarkers of stress and inflammation of Holstein cattle. *J. Dairy Sci.* Vol.104. E-Suppl.1:320.

63. **Garcia, M.**, J. Chapman, and B. Humphrey. 2021. Whole-blood transcriptomic signature after 17 and 35 days of feeding OmniGen AF to prepartum Holstein cows. *J. Dairy Sci.* 104. Suppl. 1:209.
62. Marins T. N., J. Gao, Q. Yang, R.M. Binda, M.B. Pessoa, R.M. Orellana, J. K. Bernard, **M. Garcia**, D. J. McLean, J. D. Chapman, D. J. Kirk, and S. Tao. 2020. Effects of heat stress and OmniGen-AF on physiological and inflammatory responses of mid-lactation dairy cows to intravenous lipopolysaccharide infusion. *J. Dairy Sci.* 103. Suppl. 1:283.
61. Jiang, Y., **M. Garcia**, H.A. Roberts, J.D. Chapman, and D.J. McLean. 2020. Effects of OmniGen Pro on performance and rumen fermentation of Holstein heifers. *J. Dairy Sci.* Vol.103. E-Suppl.1:234-258.
60. Jiang, Y., **M. Garcia**, H.A. Roberts, G.A. Blakeney, J.D. Chapman, and D.J. McLean. 2020. Effects of OmniGen Pro on performance and rumen fermentation of Jersey heifers. *J. Dairy Sci.* Vol.103. E-Suppl.1:234-258.
59. Takiya C. S., J.L. McGill, L. K. Mamedova, A.L.A. Scanavez, R. Rusk, L.G.D. Mendoca, **M. Garcia**, D. Nuzback, and B. J. Bradford. 2020. Effects of an immunomodulatory feed additive on granulocyte activity in peripheral blood and uterus of early lactating cows. *J. Dairy Sci.* Vol.103. E-Suppl.1:234-235.
58. Takiya C. S., L. K. Mamedova, L. Sordillo, J. Gandy, **M. Garcia**, E.E. Gultepe, D. Nuzback, and B. J. Bradford. 2020. Effects of an immunomodulatory feed additive on biomarkers of inflammation and oxylipid profile in blood of transition cows. *J. Dairy Sci.* Vol.103. E-Suppl.1:234.
57. Brown, W.E., **M. Garcia**, L.K. Mamedova, K.R. Christman, M.G. Zenobi, C.R. Staples, B.M. Leno, T.R. Overton, B.K. Whitlock, J.A. Daniel, and B.J. Bradford. 2020. Plasma alpha-1-acid glycoprotein concentration is associated with key blood biomarkers and disease incidence during the transition period. *J. Dairy Sci.* Vol.103. E-Suppl.1:177.
56. **Garcia, M.** H.A. Roberts, S.A. Armstrong, J.D. Chapman, and D.J. McLean. 2020. OmniGen-AF and OmniGen Pro improve immunocompetence of ewes subjected to dexamethasone-induced immunosuppression. *J. Dairy Sci.* Vol.103. E-Suppl.1:176.
55. Takiya C. S., L. K. Mamedova, **M. Garcia**, D. Nuzback, and B. J. Bradford. 2020. Effects of an immunomodulatory feed additive on performance of transition cows. *J. Dairy Sci.* Vol.103. E-Suppl.1:135.
54. Marins T. N., J. Gao, Q. Yang, R.M. Binda, M.B. Pessoa, R.M. Orellana, J. K. Bernard, **M. Garcia**, D. J. McLean, J. D. Chapman, D. J. Kirk, and S. Tao. 2020. Impact of heat stress and OmniGen-AF on performance and immunity of mid-lactation dairy cows. *J. Dairy Sci.* 103. Suppl. 1:105.
53. Nuzback D., D. Mclean, P. Rezende-Napier, and **M. Garcia**. 2019. The efficacy of VECTORTM in mitigating the adverse effects of aflatoxins, fumonisins, and T-2 toxins in broilers. *Poultry Sci.* Vol. 98. E-Suppl. 1.
52. **Garcia M.**, J. Harness, M. Collins, D. Mclean. 2019. The efficacy of AB20® in laying quail hens exposed to diets contaminated with aflatoxin and ochratoxin A. *Poultry Sci.* Vol. 98. E-Suppl. 1.
51. **Garcia M.**, D. Nuzback, J. Harness, M. Collins, D. Mclean. 2019. The efficacy of AB20® in broiler chicks exposed to diets contaminated with aflatoxin and ochratoxin A. *Poultry Sci.* Vol. 98. E-Suppl. 1.
50. Brown W. E., **M. Garcia**, L. K. Mamedova, M. G. Zenobi, C. R. Staples, B. M. Leno, T. R. Overton, B. K. Whitlock, J. A. Daniel, and B. J. Bradford. 2019. Plasma alpha-1-acid glycoprotein is negatively associated with dry matter intake in postpartum dairy cows. *J. Dairy Sci.* Vol.102. E-Suppl.1:395.
49. Ylioja C. M., **M. Garcia**, L. K. Mamedova, and B. J. Bradford. 2019. Extracellular vesicles modulate pro-inflammatory signaling in bovine macrophages. *J. Dairy Sci.* Vol.102. E-Suppl.1:289.
48. Marins T. N., J. O. S. Calix, R. M. Orellana, J. K. Bernard, **M. Garcia**, D. J. McLean, J. D. Chapman, D. J. Kirk. 2019. Effect of withdrawing OmniGen-AF from lactating cow diet on performance and peripheral blood mononuclear cells proliferation. *J. Dairy Sci.* Vol.102. E-Suppl.1:235.
47. Armstrong S., M. Coehlo, S. Bascom, E. Sharman, **M. Garcia**, D. McLean, and J. Chapman. 2019. OmniGen-AF alters metabolic profile and blood cell populations after 28 days of supplementation in LPS-challenged heifers. *J. Dairy Sci.* Vol.102. E-Suppl.1:180-181.
46. Takiya C. S., J. L. McGill, L. Mendonça, A. L. A. Scanavez, P. Ochonski, **M. Garcia**, L. K. Mamedova, and B. J. Bradford. 2019. Biomarkers associated with granulocyte oxidative burst in uterus of cows in early lactation. *J. Dairy Sci.* Vol.102. E-Suppl.1:180.
45. Cromer C. E., C. M. Ylioja, **M. Garcia**, L. K. Mamedova, and B. J. Bradford. 2019. Anti-inflammatory treatment modifies epigenetic changes to muscle tissue caused by altered nutrient demand in early lactation dairy cows. *J. Animal Sci.* Vol. 97. E-suppl. 2:244-245,

44. Daniel J, B. Gregg, P. Parker, K. Waller, **M. Garcia**, and B. Bradford. 2018. Flunixin meglumine does not inhibit hyperthermia induced by central administration of α -1-acid-glycoprotein, an acute phase protein, in sheep. *J. Animal Sci.* Vol. 96. E-suppl.3:30.
43. **Garcia M**, C. Ylloja, L. K. Mamedova, B. Barton, and B. J. Bradford. 2018. Impacts of short-term sodium salicylate administration and infrequent milking on early lactation cow energetics and milk yield through mid-lactation. *J. Dairy Sci.* Vol.101. E-Suppl.2:412.
42. **Garcia M.**, K. A. Pearl, E. C. Titgemeyer, and B. J. Bradford. 2018. Leucine and lysine alter inflammatory response of immune cells from growing cattle. *J. Dairy Sci.* Vol.101. E-Suppl.2:409.
41. **Garcia M**, M. Riley, L. K. Mamedova, B. Barton, and B. J. Bradford. 2018. Impact of inhibitors of choline product synthesis and signaling on the inflammatory response of innate and adaptive immune cells. *J. Dairy Sci.* Vol.101. E-Suppl.2:367.
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XI. TEACHING EXPERIENCE

- **FAS358** – Instructor (Spring 2025). Ruminant Animal Management. Department of Food and Animal Sciences, Alabama A&M University.
- **FAS351** – Instructor (Spring 2025), Nutrition and Metabolism, Department of Food and Animal Sciences, Alabama A&M University.
- **FAS245** – Instructor (Fall 2024), Practicum I, Department of Food and Animal Sciences, Alabama A&M University.
- **FAS112** – Instructor (Fall 2024, Spring 2025). Introduction to Animal Bio-Health Sciences, Department of Food and Animal Sciences, Alabama A&M University.
- **ASI 318** - Guest Lecturer (Fall 2017), Fundamentals of Nutrition, Department of Animal Science and Industry, Kansas State University.
- **ASI 320** - Guest Lecturer (Fall 2017), Principles of Feeding, Department of Animal Science and Industry, Kansas State University.
- **ANSC 443** - Guest Lecturer (Spring 2016), Physiology Lactation, Department of Animal and Avian Sciences, University of Maryland, College Park, USA.
- **ANSC 101** - Guest Lecturer (Fall 2015, Spring 2016), Principles of Animal Science, Department of Animal and Avian Sciences, University of Maryland, College Park, USA.
- **ANS 3404C** – Teaching Assistant (Spring, 2012), Food Animal Nutrition and Feeding, Department of Animal Sciences, University of Florida, Gainesville, Florida, USA.
- **ANS 6458** – Guest Lecturer (Summer, 2011), Advanced Methods in Nutrition Technology, Forage, and Quality Evaluation, Department of Animal Sciences, University of Florida, Gainesville, Florida, USA.
- **ZT 4003, ZT 3005, and ZT 7046** - Teaching Assistant and Guest Lecturer (2006 - 2008), Food and Feed Formulation, Physiology of Farm Animals, and Ruminant Nutrition, Department of Nutrition, Universidad Nacional Agraria la Molina, Lima, Peru.
- **V0019 and V0022** - Teaching Assistant (2007 - 2008), Grass and Forages and Animal Nutrition and Feeding, School of Veterinary Medicine, Universidad Peruana Cayetano Heredia, Lima, Peru.