Curriculum Vitae | Vinicius S. Machado, DVM, PhD

CURRENT POSITION, ADDRESS AND PERSONAL DATA

Position	Associate Professor of Dairy Health and Management
Department	Veterinary Science, Texas Tech University
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EDUCATION

1. **Doctor of Veterinary Medicine (DVM) [2004-2008]** at Federal University of Goias, Brazil.
2. **Fellowship Post-DVM [2009-2010]** at the Department of Population Medicine and Diagnostic Sciences, Cornell University.
3. **Doctor of Philosophy (PhD) [2011-2015]** in Animal Sciences with concentration in Physiology of Reproduction, and minors in Development and Reproductive Biology, and Population Medicine and Epidemiology.
4. **Residency in Ambulatory and Production Medicine [2015-2017]** in the College of Veterinary Medicine, Department of Population Medicine and Diagnostic Sciences at Cornell University.

PUBLICATIONS – PEER-REVIEWED ARTICLES

1. Martelo Pereira A, Pereira FNS, Menta PR, Oliveira EB, Prim JG, Lima FS, Machado VS, Galvao KN, Figueiredo CC. Differences in lactational performance associated with antimicrobial treatment and clinical cure failure of metritis in dairy cows. J Dairy Sci (Under review).
2. Dean CJ, Pena-Mosca F, Wehri TJ, Ray T, Sharpe K, Junior AA, Doster E, Fernandes L, Calles VF, Bauman C, Heins B, Pinedo P, **Machado VS**, Caixeta LS, Noyes NR. Exploring associations between the prepartum teat skin microbiome and postpartum intramammary infections in primiparous cows (Part 2). Prev Vet Med (Under review).
3. De Oliveira E, Monteiro H, Ferreira F, Williams D, Galvao KN, Saito N, Weber D, Pereira RVV, Silva-del-Rio N, Menta PR, **Machado VS**, Lima FS. Deep artificial neural networks improve the prediction of metritis spontaneous cure in dairy cows. J Dairy Sci (Under review).
4. Thompson AB, Perkins TL, Lawrence TE, Amachawadi RG, Nagaraja TG, Broadway PR, Burdick Sanchez NC, **Machado V**, Galyean ML, Hales KE. Efficacy of ultrasonography to detect liver abscesses in cattle. Applied Animal Science (Accepted).
5. Dean CJ, Pena-Mosca F, Wehri TJ, Ray T, Sharpe K, Junior AA, Doster E, Fernandes L, Calles VF, Bauman C, Heins B, Pinedo P, **Machado VS**, Caixeta LS, Noyes NR. The teat skin microbiota of organic primiparous dairy cows is dynamic during the transition period (Part 1). Prev Vet Med (In Press).
6. Paiva D, Menta P, Bielamowicz L P, **Machado VS**. The effect of selective dry cow therapies based on two different algorithms on antimicrobial use, udder health, milk production, and culling in the absence of internal

teat sealant use at dry-off. J Dairy Sci 2024 Oct; 107 (10): 8259-8270 (https://doi.org/10.3168/jds.2023-23981).

7. Martin AE, **Machado VS**, Rathmann RJ, Crossland WL. Effect of exogenous melatonin on the postweaning immune response and growth performance of crossbred beef calves. Applied Animal Science 2024 October; 40 (5): 598-607. (https://doi.org/10.15232/aas.2024-02555)
8. Menta PR, Fernandes L, Prim J, De Oliveira E, Lima F, Galvao KN, Noyes N, Ballou MA, **Machado VS**. A randomized controlled trial evaluating the efficacy of systemic ceftiofur administration for metritis therapy in dairy cows and the effect of metritis cure on economically important outcomes. J Dairy Sci 2024 Sep; 107 (9): 7092-7105 (https://doi.org/10.3168/jds.2023-24406).
9. Bielamowicz LP, Celestino ML, Menta PR, Fernandes L, Ballow MA, Neves RC, **Machado VS**. Association of bovine respiratory disease during the pre-weaning period with blood cell counts and circulating concentration of metabolites, minerals, and acute phase proteins in dairy calves transported to a calf raising facility. Animals. 2024, 14(13), 1909. (https://doi.org/10.3390/ani14131909)
10. Menta PR, Prim J, De Oliveira E, Lima F, Galvao KN, Noyes N, Ballou MA, **Machado VS**. Predictive models for metritis cure using farm-collected data, metabolic and inflammation biomarkers, and hemogram variables measured at diagnosis. J Dairy Sci. 2024 Jul; 107 (7): 5016-5028. (https://doi.org/10.3168/jds.2023-24452).
11. Prim J, Ahmadreza M, Gonzales T, Casaro S, de Oliveira E, Veronese A, Chebel R, Jeong KC, Lima FS, Menta PR, **Machado VS**, Galvao K. Application of behavior data to predict metritis self-cure and treatment failure in dairy cows. J Dairy Sci. 2024 Jul; 107 (7): 4881-4894. (https://doi.org/10.3168/jds.2023-23611).
12. McDaniel Z, Hales K, Nagaraja TG, Lawrence T, Tennant T, Amachawadi R, Carroll J, Sanchez N, Galyean M, Davis E, Kohl K, Line D, Dornbach C, Abasi M, Deters A, Shi X, Ballou M, **Machado V**, Smock T, Broadway PR. Validation of an experimental model to induce liver abscesses in Holstein steers using an acidotic diet challenge and intraruminal bacterial inoculation. Applied Animal Science. 2024 June; 40 (3): 398-413. (https://doi.org/10.15232/aas.2023-02485)
13. Cox HE, Menta PR, Nagaraja TG, Crossland WL, Hales KE, Henry DD, Strieder-Barboza C, Broadway PR, Carroll JA, Ballou MA, **Machado VS**. Short Communication: Injecting *Fusobacterium necrophorum* into the peripheral circulation or hepatic portal vein of pre-ruminant Holstein calves failed to induce liver abscesses. Applied Animal Science. 2024 June; 40 (3): 421-429. (https://doi.org/10.15232/aas.2023-02487)
14. Dean CJ, Peña-Mosca F, Ray T, Wehri T, Sharpe K, Antunes A, Doster E, Fernandes L, Valles V, Bauman C, Godden SM, Heins B, Pinedo P, **Machado VS**, Caixeta LS, Noyes N. Exploring associations between the teat apex metagenome and Staphylococcus aureus intramammary infection risk in primiparous cows under organic directives. Appl. and Environ. Microbiol. 90 (4): e02234-23. (https://doi.org/10.1128/aem.02234-23)
15. Marques TC, Monteiro HF, Melo DB, Coelho Jr WM, Salman S, Marques LR, Leao KM, **Machado VS**, Menta PR, Dubey D, Sun F, Lima FS. Effect of highly bioavailable rumen-protected choline on dairy cows' metabolism, immunity, and lactation performance. J Dairy Sci. 2024 May; 107 (5): 2864 – 2882. (https://doi.org/10.3168/jds.2023-23850)
16. McDaniel ZS, Hales KE, Salih H, Deters A, Shi X, Nagaraja TG, Lawrence TE, Amachawadi RG, Carroll JA, Burdick Sanchez NC, Galyean ML, Smock TM, Ballou MA, **Machado VS**, Davis E, Broadway PR. Development of an experimental model for liver abscess induction in Holstein steers using an acidotic diet challenge and bacterial inoculation. J of Anim Sci. 2024 Mar 6;102:skae046. (https://doi.org/10.1093/jas/skae046).

17. Martin AE, **Machado VS**, Rathmann RJ, Crossland WL. Effect of exogenous melatonin on the cellular response of Holstein heifer calves during vaccination. Transl. Anim. Sci. 2024 Mar: 2 (8): txab234. (https://doi.org/10.1093/tas/txae028)
18. Peña-Mosca F, Dean C, Fernandes L, Doster E, Sharpe K, Ray T, Feijoo V, Antunes A, Baumann C, Wehri T, Heins B, Pinedo P, **Machado V**, Noyes N, Caixeta L. Associations between early lactation intramammary infections and udder health and performance during the first 180 days in milk in first-lactation organic dairy cows. J Dairy Sci. 2024 Apr; 107 (4): 2426 – 2443. (https://doi.org/10.3168/jds.2023-23924)
19. Grantz J, Mukhopadhyay A, Jannasch A, Ferreira C, Menta PR, **Machado VS**, Neves RC. Plasma oxylipin profile of postpartum dairy cows categorized into different systemic inflammatory grades in the first week after parturition. JDS Communications. 2024 Mar; 5 (2): 155 – 160. (https://doi.org/10.3168/jdsc.2023-0410).
20. Peña-Mosca F, Dean C, **Machado VS**, Fernandes L, Pinedo P, Doster E, Heins B, Sharpe K, Ray T, Feijoo V, Antunes A, Baumann C, Wehri T, Noyes N, Caixeta L. Investigation of intramammary infections in primiparous cows during early lactation on organic dairy farms. J Dairy Sci. 2023 Dec; 106 (12): 9377 – 9392. (https://doi.org/10.3168/jds.2022-23036)
21. De Oliveira EB, Monteiro HF, Pereira JMV, Williams DR, Pereira RV, Silva Del Rio N, Menta PR, **Machado VS**, Lima FS. Changes in Uterine Metabolome Associated with Metritis Development and Cure in Lactating Holstein Cows. Metabolites. 2023; 13 (11), 1156. (https://doi.org/10.3390/metabo13111156).
22. McDaniel ZS, Hales KE, Nagaraja TG, Lawrence TE, Amachawadi RG, Carroll JA, Burdick Sanchez NC, Galyean ML, Smock TM, Ballou MA, **Machado VS**, Broadway PR. Short Communication: Evaluation of an endotoxin challenge and intraruminal bacterial inoculation model to induce liver abscesses in Holstein steers. J of Anim Sci. 2023 Jan 3;101:skad242. (https://doi.org/10.1093/jas/skad242).
23. Menta PR, Neves RC, **Machado VS**. Association of metritis diagnosis with circulating concentration of metabolites, minerals, and haptoglobin in Jersey cows. J Dairy Sci. 2023 Jul; 106 (7): 5029 – 5042. (https://doi.org/10.3168/jds.2022-22979)
24. Pina R, Lange K, **Machado V**, Bratcher C. Big Data Technology Adoption in Beef Production. Smart Agricultural Technology. 2023 Oct; 5: 100235. (https://doi.org/10.1016/j.atech.2023.100235)
25. Hubner A, Canisso IF, Peixoto PM, Coelho Junior WM, Ribeiro L, Aldridge BM, Menta P, **Machado VS**, Lima FS. Characterization of metabolic profile, health, milk production, and reproductive outcomes of dairy cows diagnosed with concurrent hyperketonemia and hypoglycemia. J Dairy Sci. 2022 Nov; 105 (11): 9054 – 9069. (https://doi.org/10.3168/jds.2021-21327)
26. Broyles A, Embertson R, Woodie B, **Machado V**. The impact of grade of arytenoid movement immediately prior to laryngoplasty and ipsilateral ventriculocordectomy on postoperative performance: 623 Thoroughbred racehorses (1998-2013). Equine Vet. J. 2022 Sep; 54 (5): 856-864. (https://doi.org/10.1111/evj.13523)
27. Basbas C, Garzon A, Silva-del-Rio N, Byrne BA, Karle B, Aly SS, Champagne JD, Williams DR, Lima FS, **Machado VS**, Pereira RV. Evaluation of antimicrobial resistance and risk factors for recovery of intrauterine *Escherichia coli* from cows with metritis on California commercial dairy farms. Sci. Rep. 2022 Aug; 12: 13937 (https://doi.org/10.1038/s41598-022-18347-w)
28. Dean CJ, Pena Mosca F, Heins BJ, **Machado VS**, Pinedo PJ, Caixeta LS, Noyes NR. Evaluation of contamination in composite milk samples pooled from independently collected quarters within a laboratory setting. Front. Vet. Sci. 2022 June; 9: 818778. (https://doi.org/10.3389/fvets.2022.818778)
29. Menta PR, **Machado VS**, Pineiro JM, Thatcher WW, Santos JEP, Vieira-Neto A. Heat stress during the transition period is associated with impaired production, reproduction, and survival in dairy cows. J Dairy Sci. 2022 May; 105 (5): 4474 – 4489 (https://doi.org/10.3168/jds.2021-21185)

30. Fernandes L, Celestino ML, Menta PR, Silva TH, Paiva D, Ribeiro TL, Caixeta LS, Noyes NR, **Machado VS**. Risk factors associated with intramammary infections during the 1st week postpartum in primiparous dairy cows in certified organic herds. Vet J. 2022 May; 282:105822. (https://doi.org/10.1016/j.tvjl.2022.105822)
31. Kasiora K, Anagnostopoulos A, Bedford C, Menka T, Barden M, Griffiths BE, Timms K, **Machado VS**, Coates A, Oikonomou G. Evaluation of the use of ketoprofen for the treatment of digital dermatitis in dairy cattle: a randomized, positive controlled, clinical trial. Vet Rec. 2022 Mar 19/26;190(6):977. (https://doi.org/10.1002/vetr.977)
32. Kasl B, **Machado VS**, Madison H, Myer P, Ballou MA. Feeding oral electrolytes with sodium acetate reduces abomasal pH and ability of *Escherichia coli* growth in the abomasum of calves fed oral electrolytes alone or 30 minutes following a milk feeding. J Dairy Sci. 2022 Feb; 105 (2): 1542 – 1554. (https://doi.org/10.3168/jds.2021-20939)
33. Silva TH, Guimaraes I, Menta PR, Fernandes L, Paiva D, Ribeiro TL, Celestino ML, Saran Netto A, Ballou MA, **Machado VS.** Effect of injectable trace mineral supplementation on peripheral polymorphonuclear leukocyte function, oxidative stress, health, and performance in dairy cows in semi-arid conditions. J Dairy Sci. 2022 Feb; 105 (2): 1649 – 1660. (https://doi.org/10.3168/jds.2021-20624)
34. **Machado VS**, Ballou MA. Overview of common practices in calf raising facilities. Transl. Anim. Sci. 2022 Jan: 6 (1): txab234. (https://doi.org/10.1093/tas/txab234)
35. Menta PR, Fernandes L, Poit D, Celestino ML, **Machado VS**, Neves RC. A randomized clinical trial evaluating the effect of oral calcium bolus supplementation in postpartum Jersey cows on mastitis incidence, culling, milk production, and reproductive performance. Animals. 2021, 11, 3361. (https://doi.org/10.3390/ani11123361)
36. Oliveira EB, Ferreira FC, Galvao KN, Youn J, Tagkopoulos I, Silva-del-Rio N, Pereira RVV, **Machado VS**, Lima FS. Integration of statistical inferences and machine learning algorithms for prediction of metritis cure in dairy cows. J Dairy Sci. 2021 Dec; 104 (12): 12887 - 12899. (https://doi.org/10.3168/jds.2021-20262)
37. Martins LF, Menta PR, Fernandes L, **Machado VS,** Neves RC. Prolonged, low-grade inflammation in the first week of lactation: associations with mineral, protein, and energy balance markers, and milk yield in a clinically healthy Jersey cow cohort. J Dairy Sci. 2021 May; 104 (5): 6113 - 6123. (https://doi.org/10.3168/jds.2020-19538)
38. Menta PR, Fernandes LM, Poit D, Celestino ML, **Machado VS,** Ballou MA, Neves RC. Association of blood calcium concentration in the first 3 days after parturition and energy balance metabolites at day 3 in milk with disease and production outcomes in multiparous Jersey cows. J Dairy Sci. 2021 May; 104 (5): 5854 - 5866. (https://doi.org/10.3168/jds.2020-19189)
39. Celestino ML, Menta PR, Fernandes L, Poit D, Neves RC, Ballou MA, Caixeta LS, **Machado VS**. Short communication: Associations of serum biomarkers of stress and inflammation measured at arrival with health, mortality, and growth of calves transported within the first 4 days of life. J Dairy Sci. 2021 Mar; 104 (3): 3547 - 3553. (https://doi.org/10.3168/jds.2020-19106)
40. Fernandes L, Guimaraes I, Noyes NR, Caixeta LS, **Machado VS**. Impact of subclinical mastitis detected in the first month of lactation on somatic cell count linear scores, milk yield, fertility, and culling of dairy cows in certified organic herds. J Dairy Sci. 2021 Feb; 104 (2): 2140 - 2150. (https://doi.org/10.3168/jds.2020-19153)

41. Reitsma LM, Batchelder TA, Davis EM, **Machado VS**, Neves RC, Ballou MA. Oral calcium supplementation on polymorphonuclear leukocyte intracellular calcium and measures of functionality. J Dairy Sci. 2020 Dec; 103 (12): 11876-11888. (https://doi.org/10.3168/jds.2020-18835)
42. Omontese BO, Caixeta LS, **Machado V**, Rendahl A, Celestino MLK, Menta Junior PR, Paiva P, Garcia-Munoz A, Masic A. Effects of the Administration of a Non-Specific Immune Stimulant around Transportation on Health and Performance of Jersey and Jersey-Cross Heifer Calves during the Rearing Period: Randomized Clinical Trial. Front. Vet. Sci. 2020 Sep; 7: 550202 (https://doi.org/10.3389/fvets.2020.550202).
43. Celestino ML, Fernandes L, Menta PR, Paiva D, Ribeiro TL, Silva TH, Bilby TR, Neves RC, Ballou MA, **Machado VS**. The effect of metaphylactic use of tildipirosin for the control of respiratory disease in long-distance transported dairy calves. Front. Vet. Sci. 2020 Sep; 7: 632. (https://doi.org/10.3389/fvets.2020.00632)
44. **Machado VS**, Celestino ML, Oliveira EB, Lima FS, Ballou MA, Galvao KN. The association of cow-related factors assessed at metritis diagnosis with metritis cure risk, reproductive performance, milk yield, and culling for untreated and ceftiofur-treated dairy cows. J Dairy Sci. 2020 Oct; 103 (10): 9261-9276 (https://doi.org/10.3168/jds.2020-18643)
45. Oliveira EB, Cunha F, Daetz, R, Figueiredo CC, Chebel, RC, Santos, JE, Risco CA, Jeong, KC, **Machado VS**, Galvao KN. Using chitosan microparticles to treat metritis in lactating dairy cows. J Dairy Sci. 2020 Aug; 103(8): 7377-7391 (https://doi.org/10.3168/jds.2019-18028)
46. Silva TH, Celestino ML, Menta PR, Neves RC, Ballou MA, **Machado VS**. Associations between circulating levels of natural antibodies, total serum immunoglobulins, and polymorphonuclear leukocyte function in early postpartum dairy cows. Vet. Immunol. Immunopathol. 2020 April; 222: 110026. (https://doi.org/10.1016/j.vetimm.2020.110026)
47. **Machado VS**, Silva TH. Adaptive immunity in the postpartum uterus: Potential use of vaccines to control metritis. Theriogenology. 2020 July; 150: 201-209. (https://doi.org/10.1016/j.theriogenology.2020.01.040)
48. Bicalho MLS, Zinicola M, **Machado VS**, Lima FS, Teixeira AGV, Narbus C, Xavier MR, Higgins H, Bicalho RC. Effects of recombinant bovine interleukin-8 (rbIL-8) treatment on health, metabolism, and lactation performance in Holstein cattle I: Production and functional characterization of rbIL-8 in vitro and in vivo. J Dairy Sci. 2019 Nov;102(11):10304-10315. (https://doi.org/10.3168/jds.2019-16334)
49. Jeon SJ, Lima FS, Vieira-Neto A, **Machado VS**, Lima SF, Bicalho RC, Santos JEP, Galvão KN. Shift of uterine microbiota associated with antibiotic treatment and cure of metritis in dairy cows. Vet Microbiol. 2018 Feb 18;214: 132-139. (https://doi.org/10.1016/j.vetmic.2017.12.022)
50. **Machado VS**, Bicalho RC. Prepartum application of internal teat sealant or intramammary amoxicillin on dairy heifers: impact on udder health, survival, and performance. J Dairy Sci. 2018 February; 101(2): 1388-1402. (https://doi.org/10.3168/jds.2017-13415)
51. Bicalho MLS, **Machado VS**, Higgins CH, Lima FS, Bicalho RC. Genetic and functional analysis of the bovine uterine microbiota. Part I: Metritis versus healthy cows. J Dairy Sci. 2017 May; 100(5): 3850-3862. (https://doi.org/10.3168/jds.2016-12058)
52. Bicalho MLS, Lima S, Higgins CH, **Machado VS**, Lima FS, Bicalho RC. Genetic and functional analysis of the bovine uterine microbiota. Part II: Purulent vaginal discharge versus healthy cows. J Dairy Sci. 2017 May; 100(5): 3863-3874. (https://doi.org/10.3168/jds.2016-12061)
53. **Machado VS**, Neves R, Lima FS, Bicalho RC. The effect of Presynch-Ovsynch protocol with or without estrus detection on reproductive performance by parity, and the long-term effect of these different

management strategies on milk production, reproduction, health and survivability of dairy cows. Theriogenology. 2017 April 15; 93(4):84-92. (https://doi.org/10.1016/j.theriogenology.2017.01.041)

54. Ganda EK, Bisinotto RS, Vasquez AK, Teixeira AGV, **Machado VS**, Foditsch C, Bicalho, Lima FS, Stephens L, Gomes MS, Dias JM, Bicalho RC. Effects of injectable trace mineral supplementation in lactating dairy cows with elevated somatic cell counts. J Dairy Sci. 2016 September; 99 (9): 7319 – 29. (https://doi.org/10.3168/jds.2016-10989)
55. Bisinotto RS, Filho JC, Narbus C, **Machado VS**, Murray E, Bicalho RC. Identification of fimbrial subunits on the genome of *Trueperella pyogenes* and association between serum antibodies against fimbrial proteins and uterine conditions in dairy cows. J Dairy Sci. 2016 May; 99 (5): 3765-76. (https://doi.org/10.3168/jds.2015-10401)
56. Foditsch C, Oikonomou G, **Machado VS**, Bicalho ML, Ganda EK, Lima SF, Rossi R, Ribeiro BL, Kussler A, Bicalho RC. Lameness Prevalence and Risk Factors in Large Dairy Farms in Upstate New York. Model Development for the Prediction of Claw Horn Disruption Lesions. PLoS One. 2016 Jan 21;11(1):e0146718. (https://doi.org/10.1371/journal.pone.0146718)
57. Bicalho ML, Lima FS, **Machado VS**, Meira EB Jr, Ganda EK, Foditsch C, Bicalho RC, Gilbert RO. Associations among Trueperella pyogenes, endometritis diagnosis, and pregnancy outcomes in dairy cows. Theriogenology. 2016 Jan 15;85(2):267-74. (https://doi.org/10.1016/j.theriogenology.2015.09.043)
58. Oultram J, Phipps E, Teixeira AG, Foditsch C, Bicalho ML, **Machado VS**, Bicalho RC, Oikonomou G. Effects of antibiotics (oxytetracycline, florfenicol or tulathromycin) on neonatal calves' faecal microbial diversity. Vet Rec. 2015 Dec 12;177(23):598. (https://doi.org/10.1136/vr.103320)
59. Zinicola M, Higgins H, Lima S, **Machado V**, Guard C, Bicalho R. Shotgun Metagenomic Sequencing Reveals Functional Genes and Microbiome Associated with Bovine Digital Dermatitis. PLoS One. 2015 Jun;10(7): e0133674. (https://doi.org/10.1371/journal.pone.0133674)
60. **Machado VS**, Bicalho RC. The infectious disease epidemiologic triangle of bovine uterine diseases. Anim. Reprod. 2015 Jul;12(3):450-464 (https://www.animal-reproduction.org/article/5b5a6032f7783717068b460f)
61. **Machado VS**, Oikonomou G, Ganda EK, Stephens L, Milhomem M, Freitas GL, Zinicola M, Pearson J, Wieland M, Guard C, Gilbert RO, Bicalho RC. The effect of intrauterine infusion of dextrose on clinical endometritis cure rate and reproductive performance of dairy cows. J Dairy Sci. 2015 Jun;98(6):3849-3858 (https://doi.org/10.3168/jds.2014-9046)
62. Zinicola M, Lima F, Lima S, **Machado V**, Gomez M, Döpfer D, Guard C, Bicalho R. Altered microbiomes in bovine digital dermatitis lesions, and the gut as a pathogen reservoir. PLoS One. 2015 Mar;10(3):e0120504. (https://doi.org/10.1371/journal.pone.0120504)
63. **Machado VS**, Bicalho, MLS, Gilbert RO, Bicalho RC. Short communication: Relationship between natural antibodies and post-partum uterine health in dairy cows. J Dairy Sci. 2014 Dec;97 (12):7674-8. (https://doi.org/10.3168/jds.2014-8393)
64. Bicalho ML, Lima FS, Ganda EK, Foditsch C, Meira EB Jr, **Machado VS**, Teixeira AG, Oikonomou G, Gilbert RO, Bicalho RC. Effect of trace mineral supplementation on selected minerals, energy metabolites, oxidative stress, and immune parameters and its association with uterine diseases in dairy cattle. J Dairy Sci. 2014 Jul;97(7):4281-95. (https://doi.org/10.3168/jds.2013-7832)
65. **Machado VS**, Bicalho RC. Complete Genome Sequence of *Trueperella pyogenes*, an Important Opportunistic Pathogen of Livestock. Genome Announc. 2014 May 1;2(2). pii: e00400-14. (https://doi.org/10.1128/genomeA.00400-14)

66. **Machado VS**, Oikonomou G, Lima SF, Bicalho ML, Kacar C, Foditsch C, Felippe MJ, Gilbert RO, Bicalho RC. The effect of injectable trace minerals (selenium, copper, zinc, and manganese) on peripheral blood leukocyte activity and serum superoxide dismutase activity of lactating Holstein cows. Vet J. 2014 May;200(2):299-304. (https://doi.org/10.1016/j.tvjl.2014.02.026)
67. **Machado VS**, Bicalho ML, Meira Junior EB, Rossi R, Ribeiro BL, Lima S, Santos T, Kussler A, Foditsch C, Ganda EK, Oikonomou G, Cheong SH, Gilbert RO, Bicalho RC. Subcutaneous immunization with inactivated bacterial components and purified protein of *Escherichia coli*, *Fusobacterium necrophorum* and *Trueperella pyogenes* prevents puerperal metritis in Holstein dairy cows. PLoS One. 2014 Mar 17;9(3):e91734. (https://doi.org/10.1371/journal.pone.0091734)
68. Pereira RV, Bicalho ML, **Machado VS**, Lima S, Teixeira AG, Warnick LD, Bicalho RC. Evaluation of the effects of ultraviolet light on bacterial contaminants inoculated into whole milk and colostrum, and on colostrum immunoglobulin G. J Dairy Sci. 2014 May;97(5):2866-75. (https://doi.org/10.3168/jds.2013-7601)
69. Oikonomou G, Banos G, **Machado V**, Caixeta L, Bicalho RC. Short communication: Genetic characterization of digital cushion thickness. J Dairy Sci. 2014 Jan;97(1):532-36. (https://doi.org/10.3168/jds.2013-7212)
70. Oikonomou G, Bicalho ML, Meira E, Rossi RE, Foditsch C, **Machado VS**, Teixeira AG, Santisteban C, Schukken YH, Bicalho RC. Microbiota of cow's milk; distinguishing healthy, sub-clinically and clinically diseased quarters. PLoS One. 2014 Jan 20;9(1):e85904. (https://doi.org/10.1371/journal.pone.0085904)
71. Teixeira AG, Bicalho ML, **Machado VS**, Oikonomou G, Kacar C, Foditsch C, Young R, Knauer WA, Nydam DV, Bicalho RC. Heat and ultraviolet light treatment of colostrum and hospital milk: effects on colostrum and hospital milk characteristics and calf health and growth parameters. Vet J. 2013 Aug;197(2):175-81. (https://doi.org/10.1016/j.tvjl.2013.03.032)
72. **Machado VS**, Bicalho ML, Pereira RV, Caixeta LS, Knauer WA, Oikonomou G, Gilbert RO, Bicalho RC. Effect of an injectable trace mineral supplement containing selenium, copper, zinc, and manganese on the health and production of lactating Holstein cows. Vet J. 2013 Aug;197(2):451-6. (https://doi.org/10.1016/j.tvjl.2013.02.022)
73. Oikonomou G, Teixeira AG, Foditsch C, Bicalho ML, **Machado VS**, Bicalho RC. Fecal microbial diversity in pre-weaned dairy calves as described by pyrosequencing of metagenomic 16S rDNA. Associations of *Faecalibacterium species* with health and growth. PLoS One. 2013 Apr 30;8(4):e63157. (https://doi.org/10.1371/journal.pone.0063157)
74. Oikonomou G, **Machado VS**, Santisteban C, Schukken YH, Bicalho RC. Microbial diversity of bovine mastitic milk as described by pyrosequencing of metagenomic 16s rDNA. PLoS One. 2012;7(10):e47671. (https://doi.org/10.1371/journal.pone.0047671)
75. **Machado VS**, Bicalho ML, Pereira RV, Caixeta LS, Bittar JH, Oikonomou G, Gilbert RO, Bicalho RC. The effect of intrauterine administration of mannose or bacteriophage on uterine health and fertility of dairy cows with special focus on *Escherichia coli* and *Arcanobacterium pyogenes*. J Dairy Sci. 2012 Jun;95(6):3100-9. (https://doi.org/10.3168/jds.2011-5063)
76. **Machado VS**, Oikonomou G, Bicalho ML, Knauer WA, Gilbert R, Bicalho RC. Investigation of postpartum dairy cows' uterine microbial diversity using metagenomic pyrosequencing of the 16S rRNA gene. Vet Microbiol. 2012 Oct 12;159(3-4):460-9. (https://doi.org/10.1016/j.vetmic.2012.04.033)
77. **Machado VS**, Knauer WA, Bicalho ML, Oikonomou G, Gilbert RO, Bicalho RC. A novel diagnostic technique to determine uterine health of Holstein cows at 35 days postpartum. J Dairy Sci. 2012 Mar;95(3):1349-57. (https://doi.org/10.3168/jds.2011-4867)

78. Bicalho M.L.S., **Machado V.S.**, Nydam D.V., Santos T.M.A., Bicalho R.C. Evaluation of oral administration of bacteriophages to neonatal calves: Phage survival and impact on fecal *Escherichia coli*. Livestock Science. 2012 April; 144 (3), 294-299 (https://doi.org/10.1016/j.livsci.2011.12.007)
79. Bicalho ML, **Machado VS**, Oikonomou G, Gilbert RO, Bicalho RC. Association between virulence factors of *Escherichia coli, Fusobacterium necrophorum*, and *Arcanobacterium pyogenes* and uterine diseases of dairy cows. Vet Microbiol. 2012 May 25;157(1-2):125-31. (https://doi.org/10.1016/j.vetmic.2011.11.034)
80. **Machado VS**, Caixeta LS, Bicalho RC. Use of data collected at cessation of lactation to predict incidence of sole ulcers and white line disease during the subsequent lactation in dairy cows. Am J Vet Res. 2011 Oct;72(10):1338-43. (https://doi.org/10.2460/ajvr.72.10.1338)
81. Pereira RV, Santos TM, Bicalho ML, Caixeta LS, **Machado VS**, Bicalho RC. Antimicrobial resistance and prevalence of virulence factor genes in fecal *Escherichia coli* of Holstein calves fed milk with and without antimicrobials. J Dairy Sci. 2011 Sep;94(9):4556-65. (https://doi.org/10.3168/jds.2011-4337)
82. Bicalho RC, **Machado VS**, Bicalho ML, Gilbert RO, Teixeira AG, Caixeta LS, Pereira RV. Molecular and epidemiological characterization of bovine intrauterine *Escherichia coli*. J Dairy Sci. 2010 Dec;93(12):5818-30. (https://doi.org/10.3168/jds.2010-3550)
83. **Machado VS**, Caixeta LS, McArt JA, Bicalho RC. The effect of claw horn disruption lesions and body condition score at dry-off on survivability, reproductive performance, and milk production in the subsequent lactation. J Dairy Sci. 2010 Sep;93(9):4071-8. (https://doi.org/10.3168/jds.2010-3177)
84. Teixeira AG, **Machado VS**, Caixeta LS, Pereira RV, Bicalho RC. Efficacy of formalin, copper sulfate, and a commercial footbath product in the control of digital dermatitis. J Dairy Sci. 2010 Aug;93(8):3628-34. (https://doi.org/10.3168/jds.2010-3246)
85. McArt JA, Caixeta LS, **Machado VS**, Guard CL, Galvao KN, Sá Filho OG, Bicalho RC. Ovsynch versus Ultrasynch: reproductive efficacy of a dairy cattle synchronization protocol incorporating corpus luteum function. J Dairy Sci. 2010 Jun;93(6):2525-32. (https://doi.org/10.3168/jds.2009-2930)
86. Santos TM, Caixeta LS, **Machado VS**, Rauf AK, Gilbert RO, Bicalho RC. Antimicrobial resistance and presence of virulence factor genes in *Arcanobacterium pyogenes* isolated from the uterus of postpartum dairy cows. Vet Microbiol. 2010 Sep 28;145(1-2):84-9. (https://doi.org/10.1016/j.vetmic.2010.03.001)
87. Santos TM, Gilbert RO, Caixeta LS, **Machado VS**, Teixeira LM, Bicalho RC. Susceptibility of *Escherichia coli* isolated from uteri of postpartum dairy cows to antibiotic and environmental bacteriophages. Part II: In vitro antimicrobial activity evaluation of a bacteriophage cocktail and several antibiotics. J Dairy Sci. 2010 Jan;93(1):105-14. (https://doi.org/10.3168/jds.2009-2299)
88. Bicalho RC, Santos TM, Gilbert RO, Caixeta LS, Teixeira LM, Bicalho ML, **Machado VS**. Susceptibility of *Escherichia coli* isolated from uteri of postpartum dairy cows to antibiotic and environmental bacteriophages. Part I: Isolation and lytic activity estimation of bacteriophages. J Dairy Sci. 2010 Jan;93(1):93-104. (https://doi.org/10.3168/jds.2009-2298)
89. Bicalho RC, **Machado VS**, Caixeta LS. Lameness in dairy cattle: A debilitating disease or a disease of debilitated cattle? A cross-sectional study of lameness prevalence and thickness of the digital cushion. J Dairy Sci. 2009 Jul;92(7):3175-84. (https://doi.org/10.3168/jds.2008-1827)

ABSTRACTS

1. Bicalho M, Bicalho R, **Machado V**. 2011. Association between virulence factors of Escherichia coli, Fusobacterium necrophorum, and Arcanobacterium pyogenes and uterine diseases of dairy cows. J. Dairy Sci. Vol. 94, E-Suppl. 1.

2. Pereira RVV, Santos TMA, Bicalho ML, **Machado VS**, Bicalho RC, Caixeta LS. 2011. Antimicrobial resistance and prevalence of virulence factor genes in fecal Escherichia coli of Holstein calves fed milk with and without antimicrobials. J. Dairy Sci. Vol. 94, E-Suppl. 1.
3. **Machado VS**, Bicalho MLS, Bicalho RC. 2011. The relationship between measured optical density of uterine lavage samples and clinical endometritis. J. Dairy Sci. Vol. 94, E-Suppl. 1.
4. Bicalho MLS, **Machado VS**, Gilbert OR, Bicalho RC. 2012. Association between virulence factors of Escherichia coli, Fusobacterium necrophorum, and Arcanobacterium pyogenes and uterine diseases of dairy cows. Proceedings of the 27th World Buiatrics Congress (Lisbon, Portugal).
5. Oikonomou G, **Machado VS**, Schukken HY, Bicalho RC. 2012 Microbial diversity of dairy cows' mastitic milk samples. Proceedings of the 27th World Buiatrics Congress (Lisbon, Portugal).
6. **Machado VS**, Bicalho MLS, Pereira R, Caixeta LS, Knauer W, Oikonomou G, Gilbert RO, Bicalho RC. 2012. The effect of injectable trace mineral (selenium, copper, zinc, and manganese) on health and production of lactating Holstein cows. Proceedings of the 27th World Buiatrics Congress (Lisbon, Portugal).
7. Teixeira AV, Bicalho R, Bicalho M, Oikonomou G, Knauer W, **Machado V**. 2012. The effect of colostrum and hospital milk UV treatment versus pasteurization on calf health, growth and survivability. Proceedings of the 27th World Buiatrics Congress (Lisbon, Portugal).
8. **Machado VS**, Bicalho RC. 2017. Prepartum application of internal teat sealant and/or intramammary amoxicillin on dairy heifers. American Association of Bovine Practitioners Proceedings of the Annual Conference, (50th).
9. Broyles A, Embertson R, Woodie JB, **Machado V**. 2019. The impact of grade of arytenoid function immediately prior to laryngoplasty and ipsilateral ventriculocordectomy on post-operative performance: 601 Thoroughbred racehorses (1998-2013). Proceedings of the 65th Annual Convention of the American Association of Equine Practitioners (Denver, Colorado).
10. Dean C, Baumann C, Fernandes L*, Sharpe K, Magalhaes Antunes Junior A, Ray T, Wehri T, Heins B, Pinedo P, **Machado V**, Caixeta L, Noyes N. 2019. Community research and education program to use the microbiome for the advancement of organic livestock production (pp. 267). Proceedings of the 100th Annual Conference of Research Workers in Animal Disease.
11. Baumann C, Fernandes L*, Sharpe K, Dean C, Magalhaes Antunes Junior A, Ray T, Wehri T, Formiga A, Heins B, Pinedo P, **Machado V**, Noyes N, Caixeta L. 2019. Milk culture results obtained from early-lactation heifers on organic dairy farms (pp. 184). Proceedings of the 100th Annual Conference of Research Workers in Animal Disease.
12. **Machado V**, Galvao K, Lima F, Noyes N, Ballou M. 2019. Predicting metritis cure as a path to reducing antimicrobial use in dairy cows (pp. 164). Proceedings of the 100th Annual Conference of Research Workers in Animal Disease.
13. Celestino M*, Menta P*, Fernandes L*, Poit D, Neves R, Caixeta L, **Machado V**. 2019. Associations of Serum Biomarkers of Stress and Inflammation Measured at Arrival with Bovine Respiratory Disease Incidence, Mortality, and Growth of Calves Transported within the First 4 Days of Life. American Association of Bovine Practitioners Proceedings of the Annual Conference, (52th).
14. Omontese B, Celestino M*, Menta P*, Paiva D, Garcia-Munoz A, Masic A, **Machado V**, Caixeta L. 2019. Effects of the administration of a bovine non-specific immune stimulant around transportation on health and performance of Jersey and Jersey-cross heifer calves in the 60 days of life. American Association of Bovine Practitioners Proceedings of the Annual Conference, (52th).
15. Baumann C, Fernandes L, Sharpe K, Dean C, Magalhaes Antunes Junior A, Ray T, Wehri T, Formiga A, Heins B, Pinedo P, **Machado V**, Noyes N, Caixeta L. 2019. Milk culture results obtained from early-lactation heifers on organic dairy farms (pp. 184). Worcester State University: National Veterinary Scholars Symposium.
16. Omontese, B, Celestino M*, Paiva D, Garcia-Munoz A, Masic A, **Machado V**, Caixeta L. 2019. Effects of a bovine nonspecific immune stimulant on health of Jersey and Jersey-cross heifer calves in the first month of life (J. Dairy Sci. Vol. 102, Suppl. 1, pp. 393-394).

17. Fernandes, L., Guimaraes, I., Caixeta, L., Noyes, N., **Machado, V**. (2020). Impact of subclinical mastitis detected in the first month of lactation on performance of organic dairy cows. Proceedings of the 101st Annual Conference of Research Workers in Animal Disease.
18. Menta, P., Noyes, N., Lima, F., Ballou, M., Galvao, K., **Machado, V**. (2020). Incidence, risk factor, and impact of metritis in dairy cows housed in dry-lots (pp. 225). Proceedings of the 101st Annual Conference of Research Workers in Animal Disease.
19. **Machado, V**., Celestino, M. L., Oliveira, E., Lima, F., Ballou, M., Galvao, K. (2020). The association of cow related factors with metritis cure risk, fertility, milk yield, and culling (pp. 226). Proceedings of the 101st Annual Conference of Research Workers in Animal Disease.
20. Kasl, B., Hoff, C., Silva, T., Caetano, I., **Machado, V.,** Carroll, J., Ballou, M. (2020). Effect of preweaning plane of nutrition on abomasal dynamics in Holstein calves. American Association of Bovine Practitioners.
21. Kasl, B., Hoff, C., Silva, T., Caetano, I., **Machado, V**., Carroll, J., Ballou, M. (2020). Effects of plane of nutrition and as-fed milk replacer temperature on abomasal dynamics in Holstein calves. American Association of Bovine Practitioners.
22. Kasl, B., Hoff, C., Silva, T., Caetano, I., **Machado, V**., Carroll, J., Ballou, M. (2020). Oral electrolyte composition and fluid meal type influence the abomasal environment in Holstein calves. American Association of Bovine Practitioners.
23. Menta, P., Fernandes, L., Poit, D., Celestino, M., **Machado, V**., Ballou, M., Neves, R. (2020). Association of calcium and energy balance metabolites in the first 3 days after parturition with disease and production outcomes in multiparous Jersey cows. (J. Dairy Sci, vol. 103, Suppl. 1., pp. 17--17).
24. Fernandes, L., Guimaraes, I., Noyes, N., Caixeta, L., **Machado, V**. (2020). Impact of subclinical mastitis detected in the first month of lactation on milk yield, fertility, and culling of dairy cows on USDA-certified organic herds. (J. Dairy Sci, vol. 103, Suppl. 1., pp. 151--151).
25. Celestino, M., Fernandes, L., Menta, P., Paiva, D., Ribeiro, T., Silva, T., Neves, R., Ballou, M., **Machado, V**. (2020). The effect of metaphylactic use of tildipirosin for the control of respiratory disease associated with long-distance transportation of dairy calves. (J. Dairy Sci, vol. 103, Suppl. 1., pp. 104--105).
26. Menta, P. R., **Machado, V. S.**, Pineiro, J. M., Thatcher, W. W., Santos, J. E. P., Vieira-Neto, A. (2021). Heat stress in transition dairy cows is associated with impaired production, health, and reproduction. (J. Dairy Sci, vol. 104, Suppl. 1., pp. 38--38).
27. Oliveira, E. B., Ferreira, F. C., Galvao, K. N., Jason, V. Y., Tagkopoulos, I., Silva-Del-Rio, N., Pereira, R. V., **Machado, V. S.**, Lima, F. S. (2021). Integration of statistical inferences and machine learning algorithms for prediction of metritis cure in dairy cows. (J. Dairy Sci, vol. 104, Suppl. 1., pp. 74--74).
28. Mosca, F. P., Dean, C. J., Heins, B. J., **Machado, V. S.**, Pinedo, P. J., Noyes, N. R., Caixeta, L. S. (2021). Description of Staphylococcus spp. Intramammary infections in early-lactation primiparous cows on organic dairy farms. (J. Dairy Sci, vol. 104, Suppl. 1., pp. 158--158).
29. Menta, P. R., Silva, T., Guimaraes, I., Paiva, D., Fernandes, L., Celestino, M. L., Netto, A. S., Ballou, M. A., **Machado, V. S.** (2021). Effect of injectable trace mineral supplementation on peripheral polymorphonuclear leukocyte function, oxidative stress, health, and performance in dairy cows in semi-arid conditions. (J. Dairy Sci, vol. 104, Suppl. 1., pp. 211--211).
30. Fernandes, L., Celestino, M. L., Menta, P. R., Silva, T. H., Paiva, D., Ribeiro, T. L., Caixeta, L. S., Noyes, N. R., **Machado, V. S.** (2021). Risk factors associated with intramammary infections in primiparous dairy cows in organic herds. (J. Dairy Sci, vol. 104, Suppl. 1., pp. 215--216).
31. Vieira-Neto, A., Menta, P. R., DeWit, C., Fernandes, L., Silva, A. C. M., Amaro, F. X., Ballou, M. A., **Machado, V. S.**, Santos, J. E. P. (2021). Role of dietary Ca and 1,25-dihydroxyvitamin D3 on gastrointestinal absorption of Ca in ruminants. (J. Dairy Sci, vol. 104, Suppl. 1., pp. 264--264).
32. Hubner, A., Canisso, I. F., Peixoto, P. M., Coelho, W. M., Ribeiro, L., Aldridge, B. M., Menta, P., **Machado, V. S.**, Lima, L. F. (2021). Characterization of metabolic profile of Holstein dairy cows diagnosed with concurrent hyperketonemia and hypoglycemia. (J. Dairy Sci, vol. 104, Suppl. 1., pp. 276--277).
33. **Machado, V. S**., Ballou, M. A. (2021). Management Strategies to Optimize Health and Performance of Pre-weaned Calves. (J. Animal Sci, vol. 99, Suppl. 3, pp. 53 -- 53).

34. Menta P., Oliveira E., Galvao K., Lima F., Ballou M., Noyes N., **Machado V**., Prim J. (2021). The association of hematological variables and data collected at diagnosis with metritis cure in dairy cows. (pp. 98). Proceedings of the 102nd Annual Conference of Research Workers in Animal Disease.
35. Pena-Mosca F., Dean C., Ray T., Heins B., Pinedo P., **Machado V.**, Noyes N., Caixeta L. (2021). Association between bacterial group and persistence in the mammary gland in early lactation primiparous cows. (pp. 99). Proceedings of the 102nd Annual Conference of Research Workers in Animal Disease.
36. Lombard J., **Machado V**., Murphy M., Pinnell L., Wolfe C., Castle J., Baker L., Morley P. (2021). Characterizing the developing microbiome and resistome in young dairy calves without antimicrobial influence. (pp. 186). Proceedings of the 102nd Annual Conference of Research Workers in Animal Disease.
37. Murphy M., Pinnell L., Wolfe C., Castle J., Lombard J., Baker L., **Machado V**., Morley P. (2021). Is sequencing of pooled samples an efficient method for characterizing the microbiome of animal groups? (pp. 284). Proceedings of the 102nd Annual Conference of Research Workers in Animal Disease.
38. Dean C., Pena-Mosca F., Fernandes L., Sharpe K., Manriquez D., Doster E., Magalhaes Antunes Junior A., Wehri T., Calles V., Baumann C., Ray T., Heins B., Pinedo P., **Machado V.**, Caixeta L., Noyes N. (2021). Longitudinal survey of the bovine teat microbiome. (pp. 290). Proceedings of the 102nd Annual Conference of Research Workers in Animal Disease.
39. Oliveira E., Ferreira F., Williams D., Galvao K., Pereira R., Silva-Del-Rio N., **Machado V.**, Lima F. (2021). Prediction of metritis cure in non-antibiotic treated dairy cows. (pp. 379). Proceedings of the 102nd Annual Conference of Research Workers in Animal Disease.
40. Martin A., Machado V., Crossland W. L. (2022). Effect of Exogenous Melatonin on the Cellular and Humoral Response of Holstein Heifer Calves During Vaccination. (J. Animal Sci, vol. 100, Suppl. 1, pp. 14 -- 15).
41. Menta P. R., Oliveira E. B., Prim J. G., Galvao K. N., Lima F. S., Ballou M. A., Noyes N. R., **Machado V. S.** (2022) Effect of systemic ceftiofur therapy on metritis cure, reproductive performance, culling, and milk yield in metritic cows. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 42 – 43).
42. Menta P. R., Oliveira E. B., Prim J. G., Galvao K. N., Lima F. S., Ballou M. A., Noyes N. R., **Machado V. S.** (2022) The association of metritis cure at 5 and 14 days after diagnosis with milk yield, reproductive performance, and culling. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 43).
43. Prim J., Mirzaei A., Gonzales T., Menta P., **Machado V.**, Chebel R., Galvao K. (2022) Possibilities of predicting self-cure and treatment success of cows with metritis using farm-collected data, hemogram, and peripartum behavioral changes. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 187).
44. Oliveira E., Ferreira F., Williams D., Galvao K., Pereira R., Silva-Del-Rio N., **Machado V.**, Lima F. (2022) Using statistical inferences for risk assessment of spontaneous metritis cure in non-antibiotic-treated dairy cows. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 189).
45. Bielamowicz L. P., Celestino M. L., Fernandes L., Menta P. R., Ballou M. A., Neves R. C., **Machado V. S.** (2022) Association between bovine respiratory disease and hematological variables during the preweaning period in dairy calves transported to a calf-raising facility. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 235).
46. Burrell T. B., Ballou M. A., **Machado V. S.**, Jones B. W. (2022) Influence of a proprietary blend of yeast fermentation products, enzymes, and probiotics on production performance of lactating Dairy Cattle. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 265).
47. Ramos D. C., Celestino M. L., Fernandes L., Menta P. R., Jersey S., **Machado V. S.**, Nelson C. D., Vieira-Neto A. (2022) Association between vitamin A, D, and E status with acute-phase proteins, minerals, energy markers, and immune cells in preweaned dairy calves. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 304).
48. Oliveira E. B., Pereira J V M., Williams D. R., Monteiro H. F., Menta P., **Machado V. S.**, Lima F. S. (2022) Changes in uterine metabolome associated with metritis development and cure in lactating Holstein cows. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 340).
49. Basbas C., Garzon A., Silva-del-Rio N., Byrne B., Karle B., Aly S., Champagne J., Williams D., Lima F., **Machado V.**, Pereira R. (2022) Evaluation of antimicrobial resistance and risk factors for recovery of intrauterine Escherichia coli from cows with metritis on California dairy farms. (J. Dairy Sci. Vol. 105, Suppl. 1., pp. 387 -- 388).

50. **Machado V. S.**, Menta P., Oliveira E., Lima F., Ballou M. A., Prim J., Galvao K. N., Noyes N. R. (2023) Predictive models for metritis cure using farm collected data and hematological variables measured at diagnosis. (pp. 153). Proceedings of the 103rd Annual Conference of Research Workers in Animal Disease.
51. Prim J., Mirzaei A., Menta P., **Machado V. S.**, Oliveira E., Veronese A., Silva C. S., Chebel R., Galvao K. N. (2023) Application of behavior data to predict metritis self-cure and treatment failure in dairy cows. (pp. 154). Proceedings of the 103rd Annual Conference of Research Workers in Animal Disease.
52. McDaniel Z. S., Nagaraja T. Lawrence T. E., Amachawadi R. G., Carroll J. A., Burdick Sanchez N. C., Galyean M. L., Hales K. E., Smock T. M., **Machado V. S.**, Ballou M. A., Broadway P. R. (2023) Development of an experimental model for liver abscesses in calves using an acidotic diet and bacterial inoculation. (pp. 218). Proceedings of the 103rd Annual Conference of Research Workers in Animal Disease.
53. **Machado V. S.**, Nagaraja T., Cox H., Menta P., Crossland W., Hales K. E., Henry D., Strieder-Barboza C., Cruz Penn M., Broadway P. R., Carroll J A., Ballou M A. (2023) Injecting *F. necrophorum* into the circulation of pre-weaned calves failed as liver abscess challenge models. (pp. 294). Proceedings of the 103rd Annual Conference of Research Workers in Animal Disease.
54. **Machado V. S.**, Ballou M. A. (2023) Management of beef-on-dairy calves: Should we raise them differently? (J. Dairy Sci. Vol. 106, Suppl. 1., pp. 46).
55. Menta P., Oliveira E., Lima F., Ballou M. A., Prim J., Galvao K. N., Noyes N. R., **Machado V. S.** (2023) Predictive models for metritis cure using farm collected data and hematological variables measured at diagnosis. (J. Dairy Sci. Vol. 106, Suppl. 1., pp. 150).
56. Grantz J. M., Mukhopadhyay A., Jannasch H., Ferreira C., Menta P. R., **Machado V. S.,** Neves R. C. (2023) Plasma oxylipid profile of postpartum dairy cows cat egorized into different systemic inflammatory grades in the first week after parturition. (J. Dairy Sci. Vol. 106, Suppl. 1., pp. 213).
57. Michelotti T. C., Tegeler A. P., Fiallo J. F., Flores L., De-la-Cruz A., Benitez O. J., Dutton D., **Machado V.**, Streider-Barboza C. (2023). Single-nuclei transcriptome reveals depot-specific changes in adipose tissue of dairy cows with subclinical ketosis. (J. Dairy Sci. Vol. 106, Suppl. 1., pp. 232).
58. Paiva D., Menta P. R., Bielamowicz L., **Machado V. S.** (2023). The effect of seletive dry cow therapies based on two different algorithms on udder health and lactation performance in herds not using internal teat sealant. (J. Dairy Sci. Vol. 106, Suppl. 1., pp. 313).
59. Menta P., Oliveira E., Lima F., Ballou M. A., Prim J., Galvao K. N., Noyes N. R., **Machado V. S.** (2023) Effect of systemic ceftiofur on cows diagnosed with metritis and classified as high risk for spontaneous cure using a predictive model with farm variables on metritis cure, reproduction, culling, and milk yield. (J. Dairy Sci. Vol. 106, Suppl. 1., pp. 317 - 318).
60. Beneduzi N., Benitez O., Paiva D., Borges Y., Boradway P. R., Nagaraja T., Hales K. E., Strieder-Barboza C., Crossland W., Ballou M A, **Machado V. S.**. (2024) Transcriptome analysis of hepatic tissue during the development of liver abscess in Holstein Steers. (pp. 352). Proceedings of the 104th Annual Conference of Research Workers in Animal Disease.
61. Diaz G. R., Tuy R., **Machado V. S.**, Noyes N. R. (2024) The effect of metritis treatment with ceftiofur on fecal microbiome and resistome of dairy cows. (pp. 366). Proceedings of the 104th Annual Conference of Research Workers in Animal Disease.
62. Martelo Pereira A., Menta P. R., de Oliveira E. B., Prim J. G., **Machado V. S.,** Lima F. S., Galvao K. N., Figueiredo C. C. (2024) Differences in lactational performance associated with antimicrobial therapy and clinical cure of metritis in dairy cows. (J. Dairy Sci. Vol. 107, Suppl. 1., pp. 56).
63. Moreira D., Rocha C., Ballou M. A., **Machado V. S.** (2024) The effect of quorum-sensing science-based products on the health of preweaned calves. (J. Dairy Sci. Vol. 107, Suppl. 1., pp. 354).

BOOK CHAPTERS

- "Understanding and managing postpartum uterine disease". In book: Large Dairy Herd Management, 3rd Edition, pp.533-548

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- "Improving udder health in dairy heifers". 2016. AABP Research Foundation Grant. PI. $16,339
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- "Gift to support research in bovine health and management research". 2018. Multimin USA. PI. $89,752
- "Gift to support research in bovine immunology". 2018-2019. Novavive Inc. PI. $30,000
- "The metaphylactic use of tildipirosin (ZuprevoTM) for the control of Bovine Respiratory Disease (BRD) in pre-weaned high-risk calves housed in individual hutches". 2019-2021. Merck Animal Health. PI. $243,544
- "Predicting metritis cure as a path to reducing antimicrobial us in dairy cows". 2019-2022. NIFA-USDA. PI. $464,338
- "Effects of various nutritional interventions on the health and performance of Holstein bull calves following an *Eimeria bovis* infection". 2020-2022. Land O'Lakes Purina Feed LLC. Co-PI. $69,779
- "Gift to support research in bovine health and management research". 2020. Cactus Feeders. PI. $35,000
- "Development of a science-based management strategy to reduce the use of antimicrobials in high-risk beef cattle". 2021-2023. Foundation for Food and Agriculture Research. Co-PI. $400,000
- "Application of pegbovigrastim (Imrestor) as a dry cow therapy for the prevention of new intramammary infections". 2021-2022. Elanco Animal Health. Co-PI. $266,037
- "Addressing the effects of ketosis on adipose tissue transcriptional diversity and progenitor cells phenotype in dairy cows". 2021-2024. NIFA-USDA. Co-PI. $300,000
- "Pathogen-host interaction during the development of liver abscesses; local and systemic immune and metabolic responses during *Fusobacterium necrophorum* challenges". 2022-2024. Foundation for Food and Agriculture Research. PI. $ 195,138
- "Novel Strategies to Improve the Understanding of Liver Abscess Formation in Beef Cattle". 2022-2024. Foundation for Food and Agriculture Research. Co-PI. $ 250,000
- "The impact of a protocol with quorum sensing science-based products on the health of pre-weaned dairy and beef on dairy calves". 2023-2025. Animal Health Vision International – AHV. PI. $ 56,085
- "Effects of various natural nutritional interventions during the preweaning and postweaning periods on the health and performance of Beef x Dairy calves using spontaneous infection and *Eimeria bovis* infection models". 2024-2025. Anpario PLC. Co-PI. $102,588

PATENTS

- "Vaccine for intrauterine disease". RC Bicalho, RO Gilbert, **V Machado**, M Bicalho. US Patent 9,533,034

KEYNOTE PRESENTATIONS

- "Controlling metritis: from treatment to vaccine development". In: 2015 Dairy Cattle Reproductive Council Annual Meeting; Buffalo, NY, USA. November 12th 2015.
- "Understanding and Managing Postpartum Uterine Disease" (Shared presentation with Dr. Stephen LeBlanc). In: Large Dairy Herd Management Conference, Chicago, IL, USA. May 2nd and May 4th 2016.

- "The Impact of Interventions During Late Gestation in the Postpartum Udder Health of First Calf Heifers". In: 2019 National Mastitis Council Annual Meeting, Savannah, GA, USA. January 31st 2019.
- "New insights into health of dairy calves during the pre-weaning period". In: 2019 Mid-South Ruminant Nutrition Conference, Grapevine, TX, USA. August 7th 2019.
- "Management Strategies to Optimize Health and Performance of Pre-weaned Calves". In: 2021 ASAS-CSAS-SSASAS Annual Meeting & Trade Show, Louisville, KY, USA. July 15th 2021.
- "Novas estratégias para o tratamento de metrite em vacas leiteiras - New strategies for the treatment of metritis in dairy cows". In: Dairy Cattle Reproductive Council Webinar in Portuguese. July 29th 2021.
- "Modulating innate immunity during the periparturient period to reduce uterine diseases". In: 2021 Michigan Veterinary Conference, Novi, MI, USA. December 3rd 2021.
- "The role of adaptive immunity against intrauterine pathogens". In: 2021 Michigan Veterinary Conference, Novi, MI, USA. December 3rd 2021.
- "Developing a targeted therapy for metritis to reduce the use of antimicrobials in dairy cows". In: 2021 Michigan Veterinary Conference, Novi, MI, USA. December 3rd 2021.
- "Immunological memory in the postpartum uterus: potential use of vaccines to control metritis". In: 2022 International Conference of Animal Reproduction, Bologna, Italy. June 29th 2022.
- "Management of beef-on-dairy calves: Should we raise them differently?" In: 2023 ADSA Annual Meeting, Ottawa, Canada. June 26th 2023.

ORAL PRESENTATION IN SCIENTIFIC MEETINGS

- "The relationship between measured optical density of uterine lavage samples and clinical endometritis." In: American Dairy Science Association Annual Meeting, New Orleans, LA, USA. July 13th, 2011.
- "The effect of injectable trace mineral (selenium, copper, zinc, and manganese) on health and production of lactating Holstein cows." In: the 27th World Buiatrics Congress 2012; Lisbon, Portugal. June 5th, 2012.
- "Prepartum application of internal teat sealant and/or intramammary amoxicillin on dairy heifers: impact on udder health, survival, and performance." In: American Association of Bovine Practitioners Annual Conference, Omaha, NE, USA. September 15th, 2017.
- "The association of cow related factors with metritis cure risk, fertility, milk yield, and culling." Conference of Research Workers in Animal Diseases. Virtual Meeting. December 2020.
- "Predictive models for metritis cure using farm collected data and hematological variables measured at diagnosis". Conference of Research Workers in Animal Diseases. Chicago, IL, USA. January 23rd, 2023.

ORAL PRESENTATION IN OTHER MEETINGS

- "Benefits of injectable trace minerals in Lactating Dairy Cattle – clinical experience and metabolic changes." In: Multimin USA Research Roundup, Denver, CO, USA. October 19th, 2013.
- "The impact of trace mineral supplementation during the periparturient period." In: Virbac Dairy Symposium; Nice, France. October 1st, 2014.
- "Promoting the Consumption of Feeds with U.S. Soy in Dairy Production Seminar". In: USSEC Dairy Symposium; Jamaica on April 12-13, 2018

- "Managing metritis in dairy cows". In: University of Liverpool Farm Animal Elective Conference; Virtual on June 8, 2021

AWARDS

- "Resident of the Year 2016" - Outstanding Resident for the Equine and Nemo Farm Animal and Ambulatory Hospitals at Cornell University.
- 2021 CASNR Junior Faculty Award, Texas Tech University
- CASNR Dean's Research Award – FY21, Texas Tech University

EXTENSION ARTICLES

1. "Intramammary Infections: A challenging issue for organic dairy farmers". Fernandes L., **Machado V. S.** Texas Dairy Matters. February 2021. Texas A&M Agrilife Extension.
2. "What is the Microbiome and Why is it Important for Organic Livestock Production?". Dean C., Pena Mosca F., Ray T., Heins B., Pinedo P., **Machado V.**, Caixeta L., Noyes N. March 2021. eOrganic (https://eorganic.org/node/34373).

PROCEEDINGS & CONFERENCE PAPERS

1. **Machado V**. 2014. The effect of trace mineral supplementation during the periparturient period. Virbac Dairy Symposium Proceedings.
2. **Machado VS.** 2015. Controlling Metritis: From Treatment to Vaccine Development. 2015 Dairy Cattle Reproduction Council Proceedings (pp. 35-43).
3. **Machado V.** 2019. The Impact of Interventions During Late Gestation in the Postpartum Udder Health of First-calf Heifers. National Mastitis Council 58th Annual Meeting, National Mastitis Council.
4. **Machado V.** 2019. New insights into health of dairy calves during the pre-weaning period. 2019 Mid-South Ruminant Nutrition Conference Proceedings (pp. 35-37).
5. **Machado VS.** 2021. Modulating innate immunity during the periparturient period to reduce uterine diseases. 2021 Michigan Veterinary Conference Proceedings.
6. **Machado VS.** 2021. The role of adaptive immunity against intrauterine pathogens. 2021 Michigan Veterinary Conference Proceedings.
7. **Machado VS.** 2021. Developing a targeted therapy for metritis to reduce the use of antimicrobials in dairy cows. 2021 Michigan Veterinary Conference Proceedings.

TEACHING ACTIVITIES

- Teaching Assistant for the course offered to junior veterinary students "Bovine Reproduction", at the Veterinary School of Federal University of Goias (2007-2008)
- Teaching Assistant for the course offered to junior veterinary students "Advanced Dairy Reproduction" - VTMED 6536, at the College of Veterinary Medicine at Cornell University (2013 – 2015).

- Teaching Assistant for the course offered to veterinary students "Diagnosis and treatment of diseases in dairy cows - a case based approach utilizing hospitalized cases" - VTMED 6631, at the College of Veterinary Medicine at Cornell University (2016).
- Teaching senior veterinary students during their clinical rotation in the Ambulatory and Production Medicine Clinic, at the College of Veterinary Medicine at Cornell University (2015 – 2017).
- Teaching the course "Basic Concepts in Endocrinology" – ANSC 5320 at the Animal and Food Sciences at Texas Tech University (2018 - present)
- Teaching the course "Principles & Application of Epidemiological Methods in Vet. Sciences" – ANSC 5001 at the Animal and Food Sciences at Texas Tech University (2020 - present)
- Teaching the course "Study designs in epidemiological studies" – ANSC 5001 at the Animal and Food Sciences at Texas Tech University (2020 - present)
- Co-Teaching the course "Animal Diseases of Livestock" – ANSC 5001 at the Animal and Food Sciences at Texas Tech University (2022 – present)

MEMBERSHIPS

- American Dairy Science Association
- American Association of Bovine Practitioners
- Dairy Cattle Reproductive Council
- Texas Animal Nutrition Council

AD HOC REVIEWER

- Journal of Dairy Science
- Theriogenology
- Journal of Animal Science
- Frontiers Microbiology
- Frontiers in Veterinary Science
- JDS Communications
- PLOSone
- BMC Veterinary Research
- BMC Genomics
- Scientific Reports
- Livestock Science
- Animals
- Applied Animal Science
- Tropical Health and Production
- Acta Veterinaria Scandinavica
- Czech Journal of Animal Science
- Archivos de Medicina Veterinaria
- Veterinarni medicina - International Journal for Veterinary Sciences and Biomedicine
- Journal of Animal Science and Biotechnology

GUEST EDITOR

- Frontiers in Veterinary Science