

Curriculum Vitae

Clarissa Strieder-Barboza, DVM MS PhD

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A. EDUCATION

- 2015 – 2018 **PhD in Comparative Medicine and Integrative Biology.** Department of Large Animal Clinical Science, College of Veterinary Medicine, Michigan State University – East Lansing, MI, USA
Dissertation advisor: Andres Contreras DVM MS PhD
Dissertation title: The role of Fetuin-A on adipose tissue lipid mobilization in periparturient dairy cows
- 2010 – 2011 **Master’s in Veterinary Science – Animal Health.** Institute of Veterinary Clinical Sciences, Universidad Austral de Chile, Valdivia, Los Lagos, Chile
Thesis advisor: Mirela Noro DVM PhD
Thesis title: Energy balance, ketosis, and insulin resistance in grazing dairy cows with high and moderate prepartum body condition score
- 2005 – 2009 **Degree in Veterinary Medicine.** Universidade Federal de Santa Maria, Santa Maria, RS, Brazil
Thesis advisor: Marcelo Cecim DVM, MS, PhD
Thesis title: Protein-energy balance in grazing dairy cows with dietary nitrogen excess

B. POSITIONS, EMPLOYMENT, AND TRAINING

- 2021 – present **Assistant Professor.** Department of Veterinary Sciences, Texas Tech University, Lubbock, TX, USA
- 2018 – 2020 **Postdoctoral Research Fellow.** Laboratories of Professors Carey Lumeng and Robert O’Rourke. Department of General Surgery, University of Michigan Medical School, Ann Arbor, MI, USA
- 2015 – 2018 **Graduate Research Assistant.** Dr. Andres Contreras Laboratory, Department of Large Animal Clinical Science, Michigan State University, East Lansing, MI, USA
- 2012 – 2014 **Veterinary Instructor and Researcher.** College of Veterinary Medicine and Animal Science, Universidad Cooperativa de Colombia, Bucaramanga, Santander, Colombia
- 2013 **Research Visiting Scholar.** Dr. Contreras Laboratory, Department of Large Animal Clinical Sciences, Michigan State University, East Lansing, MI, USA
Project: The effect of visceral adiposity on the transition cow’s performance

- 2010 – 2011 **Academic and Research Assistant.** Laboratory of Animal Clinical Pathology and Metabolism. Institute of Veterinary Clinical Sciences, Universidad Austral de Chile, Valdivia, Los Lagos, Chile
- 2009 **Research Veterinary Intern.** Laboratory of Animal Clinical Pathology and Metabolism. Veterinary Sciences Institute, Universidad Austral de Chile, Valdivia, Los Lagos, Chile
Project: Protein-energy balance in grazing dairy cows fed excess nitrogen
- 2006 – 2009 **Clinical and Research Assistant.** Ruminant Medicine Sector, Veterinary Hospital, Laboratory of Ruminant Metabolism and Endocrinology, Department of Large Animals, Universidade Federal de Santa Maria, Santa Maria, RS, Brazil

C. PUBLICATIONS

PUBLISHED PEER-REVIEWED ARTICLES

1. **Strieder-Barboza C**, Baker NA, Flesher CG, Karmakar M, Patel A, Lumeng CN, O'Rourke RW. [Depot-specific adipocyte-extracellular matrix metabolic crosstalk in murine obesity.](#) *Adipocyte.* 2020 Dec;9(1):189-196. doi: 10.1080/21623945.2020.1749500. PubMed PMID: 32272860; PubMed Central PMCID: PMC7153651.
2. Juliar BA, **Strieder-Barboza C**, Karmakar M, Flesher CG, Baker NA, Varban OA, Lumeng CN, Putnam AJ, O'Rourke RW. [Viscoelastic characterization of diabetic and non-diabetic human adipose tissue.](#) *Biorheology.* 2020 Feb 17;. doi: 10.3233/BIR-190234. PubMed PMID: 32083565.
3. **Strieder-Barboza C**, Baker NA, Flesher CG, Karmakar M, Neeley CK, Polsinelli D, Dimick JB, Finks JF, Ghaferi AA, Varban OA, Lumeng CN, O'Rourke RW. [Advanced glycation end-products regulate extracellular matrix-adipocyte metabolic crosstalk in diabetes.](#) *Sci Rep.* 2019 Dec 24;9(1):19748. doi: 10.1038/s41598-019-56242-z. PubMed PMID: 31875018; PubMed Central PMCID: PMC6930305.
4. Flesher CG, Baker NA, **Strieder-Barboza C**, Polsinelli D, Webster PJ, Varban OA, Lumeng CN, O'Rourke RW. [A Human 3D Extracellular Matrix-Adipocyte Culture Model for Studying Matrix-Cell Metabolic Crosstalk.](#) *J Vis Exp.* 2019 Nov 7;(153). doi: 10.3791/60486. PubMed PMID: 31762470.
5. **Strieder-Barboza C**, Contreras GA. [Fetuin-A modulates lipid mobilization in bovine adipose tissue by enhancing lipogenic activity of adipocytes.](#) *J Dairy Sci.* 2019 May;102(5):4628-4638. doi: 10.3168/jds.2018-15808. Epub 2019 Mar 1. PubMed PMID: 30827564.
6. **Strieder-Barboza C**, Thompson E, Thelen K, Contreras GA. [Technical note: Bovine adipocyte and preadipocyte co-culture as an efficient adipogenic model.](#) *J Dairy Sci.* 2019 Apr;102(4):3622-3629. doi: 10.3168/jds.2018-15626. Epub 2019 Feb 14. PubMed PMID: 30772027.
7. de Souza J, **Strieder-Barboza C**, Contreras GA, Lock AL. [Effects of timing of palmitic acid supplementation during early lactation on nutrient digestibility, energy balance, and metabolism of dairy cows.](#) *J Dairy Sci.* 2019 Jan;102(1):274-287. doi: 10.3168/jds.2018-14977. Epub 2018 Oct 24. PubMed PMID: 30527983.
8. De Koster J, Nelli RK, **Strieder-Barboza C**, de Souza J, Lock AL, Contreras GA. [The contribution of hormone sensitive lipase to adipose tissue lipolysis and its regulation by insulin in](#)

- [periparturient dairy cows](#). *Sci Rep*. 2018 Sep 6;8(1):13378. doi: 10.1038/s41598-018-31582-4. PubMed PMID: 30190510; PubMed Central PMCID: PMC6127149.
9. De Koster J, **Strieder-Barboza C**, de Souza J, Lock AL, Contreras GA. [Short communication: Effects of body fat mobilization on macrophage infiltration in adipose tissue of early lactation dairy cows](#). *J Dairy Sci*. 2018 Aug;101(8):7608-7613. doi: 10.3168/jds.2017-14318. Epub 2018 Jun 7. PubMed PMID: 29885887.
 10. Contreras GA, **Strieder-Barboza C**, De Koster J. [Symposium review: Modulating adipose tissue lipolysis and remodeling to improve immune function during the transition period and early lactation of dairy cows](#). *J Dairy Sci*. 2018 Mar;101(3):2737-2752. doi: 10.3168/jds.2017-13340. Epub 2017 Nov 6. Review. PubMed PMID: 29102145.
 11. **Strieder-Barboza C**, de Souza J, Raphael W, Lock AL, Contreras GA. [Fetuin-A: A negative acute-phase protein linked to adipose tissue function in periparturient dairy cows](#). *J Dairy Sci*. 2018 Mar;101(3):2602-2616. doi: 10.3168/jds.2017-13644. Epub 2017 Dec 21. PubMed PMID: 29274966.
 12. Contreras GA, **Strieder-Barboza C**, de Souza J, Gandy J, Mavangira V, Lock AL, Sordillo LM. [Periparturient lipolysis and oxylipid biosynthesis in bovine adipose tissues](#). *PLoS One*. 2017;12(12):e0188621. doi: 10.1371/journal.pone.0188621. eCollection 2017. PubMed PMID: 29206843; PubMed Central PMCID: PMC5716552.
 13. Contreras GA, **Strieder-Barboza C**, Raphael W. [Adipose tissue lipolysis and remodeling during the transition period of dairy cows](#). *J Anim Sci Biotechnol*. 2017;8:41. doi: 10.1186/s40104-017-0174-4. eCollection 2017. Review. PubMed PMID: 28484594; PubMed Central PMCID: PMC5420123.
 14. Contreras GA, Thelen K, Schmidt SE, **Strieder-Barboza C**, Preseault CL, Raphael W, Kiupel M, Caron J, Lock AL. [Adipose tissue remodeling in late-lactation dairy cows during feed-restriction-induced negative energy balance](#). *J Dairy Sci*. 2016 Dec;99(12):10009-10021. doi: 10.3168/jds.2016-11552. Epub 2016 Oct 5. PubMed PMID: 27720147.
 15. **Strieder-Barboza C**, Zondlak A, Contreras G. Lipid mobilization assessment in transition dairy cattle using ultrasound image biomarkers. *Livestock Science*. 2015; 177:159-164. doi: 10.1016/j.livsci.2015.04.020.
 16. Sanchez J, **Strieder-Barboza C**, Wageman C, Wittwer F, Noro M. Energy balance and gluconeogenic capacity in grazing transition dairy cows treated with low doses of rbST. *Revista Archivos de Medicina Veterinaria*. 2014; 46(2):321-326.
 17. **Strieder-Barboza C**. Energy makers of grazing dairy cows during transition and early lactation periods with high or moderate body condition before calving. *Revista Científica FCV-LUZ*. 2014; XXIV(1):71-78.
 18. Cucunubo G, **Strieder-Barboza C**, Wittwer F, Noro M. Diagnosis of subclinical ketosis and negative energy balance of dairy cows using samples of blood, urine and milk. *Revista Científica FCV-LUZ*. 2013; XXIII(2):111-119.
 19. Noro M, **Strieder-Barboza C**, Reyes G, Weschenfelder M, Cucunubo G, Sanchez J. Metabolic and productive response in grazing dairy cows supplemented with Quebracho (*Schinopsis balansae*) tannins. *Revista Científica FCV-LUZ*. 2013; XXIII(5):415-423.

20. Noro M, **Strieder-Barboza C**, Deramond D, Pulido R, Wittwer F. Daily variations of ruminal and blood parameters in spring grazing dairy cows supplemented with two non-protein nitrogen sources. *Revista Científica FCV-LUZ*. 2012; XXII(2):154-162.
21. de Camargo EV, Lopes ST, Costa MM, Paim F, **Barbosa CS**, Leal ML. [Neutrophil oxidative metabolism and haemogram of sheep experimentally infected with *Haemonchus contortus* and supplemented with selenium and vitamin E](#). *J Anim Physiol Anim Nutr (Berl)*. 2010 Oct;94(5):e1-6. doi: 10.1111/j.1439-0396.2010.00986.x. PubMed PMID: 20546075.
22. de Camargo EV, dos Anjos Lopes S, Costa M, Paim F, **Barboza CS**, Leal ML. Isolation of *Corynebacterium pseudotuberculosis* in the semen of a ram in the central region of Rio Grande do Sul. *Arquivos do Instituto Biológico (São Paulo)*. 2010; 77(1):139-142.

INVITED TECHNICAL ARTICLES

1. **Strieder-Barboza C** and Cuervo WAV. Totumo (*Crescentia cujete*) silage, a dietary alternative for dry periods. *Infortambo Andina*, Colombia. No. 73 (2014): 40-43. ISSN: 2027-1387.
2. Noro M and **Barboza CS**. Ketosis in dairy cattle: Incidence and control. *Spei Domus* Vol 8, no. 17 (2012): 48-58. ISSN: 1794-7928
3. **Strieder-Barboza C**. Obesity and its effects on health and reproductive performance of beef cattle. *Revista El Cebú*, Colombia. No. 389 (2012). ISSN: 0122-2201.

CONFERENCE PROCEEDINGS

1. **Strieder-Barboza C**, de Souza J, Lock AL, Contreras GA. 2017. Effect of prepartum adiposity and lipolysis on gestational and postnatal adipose tissue inflammation and immune cell infiltration. *The FASEB Journal* 31 (1_supplement), 964.1-964.
2. Contreras GA, **Strieder-Barboza C**, de Souza J, Gandy J, Lock AL. 2017. The effect of prepartum adiposity and lipolysis on gestational and postnatal oxylipids biosynthesis. *The FASEB Journal* 31 (1_supplement), lb316-lb316.
3. **Strieder-Barboza C**, W. Raphael, S. E. Schmidt, A. L. Lock, L. M. Sordillo, and G. A. Contreras. 2016. Fetuin-A: A novel biomarker for lipolysis-induced metabolic stress in transition dairy cows. *Journal of Animal Science* 94 (Suppl5):352-353. doi:10.2527/jam2016-0736.
4. Cuervo W, **Strieder-Barboza C**, Gonzalez J, Amaya C. 2013. Productive assessment of calabash (*Crescentia cujete* L) silage and leguminous protein supplementation for dual purpose cows in Colombian tropic. *Revista Colombiana de Ciencias Pecuarias*, vol. 26, suppl: 448-449. ISSN 0120-0690.
5. **Strieder-Barboza C**, Cuervo, W, Santos, M, Carreño, V. 2013. Productive and metabolic markers in grazing crossbred cows supplemented with condensed tannins in Colombian high tropic. *Revista Colombiana de Ciencias Pecuarias*, vol. 26, suppl: 452-453. ISSN 0120-0690.
6. **Strieder-Barboza C**, Cuervo, W, Santana P, Sarmiento S. 2013. Ruminal indicators of dual-purpose cows fed with calabash silage (*Crescentia cujete*) under tropical conditions. *Revista Colombiana de Ciencias Pecuarias*, vol. 26, suppl: 452-453. ISSN 0120-0690.
7. Noro M and **Strieder-Barboza C**. 2009. Control of bovine ketosis. *Proceedings IX Jornadas Chilenas de Buiatria*, Osorno, Chile.

ORAL PRESENTATIONS IN SCIENTIFIC MEETINGS

1. **Strieder-Barboza C**, CG Flesher, L Geletka, A Ehlers, RW O'Rourke, C Lumeng. 2020. Single-Nuclei Analysis of Adipose Tissue Reveal Transcriptionally and Metabolically Distinct Adipocyte Progenitor Subpopulations in Human Obesity. Michigan Diabetes Research Center Annual Diabetes Symposium (Virtual), Ann Arbor, Michigan, USA.
2. **Strieder-Barboza C**, L Geletka, NA Baker, CG Flesher, A P Ehlers, AA Ghaferi, OA Varban, CN Lumeng, RW O'Rourke. 2020. Lumican Modulates Adipocyte Function in Type 2 Diabetes. Department of Surgery's Moses Gunn 32nd Annual Research Conference, Ann Arbor, Michigan, USA.
3. **Strieder-Barboza C**, J. de Souza, A. L. Lock, G. A. Contreras. 2017. Fetuin-A as a marker of adipose tissue function in transition dairy cows. ADSA Annual Meeting, Pittsburgh, Pennsylvania, USA.
4. De Koster J, **Strieder-Barboza C**, de Souza J, James W, Lock AL, Contreras GA. 2017. Periparturient disease affects macrophage infiltration in subcutaneous adipose tissue of early lactation dairy cows. ADSA Annual Meeting, Pittsburgh, Pennsylvania, USA.
5. **Strieder-Barboza C**, Raphael W, Schmidt SE, Lock AL, Sordillo LM, Contreras GA. 2016. Fetuin-A: A novel biomarker for lipolysis-induced metabolic stress in transition dairy cows. 2016 ASAS-ADSA-CSAS-WSASAS Joint Annual Meeting, Salt Lake City, Utah, USA.
6. **Strieder-Barboza C** and Contreras GA. 2015. Fetuin-A Dynamics in Transition Cows Plasma. 48th Annual Conference of the American Association of Bovine Practitioners, New Orleans, USA.
7. Mogollon, M., **Strieder-Barboza C.**, Vargas, J. 2014. Reproductive diseases and blood markers of dual-purpose cows before artificial insemination in Santander State, Colombia. III Seminario Internacional y IV Nacional de Investigadores en Salud y Producción Animal: SENISPA, Tunja, Colombia.
8. **Strieder-Barboza C.**, Suarez, A., Patarroyo, N. 2014. Metabolic Syndrome in Colombian horses. III Seminario Internacional y IV Nacional de Investigadores en Salud y Producción Animal: SENISPA, Tunja, Colombia.
9. Cuervo W, **Strieder-Barboza C**, Gonzalez J, Amaya C. 2013. Productive assessment of calabash (*Crescentia cujete* L) silage and leguminous protein supplementation for dual purpose cows in Colombian tropic. 2013. Encuentro de Investigadores de las Ciencias Pecuarias, Medellin, Colombia.
10. **Strieder-Barboza C**, Cuervo, W, Santos, M, Carreño, V. 2013. Productive and metabolic markers in grazing crossbred cows supplemented with condensed tannins in Colombian high tropic. Encuentro de Investigadores de las Ciencias Pecuarias, Medellin, Colombia.
11. **Strieder-Barboza C**, Cuervo, W, Santana P, Sarmiento S. 2013. Ruminant indicators of dual-purpose cows fed with calabash silage (*Crescentia cujete*) under tropical conditions. Encuentro de Investigadores de las Ciencias Pecuarias, Medellin, Colombia.
12. Wagemann C, **Strieder-Barboza C**, Böhmwald H, Chihuailaf R, Wittwer F, Noro M. 2011. Seasonality of copper, zinc and selenium imbalances in Chilean dairy herds between 2003-2011. XXXVI Congreso de la Sociedad Chilena de Producción Animal – SOCHIPA, 2011, Punta Arenas, Chile. p. 263-264.

13. Weschenfelder MM, **Strieder-Barboza C**, Wagemann C, Böhmwald C, Chihuailaf R, Wittwer F, Noro M. 2010. Energy imbalances and liver disorders in Chilean dairy herds during 1986 and 2010. Proceedings of XXXV Congreso de la Sociedad Chilena de Producción Animal – SOCHIPA, Coyhaique, Chile. p.179-180.
14. Cucunubo LG, **Strieder-Barboza C**, Pelayo P, Wittwer F, Noro M. 2010. Energy markers of transition dairy cows with positive Rothera. Proceedings of XXXV Congreso de la Sociedad Chilena de Producción Animal – SOCHIPA, 2010, Coyhaique, Chile. p.199-200.
15. Kuschel D, **Strieder-Barboza C**, Pulido R, Wittwer F, Noro M. 2010. Microbial protein synthesis and milk production in dairy cows with high or moderate spring pasture offer supplemented with two sources of nitrogen. Proceedings of XXXV Congreso de la Sociedad Chilena de Producción Animal – SOCHIPA, Coyhaique, Chile. p.139-140.
16. Wagemann C, **Strieder-Barboza C**, Böhmwald H, Chihuailaf R, Wittwer F, Noro M. 2010. Presentation of sodium, magnesium and potassium imbalances in Chilean dairy herds during 1986 and 2010. Proceedings of XXXV Congreso de la Sociedad Chilena de Producción Animal – SOCHIPA, Coyhaique, Chile. p.177-178.
17. **Strieder-Barboza CS**, Cucunubo LG, Sánchez JL, Wittwer F, Noro M. 2010. Energy balance of grazing transition dairy cows with moderate or high body condition before calving. Proceedings of XXXV Congreso de la Sociedad Chilena de Producción Animal – SOCHIPA, Coyhaique, Chile. Oral presentation. p. 143-144.

POSTERS

1. **Strieder-Barboza C**, Carruthers NJ, Caruso JA, Flesher CG, Baker NA, Kerk SA, Ehlers AP, Varban OA, Lyssiotis CA, Lumeng CN, Stemmer PM, O'Rourke RW. 2020. Obese visceral adipose tissue proteome and transcriptome reveals insights into mechanisms of type 2 diabetes pathogenesis. Keystone Symposia - Proteomics in Cell Biology and Disease virtual live conference occurring on September 21-23, 2020.
2. **Strieder-Barboza C**, CG Flesher, L Geletka, RW O'Rourke, C Lumeng. 2020. Single-Nuclei Transcriptomics of Human Adipose Tissue Identify Distinct Adipocyte Progenitor Subpopulations in Type 2 Diabetes. American Diabetes Association's Virtual 80th Scientific Sessions, Chicago, Illinois (June 12-16, 2020).
3. Patel A, **C Strieder-Barboza C**, Flesher CG, Baker NA, Lumeng CN, O'Rourke RW. 2020. Sex and diabetes-specific differences in human primary adipocyte lipolysis; National Conference on Undergraduate Research, Montana State University, Bozeman, MT (March 26-28, 2020).
4. **Strieder-Barboza C**, Baker NA, Flesher CG, Karmakar M, Youngblood RL, Shea LD, Lumeng CN, O'Rourke RW. 2020. Depot-specific adipocyte-extracellular matrix metabolic crosstalk in murine obesity. Department of Surgery's Moses Gunn 32nd Annual Research Conference, Ann Arbor, Michigan, USA.
5. **Strieder-Barboza C**, Geletka L, Baker NA, Flesher CG, Ghaferi AA, Varban OA, Lumeng CN, O'Rourke RW. 2019. Lumican Regulates Adipocyte Cellular Metabolism in Obesity-Associated Type 2 Diabetes. ObesityWeek – TOS, Las Vegas, NV, USA.
6. **Strieder-Barboza C**, Baker NA, Flesher CG, Karmakar M, Neeley CK, Polsinelli D, Dimick JB, Finks JF, Ghaferi AA, Varban OA, Lumeng CN, O'Rourke RW. 2019. Advanced glycation end-

products regulate extracellular matrix-adipocyte metabolic crosstalk via Rho signaling in diabetes. Michigan Diabetes Research Center (MDRC) Symposium. University of Michigan, Ann Arbor, MI, USA.

7. **Strieder-Barboza C** and G. A. Contreras. 2018. Fetuin-A modulates lipid mobilization in bovine adipose tissue by enhancing lipogenic activity of adipocytes. ADSA Annual Meeting, Knoxville, Tennessee, USA.
8. **Strieder-Barboza C**, Thompson E, Thelen K, G. A. Contreras. In vitro adipogenic differentiation of subcutaneous and visceral primary bovine preadipocytes: a coculture model. ADSA Annual Meeting, Knoxville, Tennessee, USA.
9. De Koster J; Nelli R; **Strieder-Barboza C**; De Souza J; Lock AL; Contreras GA Contribution of hormone sensitive lipase to adipose tissue lipolysis and its regulation by insulin in periparturient dairy cows. ADSA Annual Meeting, Knoxville, Tennessee, USA.
10. **Strieder-Barboza C**, J. de Souza, A. L. Lock, G. A. Contreras. 2017. Fetuin-A as a marker of adipose tissue function in transition dairy cows. ADSA Annual Meeting, Pittsburgh, Pennsylvania, USA.
11. de Souza J, **Strieder-Barboza C**, Contreras GA, Lock AL. 2017. C16:0 supplementation alters markers of adipose tissue lipolysis and inflammation in early lactation dairy cows. ADSA Annual Meeting, Pittsburgh, Pennsylvania, USA
12. de Souza J, **Strieder-Barboza C**, Eerdun H, Contreras GA, Lock AL. 2017. Altering the ratio of dietary C16:0 and cis-9 C18:1 modifies the fatty acid profile of plasma lipid fractions and adipose tissue. ADSA Annual Meeting, Pittsburgh, Pennsylvania, USA.
13. Contreras GA, **Strieder-Barboza C**, de Souza J, Gandy J, Lock AL, Sordillo LM. 2017. The effect of body condition score and lipolysis intensity on the biosynthesis of oxylipids in periparturient dairy cows. ADSA Annual Meeting, Pittsburgh, Pennsylvania, USA.
14. Contreras GA, **Strieder-Barboza C**, Thelen K, de Souza J, De Koster J, Lock AL. 2017. Adipose tissue remodeling in transition dairy cows is affected by body condition score and lipolysis intensity. ADSA Annual Meeting, Pittsburgh, Pennsylvania, USA.
15. **Strieder-Barboza C**, de Souza J, Lock AL, Contreras GA. Effect of Prepartum Adiposity and Lipolysis on Gestational and Postnatal Adipose Tissue Inflammation and Immune Cell Infiltration. FASEB J April 2017 31:964.1.
16. Contreras GA, **Strieder-Barboza C**, de Souza J, Gandy J, Lock AL. 2017. The Effect of Prepartum Adiposity and Lipolysis on Gestational and Postnatal Oxylipids Biosynthesis. Experimental Biology, Chicago, USA.
17. **Strieder-Barboza C**, de Souza J, Lock AL, Contreras GA. 2017. Effect of Prepartum Adiposity and Lipolysis on Gestational and Postnatal Adipose Tissue Inflammation and Immune Cell Infiltration. Experimental Biology, Chicago, USA.
18. **Strieder-Barboza C**, Fonseca C, Campos R, García K. 2015. Metabolic and endocrine markers in dual-purpose cattle during the transition period in tropical conditions. Revista Colombiana de Ciencias Pecuarias; 28: Suppl. XIII Encuentro Nacional de Investigadores de Ciencias Pecuarias. Medellin, Colombia.

19. Garcia, K., Campos, R., **Strieder-Barboza C.** 2014. Subclinical ketosis incidence in a dairy herd mineral and vitamin supplementation in Colombian tropics. VI Congreso Latino-Americano de Nutrição Animal (VI CLANA). Sao Pedro, Brazil.
20. **Strieder-Barboza C.**, Cucunubo, LG., Wittwer, F., Noro, M. 2014. Pre- and postpartum energy markers of dairy cows with subclinical ketosis on transition period. *Revista Argentina de Producción Animal* Vol 34 Supl. 1: 518 (2014). ISSN online: 2314-324X; ISSN printed: 0326-0550.
21. **Strieder-Barboza C.**, Triana, M., Mogollon, E., Noro, M. 2014. Metabolic and productive markers of dual-purpose heifers supplemented with sacharina. *Revista Argentina de Producción Animal* Vol 34 Supl. 1: 547 (2014). ISSN online: 2314-324X; ISSN printed: 0326-0550.
22. Cucunubo LG, **Strieder-Barboza C**, Sánchez JL, Pelayo AP, Wittwer F, Noro M. 2013. Determination of urine ketones and blood markers for monitoring energy balance and subclinical ketosis in dairy cows. *Proceedings XVI Congreso Latinoamericano de Buiatría*. Quito, Ecuador.
23. **Strieder-Barboza C**, Cucunubo LG, Pelayo P, Sánchez JL, Wittwer F, Noro M. 2013. Postpartum insulin resistance in grazing dairy cows with high or moderate body condition before calving. *Proceedings XVI Congreso Latinoamericano de Buiatría*. Quito, Ecuador.
24. Sepúlveda P, **Strieder-Barboza C**, Wagemann C, Wittwer F, Noro M. 2012. Retrospective study of metabolic profiles in dairy cows from Southern Chile. *17º Congreso Chileno de Medicina Veterinaria*, Valdivia, Chile.
25. Da Silva LEO, **Strieder-Barboza C**, Weschenfelder M, Sánchez JL, Cucunubo LG, de Moraes LH, Noro M. 2012. Association between ruminal ammonia, milk composition and BUN. *III Congreso Sul Brasileiro de Avicultura, Suinocultura e Laticínios – Feira de Equipamentos, Serviços e Tecnologia*. Bento Goncalves, RS, Brazil.
26. Cucunubo LG, **Strieder-Barboza C**, Wittwer F, Noro M. 2011. Association between subclinical ketosis and blood, urine and milk markers in dairy cows. *Proceedings of X Congreso Chileno de Buiatria*, Osorno, Chile. p.113-114.
27. **Strieder-Barboza C**, Cucunubo LG, Sánchez J, Smülders JP, Wittwer F, Noro M. 2011. Energy balance in transition dairy cows with excessive body condition in before calving. *Proceedings of XV Congreso Latino-americano de Buiatría*, Paysandú, Uruguay. p. 277-279. ISSN 1688-6674.
28. Weschenfelder M, **Strieder-Barboza C**, Reyes G, Cucunubo LG, Sánchez JL, Noro M. 2011. Energy-protein balance in grazing dairy cows supplemented with tannins. *Revista Argentina de Producción Animal*. 31 (Supl. 1): 271-401. ISSN: 0326-0550.
29. Wagemann C, **Strieder-Barboza C**, Böhmwald H, Wittwer F, Chihuailaf R, Noro M. 2011. Imbalances of copper, zinc and selenium in dairy herds in Chile from 1986 to 2011. *Revista Argentina de Producción Animal*. 31(Supl. 1): 1-47. ISSN: 0326-0550.
30. Noro M, **Strieder-Barboza C**, Reyes G, Weschenfelder MM, Cucunubo LG, Sánchez JL. 2011. Metabolic and productive response of grazing dairy cows supplemented with quebracho tannins. *Proceedings of XV Congreso Latino-americano de Buiatría*, 2011, Paysandú, Uruguay. p. 226-228. ISSN 1688-6674.
31. Wagemann C, **Strieder-Barboza C**, Böhmwald H, Chihuailaf R, Wittwer F, Noro M. 2011. Seasonal presentation of macro minerals imbalances in grazing dairy cows of southern Chile.

Proceedings of XV Congreso Latino-americano de Buiatría, Paysandú, Uruguay. p. 256-257. ISSN 1688-6674.

32. Cucunubo LG, **Strieder-Barboza C**, Sánchez J, Ivan Calvache, Wittwer F, Noro M. 2011. Rothera test in urine for the diagnosis of negative energy balance and ketosis in dairy cows. Proceedings of XV Congreso Latino-americano de Buiatría, Paysandú, Uruguay. p. 289-290. ISSN 1688-6674.
33. **Strieder-Barboza C**, Kuschel D, Sepúlveda P, Pulido R, Wittwer F, Noro M. 2010. Daily variations in rumen and blood parameters in dairy cows grazing in spring and supplemented with two sources of nitrogen. Proceedings XXVI World Buiatrics Congress, Santiago, Chile. p. 91-92.
34. **Strieder-Barboza C**, Böhmwald H, Wittwer F, Contreras PA, Chihuailaf R, Noro M. 2009. Blood Ca: P ratio from Chilean dairy herds: Values of metabolic profiles made in 1986-2009. Proceedings IX Jornadas Chilenas de Buiatria, Osorno, Chile. p.106-107.
35. Sepúlveda P, **Strieder-Barboza C**, Cucunubo LG, Pulido R, Wittwer F, Noro M. 2010. Energy-protein balance in dairy cows grazing high or medium grass allowance and supplemented with two sources of nitrogen. Proceedings XXVI World Buiatrics Congress, Santiago, Chile. p. 92-92.
36. Sepúlveda P, **Strieder-Barboza C**, Böhmwald H, Wittwer F, Noro M. 2009. Albumin and globulin blood concentrations in dairy cows of southern Chile. 1er Encuentro Regional de Investigadores en Bienestar Animal, Américas, Valdivia, Chile.
37. Marin JB, **Strieder-Barboza C**, Nicolodi PRS, Krewer CC, Vargas APC, Cecim MS, Leal MLR. 2008. Caseous lymphadenitis in sheep in the central region of Rio Grande do Sul. 35° Conbravet - Congresso Brasileiro de Medicina Veterinária, Gramado, RS, Brazil.
38. **Strieder-Barboza C**, Weber N, Soares EM, Scheiner DT, Aires AR, Rocha RX, Cecim M, Leal MLR. 2007. Hypospadias in lamb. VII Congresso Brasileiro de Buiatria, Curitiba, PR, Brazil.

D. PROFESSIONAL AWARDS

- 2020 **Minority Postdoctoral Fellow – American Diabetes Association (ADA).** Fellowship awarded based on the research proposal: “The role of lumican-expressing adipose stromal cells in regulating adipocyte cellular metabolism in type 2 diabetes”. Role: PI
- 2018 **First Place PhD Division – Graduate Student Poster Contest in Dairy Production.** 2018 American Dairy Science Association Meeting (ADSA), Knoxville, Tennessee, USA
- 2016 **Third place PhD Division - Oral Presentation Competition in Dairy Production –** 2016 American Dairy Science Association Meeting (ADSA), Salt Lake City, Utah, USA
- 2014 **Recognition by Intellectual Productivity.** Universidad Cooperativa de Colombia, Bucaramanga, Colombia
- 2011 **Graduated with Distinction - Master’s Program in Veterinary Sciences.** Graduate School, Universidad Austral de Chile, Valdivia, Chile
- 2010 **First place - National Graduate Competition in Alltech’s Young Scientist Award – Chile.** Award in recognition of a written scientific paper.
Paper title: Daily variations of ruminal and blood parameters in grazing dairy cows supplemented with two non-protein nitrogen sources

E. PERSONAL AWARDS

- 2020 **Keystone Symposia scholarship** - Proteomics in Cell Biology and Disease virtual live conference occurring on September 21-23, 2020.
- 2018 **Burroughs Welcome Foundation Scholarship – Becoming Faculty Workshop.** National Veterinary Symposium, College Station, Texas, USA
- 2011 **Research Graduate Assistant Scholarship.** Awarded by the Graduate School, Universidad Austral de Chile, Valdivia, Chile
- 2008 **Junior Researcher Scholarship.** CNPq -National Council of Technological and Scientific Development, Brazil
Research title: Selenium and Vitamin E effect on oxidative stress in sheep infected with *Haemonchus contortus*

F. INVITED TALKS

- 2020 **Single Cell and Nuclear Analysis of Human Adipose Tissue.** Single-cell Genomics in Obesity and diabetes (scGOD) Research club.
The Michigan Diabetes Research Center. The Life Sciences Institute. University of Michigan, Ann Arbor, MI, USA. September 10th, 2020.
- 2020 **Understanding the role of distinct adipocyte progenitors in the pathogenesis of adipose tissue dysfunction in human obesity and type 2 diabetes.**
Seminar Series: Next Generation Veterinary Scientists. Baker Institute for Animal Health, Cornell University, Ithaca, NY, USA. September 1st, 2020.
- 2020 **Metabolic unbalances in transition dairy cattle.** Virtual Seminar in Nutrition and Reproduction of Bovine Cattle.
Universidad Popular del Cesar, Aguachica, Colombia. May 2020.
- 2015 **Diagnosis of periparturient diseases in dairy cattle.** Outreach Program. Educational Training for Dairy Farms' Employees. Michigan State University.
Project: TrackMiCow: A mobile APP to prevent Dairy Disease, USDA Grant. PI: Professor Lorraine Sordillo.
St. Johns, MI, May 2015.
- 2014 **Ruminant digestive system and digestive disorders.** Outreach Program. Educational Training for farmers. Universidad Cooperativa de Colombia.
Project: Development of a Bovine Breeding Program and Genetics Improvement in the State of Santander-Colombia. Convention between Governance of Santander, Cattle Federation of Santander, Universidad Cooperativa de Colombia.
Zapatoca, Colombia. September 2014.
- 2013 **Negative Energy Balance and Ketosis in Transition Dairy Cows.** Veterinarian's Day.
Universidad Cooperativa de Colombia.
Ibagué, Colombia. May 2013.
- 2013 **Negative Energy Balance and Ketosis in Transition Dairy Cows.** I Ruminant Day.
Universidad Nacional del Tolima.
Ibagué, Colombia. May 2013.

2012 **Energy Unbalances in Transition Dairy Cows.** 3rd Research Day and 1st Seminar on Animal Science and Production. Instituto Universitario La Paz Barrancabermeja, Colombia. November 2012.

G. TEACHING EXPERIENCE

2015 – 2018 **Michigan State University, USA**

1. Invited lecturer on Mammary Gland Physiology course (ANS 435) for Senior Animal Science students
2. Mentorship of (1) veterinary student during the Summer Research Program
3. Co-mentorship of (2) undergraduate students and (1) graduate student - Master's Program

2012 – 2014 **Universidad Cooperativa de Colombia, Colombia**

1. Lecturer in Internal Medicine of Ruminants to 4th-year veterinary students (190 hours/year)
2. Instructor in the rotation of Large Animal Clinics to 5th-year veterinary students (920 hours/year)
3. Mentor of senior research projects (requirement to obtain DVM) of 14 veterinary students

2009 – 2011 **Universidad Austral de Chile, Chile**

1. Academic assistant in the Clinical Pathology course for 3rd year-veterinary students
2. Collaborator in the teaching project for students of primary and secondary schools in the laboratory of Veterinary Clinical Pathology: “Abramos nuestros laboratorios a la investigación científica escolar” (*Let's open our laboratories to scholar scientific research*).

H. EXTERNAL ASSESSMENT EXPERIENCE

2014– present Evaluator of Grant Applications – Royalties Funds in Science, Technology and Innovation – Colciencias, Government of Colombia, Colombia. Area: Cattle Innovation, Research, and Development

Ad-hoc peer reviewer:

- a. Journal of Dairy Science
- b. Scientific Reports
- c. Adipocyte
- d. Molecular Metabolism
- e. Animal Production Science Journal
- f. MVZ Cordoba
- g. Spei Domus
- h. Revista Ciencia y Agricultura

I. UNIVERSITY SERVICE

2017 – 2018 Elected Graduate student representative in the Committee on Graduate Studies and Research - College of Veterinary Medicine, Michigan State University, USA

- 2014 Co-designer and assessor in the Curricular committee of the master’s Program in Animal Health and Production - College of Veterinary Medicine and Animal Science, Universidad Cooperativa de Colombia, Colombia
- 2007 – 2008 Elected representative of veterinary students in the ad-hoc curricular committee for the design of the new curriculum in Veterinary Medicine - College of Rural Sciences, Universidade Federal de Santa Maria, Brazil

J. LANGUAGES

- Portuguese: Native language
- English: Fluent (speaking, reading, writing)
- Spanish: Fluent (speaking, reading, writing)

K. PROFESSIONAL MEMBERSHIPS

1. Member, American Diabetes Association (ADA): 2020 – present
2. Member, American Association for the Advancement of Science (AAAS): 2019-present
3. Member, American Heart Association: 2019 – 2020
4. Member, Board of Veterinary Medicine - COMVEZCOL, Colombia: 2012 – present
5. Member, American Society of Nutrition (ASN): 2017
6. Member, American Dairy Science Association (ADSA): 2016 – present
7. Member, American Association of Bovine Practitioners (AABP): 2015 – 2016

L. COMPLETED RESEARCH SUPPORT

<i>Investigators</i>	<i>Project Title</i>	<i>Funding body</i>	<i>Period</i>
<u>Principal Investigator</u> Dr. Strieder-Barboza <u>Co-sponsors:</u> Dr. O’Rourke Dr. Lumeng	The role of lumican-expressing adipose stromal cells in regulating adipocyte cellular metabolism in type 2 diabetes	American Diabetes Association (ADA), USA Minority Postdoctoral Fellowship	July 2020-2022 <i>(postponed due to COVID-19)</i>
<u>Principal Investigator</u> Dr. Contreras <u>Co-Investigators</u> Dr. Lock Dr. Koster Dr. Strieder-Barboza	Adipose Tissue Metabolic Biomarkers as Predictors of Lactation Performance in Dairy Cows	Michigan Alliance for Animal Agriculture (M-AAA), USA	2018-2019
<u>Principal Investigator</u> Dr. Contreras <u>Co-Investigator</u> Dr. Strieder-Barboza	Fetuin-A: A potential biomarker of insulin resistance in transition dairy cows	Michigan Animal Health Foundation (MAHF), USA	2015-2016

<u>Principal Investigator</u> Dr. Dubeibe <u>Co-Investigators</u> Dr. Strieder-Barboza Dr. Campos	Effect of the implementation of a restricted milk feeding on energy balance and postpartum reproductive performance in sheep	National Committee of Research Development, (CONADI), Colombia	2014-2015
<u>Principal Investigator</u> Dr. Strieder-Barboza <u>Co-Investigators</u> Dr. Campos Dr. Gomez	Metabolic and productive markers of dual-purpose cows during the transition period in tropical conditions	National Committee of Research Development, (CONADI), Colombia	2013-2014
<u>Principal Investigator</u> Dr. Strieder-Barboza <u>Co-Investigator</u> Dr. Cuervo	Metabolic and ruminal markers of dual-purpose cows supplemented with <i>Crescentia cujete</i> silage in tropical conditions	National Committee of Research Development, (CONADI), Colombia	2012-2013