

Paulo de Mello Tavares Lima

Assistant professor

College of Agriculture, Life Sciences and Natural Resources

Department of Animal Science

University of Wyoming

1000 East University Avenue

Laramie, WY, USA. 82071

Office phone: +1 (307) 766 3177

Fax: +1 (307) 766 2355

Email: pdemello@uwyo.edu | ORCID iD: <https://orcid.org/0000-0002-6354-313>

Academic education:

University of Brasília (UnB), Brasília, DF, Brazil. Veterinary Medicine, B.S., 2011.

University of Brasília (UnB), Brasília, DF, Brazil. Animal Science, M.S., 2013.

University of São Paulo – Center for Nuclear Energy in Agriculture (CENA-USP), Piracicaba, SP, Brazil. Science, Ph.D., 2016.

University of São Paulo – Center for Nuclear Energy in Agriculture (CENA-USP), Piracicaba, SP, Brazil. Methane emissions in grazing ruminants, Postdoc, 2022.

Research and Professional experience

Employment: University of Wyoming, Laramie, WY. Assistant professor of Livestock Systems, Precision Livestock Management, RMAL. Department of Animal Science– **January 2023 – Current**

Appointment: 60% research, 35% teaching, 5% services.

Research interest: Precision Livestock Management; Animal Physiology; Animal Nutrition; Enteric Methane Emissions from Ruminants; Effects of plant secondary compounds on animal metabolism.

Courses taught: Domestic Animal Metabolism.

Post-Doctorate - Center for Nuclear Energy in Agriculture (CENA) - University of São Paulo (USP) – 2017 – 2022.

Research Project: Methane emission in cattle: intercropped pasture and use of tannins as mitigation.

Funded by: FAPESP (São Paulo Research Foundation - grant number: 2016/26035-3)

Supervisor: Dr. Adibe Luiz Abdalla.

Research abroad period (as part of the post-doctorate program): Lethbridge Research and Development Centre (Agriculture and Agri-Food Canada). April 8 – 2019; March 25 – 2020.

Research Project: Impacts of different condensed tannins structures on ruminal fermentation. Funded by: FAPESP (São Paulo Research Foundation - grant number: 2018/19580-0).

Supervisor abroad: Dr. Tim A. McAllister

Supervisor: Dr. Adibe Luiz Abdalla

Awarded Research Grants:

- Evaluation of resiliency of forages and plants unique to production systems in Wyoming. Cardiff Wyoming Seed Grant for Collaborative Projects. – U\$ 20,000.00.
- Methane emission in cattle: intercropped pasture and use of tannins as mitigation strategies. São Paulo Research Foundation – FAPESP – Grant number: 2016/26035-3 – Post-doctorate Research.
- Impacts of different condensed tannins structures on ruminal fermentation. São Paulo Research Foundation – FAPESP – Grant number: 2018/19580-0 – Research Abroad Grant.
- Productive aspects and methane emission by Santa Inês sheep kept on tropical grass - legume consortium pasture. São Paulo Research Foundation – FAPESP – Grant number: 2013/02814-5 – PhD Research.

- Scientific journal reviewer:

2024 - Journal of Dairy Research

2024 - Animal

2023 - Journal of Agricultural and Food Chemistry

2023 - Journal of Applied Animal Research

2023 - New Zealand Journal of Agricultural Research

2023 – Acta Agriculturae Scandinavica - Section A: Animal Science

2023 - Environmental Science and Pollution Research

2023 – Canadian Journal of Animal Science

2023 - Fermentation

2023 – Animals

2022 - Annals of Animal Science

2021 – Animal Feed Science and Technology;

2021 – Agroforestry Systems;

2021 – Scientific Report;

2020 – Animal Nutrition;

2020 – Frontiers in Veterinary Science – Guest associate editor;

2020 – Journal of Animal Physiology and Animal Nutrition;

2020 – Anais da Academia Brasileira de Ciências;

2019 – The Journal of Agricultural Science (Cambridge);

2019 – Tropical Animal Health and Production;

2019 – Pakistan Journal of Zoology;

2019 – Arquivo Brasileiro de Medicina Veterinária e Zootecnia;

2018 – Brazilian Journal of Animal Science;

2015 – Small Ruminant Research;
2014 – Animal Production Science.

- Grant reviewer

- FAPESP (São Paulo Research Foundation) – Since March, 2019.

- Guest editor services –

- Frontiers in Veterinary Science – Research topic: Greenhouse Gases Mitigation Strategies in Grazing Ruminants. 11/2021 – 04/2023.

Selected relevant per-reviewed publications (Chronologically):

Lima, P. M. T. ; Paim, T. P.; McAllister, T. A. Editorial: Greenhouse Gases Mitigation Strategies in Grazing Ruminants. *Frontiers in Veterinary Science*, v.11, p. 1360276, 2024. Link: <https://doi.org/10.3389/fvets.2024.1360276>

Yang, W. Z.; **Lima, P. M. T.**; Ramirez, S.; Schwandt, E.; McAllister, T. A. Effects of a Phytogenic Feed Additive on Growth performance, Feed Intake, and Carcass Traits of Beef Steers. *Applied Animal Science* v. 39, 423–432, 2023. Link: <https://doi.org/10.15232/aas.2023-02421>

Pérez-Márquez, S.; Ovani V. S.; **Lima, P. M. T.**; Lana A. M. Q.; Louvandini, H.; Abdalla, A. L.; Mauricio, R. M. *Tithonia diversifolia* Improves In Vitro Rumen Microbial Synthesis of Sheep Diets without Changes in Total Gas and Methane Production. *Agronomy*, v. 13, p. 2768, 2023. Link: <https://doi.org/10.3390/agronomy13112768>

Terry, S. A. ; Krüger, A. M. . ; **Lima, P. M. T.** ; Gruninger, R. J. ; Abbot, D. W. ; Beauchemin, K. A. Evaluation of rumen fermentation and microbial adaptation to three red seaweeds using the rumen simulation technique. *Animals*, v. 13, p. 1643, 2023. Link: <https://www.mdpi.com/2076-2615/13/10/1643>

Bizzuti, B. E. ; Pérez-Márquez, S. ; van Cleef, F. O. S. ; Ovani, V. S.; Costa, W. S.; **Lima, P. M. T.**; Louvandini, H.; Abdalla, A. L. In Vitro Degradability and Methane Production from By-Products Fed to Ruminants. **Agronomy**, v. 13, p. 1043, 2023. Link: <https://www.mdpi.com/2073-4395/13/4/1043>

Fernandes, M. A.; **Lima, P. M. T.**; Amarante, A. F. T.; Abdalla, A. L.; Louvandini, H. Hematological, biochemical alterations and methane production in sheep submitted to mixed infection of *Haemonchus contortus* and *Trichostrongylus colubriformis* **Small Ruminant Research**, v. 216, p. 106798, 2022. Link: <https://www.sciencedirect.com/science/article/pii/S0921448822001870>

Sakita, G. Z.; **Lima, P. M. T***; Abdalla Filho, A. L.; Bompadre, T. F. V.; Ovani, V. S.; Chaves, C. M. S.; Bizzuti, B. E.; Costa, W. S.; Paim, T. P.; Campioni, T. S.; Oliva Neto, P.; Bremmer-Neto, H.; Louvandini, H.; Abdalla., A. L. Treating tropical grass with fibrolytic enzymes from the fungus *Trichoderma reesei*: effects on animal performance, digestibility and enteric methane emissions of growing lambs. **Animal Feed Science and Technology**, v. 286, p.115253, 2022. Link: <https://www.sciencedirect.com/science/article/pii/S0377840122000517?via%3Dihub>

* corresponding author

Ovani, V. S.; Abdalla, A. L.; Márquez, S. P.; Costa, W. S.; Bizzuti, B. E.; **Lima, P. M. T.**; Moreira, G. D.; Gerdes, L.; Louvandini, H. Use of internal markers to estimate feed intake and selection of forage in sheep fed grass and legume hay. **Animal Feed Science and Technology**, v. 283, p.115177, 2022.

Link: <https://www.sciencedirect.com/science/article/pii/S0377840121003631?via%3Dihub>

Nair, J.; **Lima, P. M. T.** ; Abdalla, A. L.; Molnar, L. J. ; Wang, Y. ; McAllister, T. A. ; Geddes, C. M. Kochia (*Bassia scoparia*) harvest date impacts nutrient composition, in vitro degradability, and feed value more than pre-harvest herbicide treatment or herbicide resistance traits. **Animal Feed Science and Technology**, v. 280, p.115079, 2021. Link: <https://www.sciencedirect.com/science/article/pii/S0377840121002650>

Bizzuti, B. E.; Faria, L. A.; Costa, S. W.; **Lima, P. M. T.**; Ovani, V. S.; Krüger, A. M.; Louvandini, H.; Abdalla, A. L. Potential use of cassava by-product as ruminant feed. **Tropical Animal Health and Production**, v. 53, p. 1-7, 2021. Link: <https://link.springer.com/article/10.1007/s11250-021-02555-z>

Ligoski, B.; Gonçalves, L. F.; Claudio, F. L.; Alves, E. M.; Krüger, A. M.; Bizzuti, B. E.; **Lima, P. M. T.**; Abdalla, A. L.; Paim, T. P. Silage of intercropping corn, palisade grass, and pigeon pea increases protein content and reduces in vitro methane production. **Agronomy**, v. 10, p. 1-19, 2020. Link: <https://www.mdpi.com/2073-4395/10/11/1784>

Sakita, G. Z.; Bompadre, T. F. V.; Dineshkumar, D.; **Lima, P. M. T.**; Abdalla Filho, A. L.; Campioni, T. S.; Oliva Neto, P.; Bremer Neto, H.; Louvandini, H.; Abdalla, A. L. Fibrolytic enzymes improving in vitro rumen degradability of tropical forages. **Journal of Animal Physiology and Animal Nutrition** v. 104, p.1267-1276, 2020.

Link: <https://onlinelibrary.wiley.com/doi/abs/10.1111/jpn.13373>

Krüger, A. M.; **Lima, P. M. T.**; Abdalla Filho, A. L.; Moro, J. D. G.; Carvalho, I. Q.; Abdalla, A. L.; Jobim, C. C. Dry matter concentration and corn silage density: Effects on forage quality. **Tropical Grasslands - Forrajes Tropicales** v.8, p.20 - 27, 2020.

Link: <https://www.tropicalgrasslands.info/index.php/tgft/article/view/553>

***Lima, P. M. T.**; Abdalla Filho, A. L.; Issakowicz, J.; Ieda, E. H.; Corrêa, P. S.; de Mattos, W. T.; Gerdes, L.; McManus, C.; Abdalla, A. L.; Louvandini, H. Methane emission, ruminal fermentation parameters and fatty acid profile of meat in Santa Inês lambs fed the legume macrotiloma. **Animal Production Science** v. 60, p. 665-673, 2020.

Link: <https://www.publish.csiro.au/an/AN19127>

*Corresponding author

Louvandini, H.; Ieda, E. H.; Jimenez, C. R.; Corrêa, P. S.; Moretti, D. B.; **Lima, P. M. T.**; McManus, C.; Carvalho, H. W. P.; Fernandes, E. A. N. Effects of maternal dietary cottonseed on the profile of minerals in the testes of the lamb. **Biological Trace Element Research** v. 197, p. 159 -166, 2020.

Link: <https://link.springer.com/article/10.1007/s12011-019-01971-5>

***Lima, P. M. T.**; Crouzoulon, P.; Sanches, T. P.; Zabré, G.; Kabore, A.; Niderkorn, V.; Hoste, H.; Amarante, A. F. T.; Costa-Júnior, L. M.; Abdalla, A. L.; Louvandini, H. Effects of Acacia mearnsii supplementation on nutrition, parasitological, blood parameters and methane emissions in Santa Inês sheep infected with Trichostrongylus colubriformis and Haemonchus contortus. **Experimental Parasitology** v. 207, p.107777, 2019.

Link: <https://www.sciencedirect.com/science/article/abs/pii/S0014489419300426?via%3Dihub>

*Corresponding author

Abdalla Filho, A. L.; **Lima, P. M. T.**; Sakita, G. Z.; Silva, T. P. D.; Costa, W. S.; Ghini, R.; Abdalla, A. L.; Piccolo, M. C. CO₂ fertilization does not affect biomass production and nutritive value of a C tropical grass in short timeframe. **Grass and Forage Science** v.74, p.670 - 677, 2019.

Link: <https://onlinelibrary.wiley.com/doi/abs/10.1111/gfs.12443>

Abdalla Filho, A. L.; Costa Junior, G. T.; **Lima, P. M. T.**; Soltangheisi, A.; Abdalla, A. L.; Ghini, R.; Piccolo, M. C. Fiber fractions, multielemental and isotopic composition of a tropical C₄ grass grown under elevated atmospheric carbon dioxide. **PeerJ** v.7, p. e5932, 2019.

Link: <https://peerj.com/articles/5932/>

Lima, P. M. T.; Moreira, G. D.; Sakita, G. Z.; Natel, A. S.; Mattos, W. T.; Gimenes, F. M. A.; Gerdes, L.; McManus, C.; Abdalla, A. L.; Louvandini, H. Nutritional evaluation of the legume Macrotyloma axillare using in vitro and in vivo bioassays in sheep. **Journal of Animal Physiology and Animal Nutrition** v.102, p.669 - 676, 2018.

Link: <https://onlinelibrary.wiley.com/doi/abs/10.1111/jpn.12810>

Viana, P. G.; ***Lima, P. M. T.**; Paim, T. P., Souza, J. R.; Dantas, A. M. M.; Pereira, E. F.; Gonçalves, V.; McManus, C.; Abdalla, A. L.; Louvandini, H. Gossypol was not detected in the longissimus muscle of lambs fed several forms of cottonseed. **Animal Production Science** v.55, p.812 - 817, 2015.

Link: <https://www.publish.csiro.au/an/an14035>

*Corresponding author

Oliveira, P. B.; ***Lima, P. M. T.**; Campeche, A.; Mendonça, S.; Laviola, B. G.; McManus, C.; Louvandini, H. Growth and carcass characteristics of Santa Inês lambs fed diet supplemented with physic nut meal free of phorbol ester. *Small Ruminant Research*, v. 114, p. 20 - 25, 2013.

[Link: https://www.sciencedirect.com/science/article/pii/S0921448813001491](https://www.sciencedirect.com/science/article/pii/S0921448813001491)

*Corresponding author

Moreira, G. D.; ***Lima, P. M. T.**; Borges, B. O.; Primavesi, O.; Longo, C.; McManus, C.; Abdalla, A. L.; Louvandini, H. Tropical tanniniferous legumes used as an option to mitigate sheep enteric methane emission. *Tropical Animal Health and Production*, v. 45, p. 879 – 882, 2013.

[Link: https://link.springer.com/article/10.1007/s11250-012-0284-0](https://link.springer.com/article/10.1007/s11250-012-0284-0)

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