

CURRICULUM VITAE

Madeline Elaine Rivera

September 2024

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PERSONAL INFORMATION

Name: Madeline Elaine Rivera

Address: Department of Animal Science
Berry College
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Mount Berry, GA 30149-5003

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EDUCATION

- Ph.D., Ruminant Nutrition, Texas A&M University. Department of Animal Science, College Station, TX. Mentor: Dr. Luis Tedeschi, May 2024.
 - GR Certificate, College Teaching, January 2023.
 - Doctoral Dissertation - Advancements in Cattle Nutrition and Health: From Antimicrobial Strategies to Environmental Sustainability and Innovative Pedagogy
- B.S., Animal Science, Texas A&M University. Department of Animal Science, College Station, TX., December 2018.
 - Minor - Business

PROFESSIONAL EXPERIENCE

- Assistant Professor of Animal Science, Berry College, Mount Berry, Georgia, July 2024 - Present
- Graduate Research/Teaching Assistant, Texas A&M University/ Texas A&M AgriLife Research, College Station, Texas, January 2019- May 2024
- Undergraduate Research Assistant, PI: Dr. Luis Tedeschi, Texas A&M University/ Texas A&M AgriLife Research, College Station, Texas, June 2017 – December 2018

PROFESSIONAL DEVELOPMENT

- College Teaching Certificate Program, Texas A&M University, College Station, Texas, *Graduate Student*, August 2021 – December 2022
- PNC Feedlot Nutritionist Bootcamp, Canyon, Texas, *Graduate Student Participant*, August 2022
- Graduate Mentoring Academy, Texas A&M University, College Station, Texas, *Graduate Student Participant*, June 2022 – May 2023
- DeBakey Executive Research Leadership Development Program, Texas A&M University, College Station, Texas, *Project Leader*, January 2020 – August 2021
- Cupcakes for a Cause, Texas A&M University, College Station, Texas, *Organization President*, January 2016 – May 2018

PROFESSIONAL CERTIFICATES

- Graduate Mentoring Academy Fellow Certificate, May 2023
- ARPAS Professional Animal Scientist Certificate, Beef Cattle, January 2023
- Educational Administration and Human Resource Development – College Teaching GR Certificate, January 2023
- G.R.A.D. Aggies Professional Development Certificate- Basic level, August 2022
- DeBakey Executive Research Leadership Development Certificate, August 2021

PROFESSIONAL ASSOCIATIONS

- North American Colleges and Teachers of Agriculture, Member, June 2023 - Present
- American Registry of Professional Animal Scientists, Member, January 2023 - Present
- American Society of Animal Science, Member, January 2019 – Present

HONORS AND AWARDS

- Aggie Leader Scholarship, Texas A&M Association of Former Students, February 2024
- Cary N. Smith Endowed Memorial Scholarship, Texas A&M Association of Former Students, August 2023
- Howard A. Shaw Memorial Scholarship, Texas A&M Association of Former Students, June 2023
- Robertson Graduate Scholarship, Texas A&M Department of Animal Science, April 2023
- Appreciation Challenge Coin, Presented by: Khane Allen (United States Navy veteran), Texas A&M University, August 2022
- Charles and Frances Fleming Scholarship, Texas A&M Association of Former Students, August 2022
- Edgar F. Smith Scholarship, Texas A&M Department of Animal Science, May 2022
- Edgar F. Smith Scholarship, Texas A&M Department of Animal Science, June 2020
- Cartwright Scholarship, Texas A&M Department of Animal Science, April 2019
- TCFA Education Foundation Scholarship, Texas Cattle Feeders Association, April 2019
- Excellence Fellow, Texas A&M Department of Animal Science, January 2019-December 2019

UNDERGRADUATE STUDENT RESEARCH TRAINING/ MENTORING

- Kasia Molina – January 2023 – December 2023
- Bess Coggins – January 2023 – December 2023
- Brock Nichols – January 2023 – May 2023
- Oscar Ochoa – August 2022 – December 2022
- Aubree McMahon – August 2021 – May 2022
- Khane Allen – May 2021 – May 2022
- Lorelei Lahiere – December 2019 – July 2022
- Brianna Bazel – January 2021 – July 2021
- Alexandra Smith – February 2021 – May 2021
- Mary Ann Phan – February 2021 – May 2021
- Noorjahan Seyed Mohamed – January 2021 – May 2021
- Shaylan Wehner – January 2021 – May 2021

- Kayli Crauthers – December 2019 – August 2020
- Chris Johnson – February 2019 – December 2020
- Sydney Wilson – January 2020 – May 2020
- Edgar Montoya – June 2019 – December 2019
- Kaylie Kirk – February 2019 – December 2019
- Morgan Jackson – October 2018 – December 2019
- Jordan Adams – May 2017 – December 2019
- Adam Powell – January 2019 – August 2019
- Daylon Drews – September 2017 – October 2018

INTERNATIONAL STUDENT INTERNSHIP TRAINING/ MENTORING

- Isabela Goncalves – B.S. student from Universidade Estadual de Mato Grosso do Sul, Brazil – Summer 2023
- Roberta Cresci – Ph.D. student from University of Sassari, Italy – Spring 2023
- Andressa Scholz Berca – Ph.D. student from University of Sao Paulo, Brazil – Fall 2021 – Fall 2022
- Marcos Pacheco – Ph.D. student from Universidade Federal de Viçosa, Brazil – Spring 2020 – Spring 2021
- Herlon Meneguelli Alhadas – Ph.D. student from Universidade Federal de Viçosa, Brazil – Spring 2020 – Spring 2021
- Saul Antonio Aguilar Zelaya – B.S. student from University of Zamorano, Tegucigalpa, Honduras – Spring 2019
- Orlando Benjamin Fiallos – B.S. student from University of Zamorano, Tegucigalpa, Honduras – Spring 2018

EXPERIENTIAL LEARNING AND STUDY ABROAD

1. Experiential Learning Tour – Texas Panhandle Beef Production Tour, Faculty Leader: Dr. Tryon Wickersham, Texas A&M University, Summer 2022
2. Study Abroad - Brazil Comparative Ruminant Production, Faculty Leader: Dr. Luis Tedeschi, Texas A&M University, Summer 2018

TEACHING EXPERIENCE

- Department of Animal Science, Texas A&M University, *Graduate Teaching Assistant*
ANSC 111 – Farm Animal Production Systems
ANSC 303 – Principles of Animal Nutrition (Honors contract)
ANSC 318 – Feeds and Feeding
ANSC 414 – Sheep and Goat Production

ABSTRACTS/ PRESENTATIONS

*Indicates mentored abstracts

1. **Rivera, M.E.**, T.A. Wickersham, C.M. Quick, K.A. Dunlap and L.O. Tedeschi, Assessing writing and visual models as a pedagogical strategy for creating individual learning paths in animal nutrition, ASAS-CSAS Annual Meeting, Calgary, Canada, July 2024

2. Dias Batista, L.F., **M.E. Rivera**, E.D. Mendes, K. O'Reilly, and L.O. Tedeschi, Effectiveness of liver abscess-controlling antibiotic on rumen kinetics of beef steers consuming a high-grain diet, ASAS-CSAS Annual Meeting, Albuquerque, New Mexico, July 2023, <https://doi.org/10.1093/jas/skad281.324>
3. Dias Batista, L.F., **M.E. Rivera**, and L.O. Tedeschi, Effects of acidosis bout events on animal growth and development, and the effectiveness of liver abscess-controlling antibiotic on diminishing its incidence, ASAS-CSAS Annual Meeting, Albuquerque, New Mexico, July 2023, <https://doi.org/10.1093/jas/skad281.353>
4. Kaniyamattam, K., V. Veetil, **M.E. Rivera**, L.F.D. Batista, and L.O. Tedeschi, Design and development mechanics of a random forest-based decision-tree model for sub-acute rumen acidosis management in feedlots, ASAS-CSAS Annual Meeting, Albuquerque, New Mexico, July 2023, <https://doi.org/10.1093/jas/skad281.069>
5. **Rivera, M.E.**, Assessing Intercultural Competence Skills in Higher Education Study Abroad, Texas A&M Animal Science Department Seminar, College Station, Texas, September 2022
6. **Rivera, M.E.**, L.F.D. Batista, and L.O. Tedeschi, Evaluation of virginiamycin inclusion in the diets of feedlot steers: Interplay between rumen pH and liver health, ASAS-CSAS Annual Meeting, Oklahoma City, Oklahoma, June 2022, <https://doi.org/10.1093/jas/skac247.052>
7. Dias Batista, L.F., **M.E. Rivera**, and L.O. Tedeschi, Effectiveness of virginiamycin administration on animal health and the observed impacts on growth, development, and intake dynamics in growing and finishing calves, ASAS-CSAS Annual Meeting, Oklahoma City, Oklahoma, June 2022, <https://doi.org/10.1093/jas/skac247.293>
8. Dias Batista, L.F., **M.E. Rivera** and L.O. Tedeschi, Effectiveness of virginiamycin administration on animal performance, intake, and ruminal pH dynamics in growing and finishing calves, PNC Meeting, San Antonio, Texas, April 2022
9. **Rivera, M.E.**, L.F.D. Batista, A.B. Norris, G. D'Souza and L.O. Tedeschi, Inclusion effects of Quebracho (*Schinopsis balansae*) extract and active dry yeast (*Saccharomyces cerevisiae*) in beef cattle limit-fed a grower ration, ASAS-CSAS Annual Meeting, Louisville, Kentucky, July 2021, <https://doi.org/10.1093/jas/skab235.289>
10. **Rivera, M.E.**, A.B. Norris, and L.O. Tedeschi, The effect of sample handling methodology on ruminal redox potential measured *in vivo* and *in vitro*, ASAS-CSAS Southern Section, Chattanooga, Tennessee, January 2020, <https://doi.org/10.1093/jas/skz397.124>
11. Batista, L.F.D., **M.E. Rivera**, A.B. Norris, J.M. Adams, R. Cracco, M.E. Jackson, and L.O. Tedeschi, Effect of Quebracho (*Schinopsis balansae*) extract inclusion in a high

roughage diet upon in vitro gas production, ASAS-CSAS Southern Section, Chattanooga, Tennessee, January 2020, <https://doi.org/10.1093/jas/skz397.122>

12. Adams, J.M., A.B. Norris, L.F.D. Batista, **M.E. Rivera**, and L.O. Tedeschi, The suitability of autoclave and pressure cooker washing methods in comparison to ANKOM200 to determine neutral detergent fiber using different feedstuffs and washing solutions, ASAS-CSAS Southern Section, Chattanooga, Tennessee, January 2020, <https://doi.org/10.1093/jas/skz397.186>
13. *Johnson, C., L.F.D. Batista, **M.E. Rivera**, A.B. Norris, and L.O. Tedeschi, The Effects of Quebracho Extract and Branched-Chain Volatile Fatty Acids Using the In Vitro Gas Production Technique, Capital of Texas Undergraduate Research Conference, Austin, Texas, November 2019
14. *Jackson, M.E., **M.E. Rivera**, A.B. Norris, and L.O. Tedeschi, Comparison of *In Vitro* Gas Production of Two Brazilian Caatinga Forages rich in Condensed Tannins, Capital of Texas Undergraduate Research Conference, Austin, Texas, November 2019
15. *Adams, J.M., A.B. Norris, L.F.D. Batista, **M.E. Rivera**, and L.O. Tedeschi, Comparison of marker type on the accuracy of digestibility estimates for sustainable beef cattle production, Capital of Texas Undergraduate Research Conference, Austin, Texas, November 2019
16. Adams, J.M., A.B. Norris, L.F.D. Batista, **M.E. Rivera**, and L.O. Tedeschi, Comparison of *in situ* techniques to evaluate the recovery of indigestible components and the accuracy of digestibility estimates, ASAS-CSAS Annual Meeting, Austin, Texas, July 2019, <https://doi.org/10.1093/jas/skz258.517>
17. **Rivera, M.E.**, J.M. Adams, and L.O. Tedeschi, Nutritional management for tropical-subtropical-adapted cattle receiving high-concentrate diets, ASAS-CSAS Annual Meeting, Austin, Texas, July 2019, <https://doi.org/10.1093/jas/skz258.066>
18. Batista, L.F.D., A.B. Norris, **M.E. Rivera**, G.D. Souza, J.M. Adams, and L.O. Tedeschi, Effect of Quebracho (*Schinopsis balansae*) extract inclusion in a high roughage diet upon in situ digestion, ASAS-CSAS Annual Meeting, Austin, Texas, July 2019, <https://doi.org/10.1093/jas/skz258.796>
19. Adams, J.M., **M.E. Rivera**, D.R. Drews, A.B. Norris, and L.O. Tedeschi, Using the in vitro gas production technique to investigate effects of Quebracho (*Schinopsis balansae*) on greenhouse gas production and diet digestibility in steers, LAUNCH Undergraduate Research Summer Poster Session, College Station, Texas, August 2018
20. **Rivera, M.E.**, J.M. Adams, D.R. Drews, A.B. Norris, and L.O. Tedeschi, The suitability of autoclave or pressure cooker in comparison to ANKOM200 for determination of dietary fiber in ruminants, LAUNCH Undergraduate Research Summer Poster Session, College Station, Texas, August 2018

INVITED TALKS

1. **Rivera, M.E.**, N. Kirk-Bradley, N. Graff, D. Pall, and J. Linyear, Graduate and Professional Studies-Panel Discussion, Texas A&M University, Cargill THRIVE Scholars Program, College Station, Texas, December 2021

PUBLICATIONS

Published in peer-reviewed journals;

1. Dias Batista, L.F., **M.E. Rivera**, and L.O. Tedeschi, Investigation of virginiamycin to improve health of growing and finishing steers: II. Animal growth and development and intake dynamics, *Applied Animal Science*, Volume 40, Issue 4, Pages 487-503, August 2024, <https://doi.org/10.15232/aas.2023-02510>
2. **Rivera, M.E.**, L.F. Dias Batista, and L.O. Tedeschi, Investigation of virginiamycin to improve health of growing and finishing steers: I. Effects on ruminal acidosis and liver health, *Applied Animal Science*, Volume 40, Issue 3, Pages 329-346, June 2024, <https://doi.org/10.15232/aas.2023-02511>
3. Dias Batista, L.F., **M.E. Rivera**, M.A. Fonseca and L.O. Tedeschi, The influence of virginiamycin on digestion and ruminal parameters under feedlot conditions, *Translational Animal Science*, Volume 8, February 2024, <https://doi.org/10.1093/tas/txae019>
4. Batista, L.F.D., **M.E. Rivera**, A.B. Norris, J.P. Muir, M.A. Fonseca and L.O. Tedeschi, The influence of extended supplementation of quebracho extract to beef steers consuming a hay diet on digestion, ruminal and blood parameters, *Journal of Animal Science*, Volume 99, Issue 5, March 2021, <https://doi.org/10.1093/jas/skab074>
5. Zhang, X.H., A. Marquez, J. Clark, I. Hernandez, **M.E. Rivera**, M. Liu, and B. Burrowes, The Complete Genome Sequence of *Streptomyces* Siphophage Sycamore, *Microbiology Resource Announcements*, Volume 10, Issue 1, January 2021, <https://doi.org/10.1128/MRA.01343-20>
6. Adams, J.M., A.B. Norris, L.F.D. Batista, **M.E. Rivera** and L.O. Tedeschi, Comparison of in situ techniques to evaluate the recovery of indigestible components and the accuracy of digestibility estimates, *Journal of Animal Science*, Volume 98, Issue 10, October 2020, <https://doi.org/10.1093/jas/skaa296>
7. **Rivera, M.E.**, H. Newkirk, R. Moreland, M. Liu, and J. Ramsey, Complete Genome Sequence of *Escherichia coli* Siphophage Schulenberg, *Microbiology Resource Announcements*, Volume 8, Issue 39, September 2019, <https://doi.org/10.1128/MRA.01053-19>

INVITED AD HOC PEER-REVIEWER

Since 2024

- Applied Animal Science
- Tropical Animal Health and Production

ACKNOWLEDGED IN THE FOLLOWING PUBLICATIONS

1. Norris, A.B., W.L. Crossland, L.O. Tedeschi, J.L. Foster, J.P. Muir, W.E. Pinchak and M.A. Fonseca, Inclusion of quebracho tannin extract in a high roughage cattle diet alters digestibility, nitrogen balance, and energy partitioning, *Journal of Animal Science*, Volume 98, Issue 3, March 2020, <https://doi.org/10.1093/jas/skaa047>
2. Tedeschi, L.O. and D.G. Fox, *The Ruminant Nutrition System: Volume 1- An applied model for predicting nutrient requirements and feed utilization in ruminants*, 3rd ed, XanEdu, Ann Arbor, MI, February 2020
3. Norris, A.B., L.O. Tedeschi, and J.P. Muir, Assessment of In Situ Techniques to Determine Indigestible Components in the Feed and Feces of Cattle Receiving Supplemental Condensed Tannins, *Journal of Animal Science*, Volume 97, Issue 12, December 2019, Pages 5016-5026, <https://doi.org/10.1093/jas/skz329>
4. Norris, A.B., L.O. Tedeschi, J.L. Foster, J.P. Muir, W.E. Pinchak, and M.A. Fonseca., Influence of Quebracho Tannin Extract Fed at Differing Rates Within a High-Roughage Diet on the Apparent Digestibility of Dry Matter and Fiber, Nitrogen Balance, and Fecal Gas Flux, *Animal Feed Science and Technology*, Volume 260, December 2019, <https://doi.org/10.1016/j.anifeedsci.2019.114365>
5. Crossland, W.L., J.T. Jobe, F.R.B. Ribeiro, J.E. Sawyer, T.R. Callaway, and L.O. Tedeschi, Evaluation of active dried yeast in the diets of feedlot steers—I: Effects on feeding performance traits, the composition of growth, and carcass characteristics, *Journal of Animal Science*, Volume 97, Issue 3, March 2019, Pages 1335– 1346, <https://doi.org/10.1093/jas/skz007>
6. Crossland, W.L., C.M. Cagle, J.E. Sawyer, T.R. Callaway, and L.O. Tedeschi, Evaluation of active dried yeast in the diets of feedlot steers. II. Effects on rumen pH and liver health of feedlot steers, *Journal of Animal Science*, Volume 97, Issue 3, March 2019, Pages 1347–1363, <https://doi.org/10.1093/jas/skz008>
7. Crossland, W.L., A.B. Norris, L.O. Tedeschi, and T.R. Callaway, Effects of active dry yeast on ruminal pH characteristics and energy partitioning of finishing steers under thermoneutral or heat-stressed environment, *Journal of Animal Science*, Volume 96, Issue 7, July 2018, Pages 2861–2876, <https://doi.org/10.1093/jas/sky165>

NEWSPAPER ARTICLES

1. **Rivera, M.E.**, Dry Conditions Persist, What are my forage options for winter?, *Texas Angus Association*, August 2022, 87(6):26

2. Adams, J.M. and **M.E. Rivera**, 2018 ANSC Brazil Study Abroad: Comparative Ruminant Production, Texas A&M Animal Science Monthly Newsletter, February 2019
3. Menendez, H.M. and **M.E. Rivera**, Presenting at the Capital of Texas Undergraduate Research Conference, Texas A&M Animal Science Monthly Newsletter, January 2020

GRANTS

1. **Rivera, M.E.**, Graduate Student Travel Grant, Texas A&M Department of Animal Science and Quantifiable Animal Performance Area of Excellence, \$500, August 2022, PNC Feedlot Nutritionist Bootcamp, Canyon, Texas
2. **Rivera, M.E.**, Graduate Student Travel Grant, Texas A&M Department of Animal Science and Quantifiable Animal Performance Area of Excellence, \$500, July 2021, ASAS-CSAS Annual Meeting, Louisville, Kentucky
3. **Rivera, M.E.** and Luis Orlando Tedeschi (PI), Texas A&M Department of Animal Science Mini Grant, \$10,000, April 2019- August 2020, Inclusion effects of Quebracho (*Schinopsis balansae*) extract and active dry yeast (*Saccharomyces cerevisiae*) in beef cattle limit-fed a grower diet/ration, Graduate student