

*Curriculum Vitae*  
**DR. OSCAR JAVIER BENITEZ ROJAS**  
Assistant Professor  
Department of Veterinary Sciences  
Texas Tech University  
obenitez@ttu.edu

**EDUCATION AND POST GRADUATE TRAINING**

- 2021 – 2022      **Postdoctoral**, Department of Animal and Food Sciences, Texas Tech University, Lubbock, TX, USA.  
Focus: Muscle and adipose tissue biology in beef cattle
- 2020 – 2021      **Postdoctoral**, Department of Physiology, Wayne State University, Detroit, MI, USA.  
Focus: Developing research in cardiovascular physiologist interested in the integrative control of the cardiovascular system at rest and during stress.
- 2016 – 2020      **PhD**, Department of Large Animal Clinical Science, College of Veterinary Medicine, Michigan State University – East Lansing, MI, USA  
Major: Comparative Medicine and Integrative Biology
- 2005 – 2009      **DVM**, La Salle University, Bogotá D.C, Colombia  
Major: Degree in Veterinary Medicine

**ACADEMIC AND PROFESSIONAL EXPERIENCE**

- 2022 – present      **Assistant Professor**. Dual appointment: Department of Veterinary Sciences, Davis College of Agricultural Sciences and Natural resources; Texas Tech University, Lubbock, TX, USA. School of Veterinary Medicine, Texas Tech University, Amarillo, TX, USA
- 2021 – 2022      **Postdoctoral Research Fellow**. Department of Animal and Food Sciences, Texas Tech University, Lubbock, TX, USA.
- 2020 – 2021      **Postdoctoral Research Fellow**. Department of Physiology, Wayne State University, Detroit, MI, USA
- 2016 – 2020      **Graduate Research Assistant**. Dr. Paul Bartlett and Dr. Daniel Grooms Laboratory, Department, Department of Large Animal Clinical Science, Michigan State University, East Lansing, MI, USA
- 2015 – 2016      **Research Associate**. Department, Department of Large Animal Clinical Science, Michigan State University, East Lansing, MI, USA

- 2011 – 2015      **Veterinary Specialist.** Preventive, reproductive, and clinical management.  
San Alberto, Cesar, Colombia
- 2010              **Laboratory and Clinical Assistant.** Santa Clara Genetics, Cascavel, Paraná,  
Brazil
- 2009              **Research Veterinary Intern.** Veterinary Sciences Institute, Universidad  
Austral de Chile, Valdivia, Los Lagos, Chile.

## PROFESSIONAL MEMBERSHIPS

1. Member, Institute for One Health Innovation, Texas Tech University: 2023-present
2. Member, Board of Veterinary Medicine - COMVEZCOL, Colombia: 2010 – present
3. Member, American Association of Bovine Practitioners (AABP): 2016 – present

## AWARDS AND HONORS

- 2024      **Outstanding Research Award– Davis College of Agricultural Sciences and Natural Resources, Texas Tech University.** Awarded in recognition of outstanding research activity.
- 2017      **First Place PhD Division - Graduate Student Oral Presentation Competition– American Association of Bovine Practitioners Meeting (AABP),** Omaha, Nebraska, US.

## PUBLICATIONS (peer reviewed)

<https://scholar.google.com/citations?user=gzn302MAAAAJ&hl=en&oi=sra>

1. Diez, JF Fiallo, A. P. Tegeler, C. G. Flesher, T. C. Michelotti, H. Ford, M. N. Hoque, B. Bhattarai, **Benitez OJ**, G. F. Christopher, and C. Strieder-Barboza. "Corrigendum to “Extracellular matrix modulates depot-specific adipogenic capacity in adipose tissue of dairy cattle” (J. Dairy Sci. 107: 9978–9996)." Journal of Dairy Science 108, no. 1 (2025): 1156-1158.
2. Scull TF, Strieder-Barboza C, **Benitez OJ**. Peripheral Blood Mononuclear Cell Transcriptome of Dairy Cows Naturally Infected with Bovine Leukemia Virus. Pathogens. 2024 Oct 11;13(10):885.
3. Diez JFF, Tegeler AP, Flesher CG, Michelotti TC, Ford H, Hoque MN, Bhattarai B, **Benitez OJ**, Christopher GF, Strieder-Barboza C. Extracellular matrix modulates depot-specific adipogenic capacity in adipose tissue of dairy cattle. J Dairy Sci. 2024 Jul 3; doi: 10.3168/jds.2024-25040. PubMed PMID: 38969002.

4. Ford HR, Mitchell TM, Scull T, **Benitez OJ**, Strieder-Barboza C. The Effect of Subclinical Ketosis on the Peripheral Blood Mononuclear Cell Inflammatory Response and Its Crosstalk with Depot-Specific Preadipocyte Function in Dairy Cows. *Animals (Basel)*. 2024 Jul 6;14(13). doi: 10.3390/ani14131995. PubMed PMID: 38998107; PubMed Central PMCID: PMC11240650.
5. Tegeler, A. P., Fiallo-Diez, J., Michelotti, T., Flores, L., **Benitez OJ**., Johnson, B. J., & Strieder-Barboza, C. (2023). 32 Depot-Specific Transcriptome and Adipocyte Metabolism in Intramuscular and Subcutaneous Adipose Tissue in Beef Cattle. *Journal of Animal Science*, 101, 16-17.
6. Hall, J. R., **Benitez OJ**., & Johnson, B. J. (2023). 248 Divergent Satellite Cell Profiles of Bovine Trapezius, Longissimus, and Bicep Femoris Muscles in Utero. *Journal of Animal Science*, 101(Supplement\_3), 181-182.
7. Fuerniss, L. K., Young, J. D., Hall, J. R., Wesley, K. R., **Benitez OJ**., Corah, L. R., ... & Johnson, B. J. (2023). Beef embryos in dairy cows: childhood growth of Angus-sired calves from Holstein, Jersey, and crossbred beef dams. *Translational Animal Science*, 7(1), txad096.
8. Fuerniss, L. K., Young, J. D., Hall, J. R., Wesley, K. R., **Benitez OJ**., Rathmann, R. J., & Johnson, B. J. (2022). PSIV-A-2 Beef Genetics in the Dairy Management System: Management System and Maternal Genetic Effects on Calf Growth and Body Measurements. *Journal of Animal Science*, 100(Suppl 3), 248.
9. LaHuis, C. H., **Benitez OJ**., Droscha, C. J., Singh, S., Borgman, A., Lohr, C. E., ... & Taxis, T. M. (2022). Identification of BoLA alleles associated with BLV proviral load in US beef cows. *Pathogens*, 11(10), 1093.
10. **Benitez OJ**., LaDronka, R. M., Norby, B., Grooms, D. L., & Bartlett, P. C. (2022). The effect of bovine leukemia virus on dairy cow longevity. *JDS communications*, 3(3), 185-188.
11. **Benitez OJ**., Norby, B., Bartlett, P. C., Maeroff, J. E., & Grooms, D. L. (2020). Impact of bovine leukemia virus infection on beef cow longevity. *Preventive Veterinary Medicine*, 181, 105055.
12. **Benitez OJ**., Roberts, J. N., Norby, B., Bartlett, P. C., Takeshima, S. N., Watanuki, S., & Grooms, D. L. (2019). Breeding bulls as a potential source of bovine leukemia virus transmission in beef herds. *Journal of the American Veterinary Medical Association*, 254(11), 1335-1340.
13. **Benitez OJ**., Roberts, J. N., Norby, B., Bartlett, P. C., Maeroff, J. E., & Grooms, D. L. (2019). Lack of Bovine leukemia virus transmission during natural breeding of cattle. *Theriogenology*, 126, 187-190.

14. Ruggiero, V. J., Norby, B., **Benitez OJ.**, Hutchinson, H., Sporer, K. R. B., Droscha, C., & Bartlett, P. C. (2019). Controlling bovine leukemia virus in dairy herds by identifying and removing cows with the highest proviral load and lymphocyte counts. *Journal of dairy science*, 102(10), 9165-9175.
15. Ruggiero, V. J., **Benitez OJ.**, Tsai, Y. L., Lee, P. Y. A., Tsai, C. F., Lin, Y. C., ... & Bartlett, P. (2018). On-site detection of bovine leukemia virus by a field-deployable automatic nucleic extraction plus insulated isothermal polymerase chain reaction system. *Journal of virological methods*, 259, 116-121
16. Frie, M. C., Sporer, K. R., **Benitez OJ.**, Wallace, J. C., Droscha, C. J., Bartlett, P. C., & Coussens, P. M. (2017). Dairy cows naturally infected with bovine leukemia virus exhibit abnormal B-and T-cell phenotypes after primary and secondary exposures to keyhole limpet hemocyanin. *Frontiers in veterinary science*, 4, 112.

## CONFERENCE PROCEEDINGS

### Oral presentations

1. Fiallo Diez JF, Tegeler AP, Flesher C, Michelotti TC, Hoque MN, Bhattarai B, **Benitez OJ**, Christopher GF, Strieder-Barboza C. The significance of adipose tissue extracellular matrix microenvironment on adipogenesis. *Proceedings of the 104<sup>th</sup> Annual Conference of Research Workers in Animal Diseases*, p.290. Chicago, IL. January 2024. (Presenter: J.F.D; graduate student).
2. Okon J, Ford H, Beneduzi N, Scull TF, Woerner D, Strieder-Barboza C, **Benitez OJ**. Transcriptomic insights into liver abscesses in beef cattle: A gastrointestinal tissue perspective. *Proceedings of the 104<sup>th</sup> Annual Conference of Research Workers in Animal Diseases*, p.128. Chicago, IL. January 2024 (Presenter: O.J.; graduate student at Benitez lab).
3. Fiallo Diez J, Flesher CG, Tegeler AP, Michelotti TC, Hoque MN, Bhattarai B, Flores LS, **Benitez OJ**, Christopher G, Strieder-Barboza C. Adipocyte adipogenesis is modulated by depot-specific extracellular matrix microenvironment in adipose tissue of dairy cattle. *J. Dairy Sci. Vol. 106, Suppl. 1. 2023. Awarded 1<sup>st</sup> Place on Dairy Production Oral Competition – MS category*. Presented at: 118<sup>th</sup> Annual Meeting of American Dairy Science Association, Ottawa, CA. June 2023. (Presenter: J.F.D; graduate student).
4. Tegeler, A. P., Fiallo-Diez, J., Michelotti, T., Flores, L., **Benitez OJ.**, Johnson, B. J., & Strieder-Barboza, C. (2023). 32 Depot-Specific Transcriptome and Adipocyte Metabolism in Intramuscular and Subcutaneous Adipose Tissue in Beef Cattle. *Journal of Animal Science*, 101(Supplement\_1), 16-17. Presented at ASAS Southern Section Meeting. Raleigh, NC. (Presenter: A.P.T; graduate student).
5. Tegeler AP, Fiallo JF, Michelotti TC, Flores LS, **Benitez OJ ez**, Johnson B, Strieder-Barboza C. Transcriptional profiles and adipocyte metabolic function in intramuscular and subcutaneous adipose tissue in beef cattle. Three-minutes Thesis Competition, Texas Tech University, Lubbock, TX. September 2022. (Presenter: A.P.T.; graduate student). Awarded 2<sup>nd</sup> place.

6. BLV-induced Differential Gene Expression in Peripheral Blood Mononuclear Cells. 2023. All Things BLV. Author(s): Tanner Scull, H. Ford, C. Strieder-Barboza, J. Okon, N. Beneduzi, **Benitez OJ**. (Presenter: O. J. Benitez.)
7. **Benitez OJ**, Bob Norby, Paul C. Bartlett, Daniel L. Grooms, Effect of Bovine Leukosis Virus on Beef Cow Longevity. 99th Annual Conference of Research Workers in Animal Diseases (CRWAD), Chicago, Illinois, US, 2018. (Presenter: O. J. Benitez.)
8. **Benitez OJ**, Bob Norby, Paul C. Bartlett, Daniel L. Grooms. The role of breeding bulls in Bovine Leukemia Virus transmission. Phi Zeta Research Day, College of Veterinary Medicine. MSU, 2018. (Presenter: O. J. Benitez.)
9. **Benitez OJ**, Jennifer Roberts, Bob Norby, Paul C. Bartlett, Daniel L. Grooms, Bulls as a Source of Bovine Leukemia Virus During Natural Breeding. 51st Annual Conference of the American Association of Bovine Practitioners, Phoenix, Arizona, US, 2018. (Presenter: O. J. Benitez.)
10. **Benitez OJ**, Jennifer Roberts, Bob Norby, Paul C. Bartlett, Shin-nosuke Takeshima, Yoko Aida, Daniel L. Grooms, Breeding beef bulls as a source of BLV transmission. 50th Annual Conference of the American Association of Bovine Practitioners, Omaha, Nebraska, US, 2017. (Presenter: O. J. Benitez.)
11. **Benitez OJ**, Jennifer Roberts, Bob Norby, Paul C. Bartlett, Shin-nosuke Takeshima, Yoko Aida, Daniel L. Grooms. The role of breeding bulls in Bovine Leukemia Virus transmission. Phi Zeta Research Day, College of Veterinary Medicine. MSU, 2017. (Presenter: O. J. Benitez.)

### Posters

1. **Benitez OJ**, T. Scull, C. Strieder-Barboza, Unveiling Novel Mechanisms of Immune Dysfunction in Bovine Leukemia Virus Infected Dairy Cows 105<sup>th</sup> Annual Conference of Research Workers in Animal Diseases, January 2025, Chicago, IL. (Presenter: O. J. Benitez.)
2. Beneduzi N, Benitez O, Paiva D, Borges Y, Broadway PR, Nagaraja TG, Hales-Paxon C, **Strieder-Barboza**, Crossland W, Ballou MA, Machado V. Transcriptome analysis of hepatic tissue during the development of liver abscess in Holstein Steers. 104<sup>th</sup> Annual Conference of Research Workers in Animal Diseases, p. 352 January 2024, Chicago, IL. (Presenter: N.B.; graduate student at OJB lab).
3. Beimer, T. Scull, R. Foster, V. Gouvea, Benitez OJ, Texas Tech University, Lubbock, TX, and Texas A&M University, Amarillo, TX. Tissue-Specific Gene Expression in Bovine GI Tract Following NSAID-Induced Barrier Dysfunction (Awarded First place). 2024 (Presenter: N.B.; graduate student at OJB lab).
4. T. Scull, H. Ford, C. Strieder-Barboza, J. Okon, N. Beneduzi, **Benitez OJ**, Texas Tech University, Lubbock, TX. Bovine Leukemia Virus (BLV)-Induced Differential Gene Expression in Peripheral Blood Mononuclear Cells. Texas Tech Graduate Student Research Poster Competition, Bob Albin Outstanding Student Research Competition (Awarded 2nd place), Beef x Dairy Symposium. 2023 (Presenter: N.B.; graduate student at OJB lab).

5. Tegeler, A. P., Fiallo-Diez, J., Michelotti, T., Flores, L., Woerner, D. R., **Benitez OJ**, & Strieder-Barboza, C. (2023). PSIII-20 Transcriptional and Functional Analyses of Intramuscular, Subcutaneous, and Visceral Adipose Tissue in Finished Beef Cattle. *Journal of Animal Science*, 101(Supplement\_3), 381-382. Presented at ASAS Annual Meeting, Albuquerque, NM. July 2023. (presenter: A.P.T; graduate student).
6. **Benitez OJ**, Michelotti TC, Tegeler AP, Johnson B, Strieder-Barboza C. Single-nuclei transcriptomic analysis reveals depot-specific cellular heterogeneity in subcutaneous and intramuscular adipose tissues in beef cattle. Presented at ASAS Annual Meeting, Albuquerque, NM. July 2023. (Presenter: C.S.B).
7. Fiallo JF, Flesher C, Tegeler AP, Michelotti TC, Flores LS, **Benitez OJ**, Strieder-Barboza C. Visceral and subcutaneous adipose tissue adipogenic capacity is mediated by depot-specific extracellular matrix in dairy cattle. 2023. TTUSVM research day, School of Veterinary Medicine, Texas Tech University, Amarillo, Texas. (Presenter: JFF.; graduate student).
8. Flores LS, **Benitez OJ**, Tegeler AP, de la Cruz A, Michelotti TC, Strieder-Barboza C. Depot-specific differences in adipocyte metabolism of beef cattle. Davis College Poster Competition, Texas Tech University, September 2022. (Presenter: L.F.; undergraduate student).
9. E. C. Lessing, **Benitez OJ**, L. D. Felizari, B. J. Johnson. The effect of differing manganese (Mn) concentrations on lipid accumulation in insulin and non-insulin treatments. Undergraduate Research Conference. Texas Tech University. Lubbock TX. 2022 (Presenter: L.F.; undergraduate student).
10. L. K. Fuerniss, J. D. Young, J. R. Hall, K. R. Wesley, **Benitez OJ**, R. J. Rathmann, and B. J. Johnson of Texas Tech University, Lubbock, TX. Beef genetics in the dairy management system: management system and maternal genetic effects on calf growth and body measurements. Plains Nutrition Council Spring Conference, San Antonio. 2022 (Presenter: L.F.; undergraduate student).
11. Fiallo JF, Flesher C, Tegeler AP, Michelotti TC, Flores LS, Benitez OJ, Strieder-Barboza C. Depot-specific adipogenic capacity and ECM crosstalk in visceral and subcutaneous adipose tissue in dairy cattle. Davis College Poster Competition, Texas Tech University, September 2022. (Presenter: J.F.F; graduate student)
12. Tegeler AP, Fiallo JF, Michelotti TC, Flores LS, **Benitez OJ**, Johnson B, Strieder-Barboza C. Transcriptional profile and adipocyte metabolic function in intramuscular and subcutaneous adipose tissue in beef cattle. Davis College Poster Competition, Texas Tech University, September 2022. (Presenter: A.P.T.; graduate student).
13. **Benitez OJ**, Jacqueline Maeroff, Colleen Curtiss, Paul Bartlett, Daniel Grooms. Bovine Leukemia Virus prevalence and lymphocyte count in female beef cattle. Phi Zeta Research Day, College of Veterinary Medicine. MSU, 2016. (Presenter: O. J. Benitez.)

## INVITED TALKS

- 2024    **The role of breeding bulls in Bovine Leukemia Virus transmission.** 86th Annual Kansas State University Annual Conference, All Things BLV. College of Veterinary Medicine, Kansas State University, Manhattan, KS. June 1<sup>st</sup>, 2024.
- 2023    **BLV-induced Differential Gene Expression in Peripheral Blood Mononuclear Cells.** 2023. All Things BLV. College of Veterinary Medicine, Michigan State University, MI. November 9<sup>th</sup>, 2023
- 2019    **Controlling bovine leukemia virus in dairy herds by identifying and removing cows with the highest proviral load and lymphocyte counts.** 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 2019.
- 2018    **The Role of Bovine Leukemia Virus in Dairy Cow Health and Longevity.** 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, Jun 2018.

## TEACHING

### Texas Tech University: 2022- present

#### Courses Taught

VSCI-5001, Special Problems in Veterinary Sciences: Application of Immunology in Animal Health, 1 course.

VSCI-5304, TTU Application of Immunology in Animal Health, 2 course.

VSCI-5001, Special Problems in Veterinary Sciences: Foundations of Pathophysiology in Animal Health, 1 course.

VSCI-5100, TTU Animal Diseases - Seminar: Seminar Part Two, ¼ course

ANSC 6000, Master's Thesis, 3 courses.

ANSC 7000, Research, 3 courses.

#### Non-Credit Instruction : Guest lectures

ANSC 5001, Problems in Animal Science: Food Animals & Human Health & Nutrition, (1 lecture) – once a year

VSCI 5100, Animal Diseases - Seminar: Nutritional Immunology, (1 lecture) – once a year

## DIRECTED STUDENT LEARNING

### Primary mentor

Dissertation Committee Chair/ Mentor, " Elucidate how *Fusobacterium necrophorum* adheres and modifies the transcriptional responses of epithelial cells derived from distinct areas of the gastrointestinal," Animal & Food Sciences, Texas Tech University, TX (January 2025 - Present). Advised: Mayrim Pereira Muñoz

Dissertation Committee Co-Chair/ Mentor, " Therapeutic Potential of the Protein MG53 in Treating Leaky Gut Syndrome in Bovine," Department of Biology, Texas Tech University, TX (January ,2024 - Present). Advised: Ahmad Ali

Dissertation Committee Chair/ Mentor, "Insights on bovine leukemia virus from the transcriptome of immune cells", One Health Sciences, Texas Tech University School of Veterinary Medicine, Texas Tech University, Amarillo, TX (August 2023 - Present). Advised: Tanner Scull

Master's Thesis Committee Chair, / Mentor, "Addressing the Role of Dietary Xylo-Oligosaccharides Derived from Sorghum Stover on Gastrointestinal Health in Dairy Calves", Animal Health and Industry Graduate Program, Department of Veterinary Sciences, Texas Tech University, Amarillo, TX (January 2024 - Present). Advised: Avery Beimer.

Master's Thesis Committee Chair/ Mentor, "Transcriptome analysis of hepatic tissue during the development of liver abscess in Holstein Steers", Animal Health and Industry Graduate Program, Department of Veterinary Sciences, Texas Tech University, Amarillo, TX (August 2023 - Present). Advised: Natalia Beneduzi

Master's Thesis Committee Chair, / Mentor, "Addressing the effects of miRNAs derived from bovine colostrum extracellular vesicles on the immune response to enteric infections in neonatal calves", Animal Health and Industry Graduate Program, Department of Veterinary Sciences, Texas Tech University, Amarillo, TX (2022 - 2024). Advised: James Okon.

### Guidance Committee member

Doctoral Advisory Committee Member, "Elucidating sympathetic nervous system regulations of adipose tissue function in dairy cows," Animal & Food Sciences, Texas Tech University, TX (August 1, 2023 - Present). Advised: Bridger Sparks

Doctoral Advisory Committee Member, " Rapid Detection of Beta-Lactam Resistance Status In Enterobacteriaceae By Liquid Chromatography," One Health Sciences, Texas Tech University School of Veterinary Medicine, Texas Tech University, Amarillo, TX (August 1 2023 - Present). Advised: Yamima Tasnim



Master's Thesis Committee Member, "The effect of a protocol with herbal blend-based products on the health and growth performance of pre-weaned dairy and beef-on-dairy calves"  
Animal Health and Industry Graduate Program, Department of Veterinary Sciences,  
Texas Tech University, Amarillo, TX (January 1, 2024 - Present)  
Advised: Diego Morais Moreira

Master's Thesis Committee Member, " Host-Microbial Dynamics of Beef on Dairy Calves  
During the Neonatal Period," Interdisciplinary Studies. Texas Tech University, TX (2022  
– 2024).  
Advised: Sravani Gade

Master's Thesis Committee Member, "Adipose tissue transcriptional profile and functional  
heterogeneity of adipocyte and extracellular matrices in beef intramuscular, subcutaneous  
and visceral depots," Animal & Food Sciences. (2022 – 2024).  
Advised: Alexandra Tegeler

Master's Thesis Committee Member, “Functional characterization of extracellular matrix on  
depot-specific adipose tissue function in dairy cattle," Animal & Food Sciences. (2022 –  
2024).  
Advised: Jean Fiallo Diez

## **LANGUAGES**

1. Spanish: Native language
2. English: Fluent (speaking, reading, writing)
3. Portuguese: Fluent (speaking, reading, writing)