

BIOGRAPHICAL SKETCH***Erika Ganda****Assistant Professor of Food Animal Microbiomes*

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Education and Training

<i>Institution</i>	<i>Degree</i>	<i>Year</i>	<i>Field of Study</i>
Cornell University	Post Doc.	2019	Food Safety
Cornell University	Ph.D.	2017	Animal Science
Universidade Federal de Goiás	B. VSc.	2012	Veterinary Medicine

Research and Professional Experience

<i>Year(s)</i>	<i>Position</i>	<i>Dept.</i>	<i>Institution</i>
2019-Present	Assistant Professor	Animal Science	The Pennsylvania State University
2017-2019	Postdoc. Assoc.	Food Science	Cornell University
2013-2017	Gr. Research Assist.	Animal Science	Cornell University

Awards and Scholarships

- 2016 Student Presentation Award AABP – American Association of Bovine Practitioners
Ganda, E. K., R. S. Bisinotto, K. Kronauer, S. F. Lima and R. C. Bicalho. 2016. Milk microbiome assessed through 16S rRNA sequencing during antimicrobial treatment of mastitis - A Randomized Clinical Trial.
- 2013-2017 Science Without Borders Scholarship
(Ciencias Sem Fronteiras) CAPES Foundation Brasilia, Brazil

Professional Memberships

- 2019 - American Society for Microbiology.
2019 - Multistate research project on Antimicrobial Resistance (NC1206).
2019 - Penn State Center for Infectious Disease Dynamics.
2019 - Penn State Microbiome Center.
2019 - Pennsylvania Consortium for Antimicrobial Stewardship (PCAS).
2017 - American Dairy Science Association.
2017 - Consortium for Sequencing the Food Supply Chain.
2016 - National Mastitis Council.
2015 - American Association of Bovine Practitioners.

Synergistic Activities

Serving as a reviewer: USDA NIFA Foundational Program (panel member), Animals (Guest Editor), Journal of Dairy Science, Microbiome Journal, Journal of Animal Breeding and Genetics, Scientific Reports.

Student mentoring at Penn State: Postdoc 1; Ph.D. 2; M.Sc. 1;

Peer-reviewed publications (ORCID ID: 0000-0002-8735-0753)

1. **Ganda, E.**; Beck, K. L.; Haiminen, N.; Silverman, J. D.; Kawas, B.; Cronk, B.; Anderson, R. R.; Goodman, L. B.; Wiedmann, M. DNA extraction and host depletion methods significantly impact and potentially bias bacterial detection in a biological fluid. *mSystems* 2021 – *in press*
2. Van Syoc, E.; Carrillo Gaeta, N.; **Ganda, E.** Choice of Commercial DNA Extraction Method Does Not Affect 16S Sequencing Outcomes in Cloacal Swabs. *Animals* 2021, 11, 1372. <https://doi.org/10.3390/ani11051372>
3. Gaeta, N. C., Bean, E., Miles, A. M., Carvalho, D. U., Alemán, M. A., Carvalho, J. S., Gregory, L., and **Ganda, E.** 2020. A cross-sectional study of dairy cattle metagenomes reveals increased antimicrobial resistance in animals farmed in a heavy metal contaminated environment. *Frontiers in Microbiology*, 11, 590325. ISBN/ISSN #/Case #/DOI #: 1664-302X
4. Barden, M., Richards-Rios, P., **Ganda, E.**, Lenzi, L., Eccles, R., Neary, J., Oultram, J., and Oikonomou, G. 2020. Maternal influences on oral and faecal microbiota maturation in neonatal calves in beef and dairy production systems. *Animal Microbiome*, 2(1), 31. ISBN/ISSN #/Case #/DOI #: 2524-4671
5. Weller, D., N. Brassill, C. Rock, R. Ivanek, E. Mudrak, S. Roof, **E. Ganda**, and M. Wiedmann. 2020. Complex Interactions Between Weather, and Microbial and Physicochemical Water Quality Impact the Likelihood of Detecting Foodborne Pathogens in Agricultural Water. *Front. Microbiol.* 11:134. doi:10.3389/fmicb.2020.00134.
6. Vasquez AK, **Ganda EK**, Capel MB, Eicker S, Virkler PD, Bicalho RC, Nydam DV. 2019. The microbiome of *Escherichia coli* and culture-negative nonsevere clinical mastitis: Characterization and associations with linear score and milk production. *J Dairy Sci.* 2019 Jan;102(1):578-594. doi: 10.3168/jds.2018-15062. Epub 2018 Nov 15. PMID: 30447983
7. Zinicola M, Korzec H, Teixeira AGV, **Ganda EK**, Bringhenti L, Tomazi ACCH, Gilbert RO, Bicalho RC. 2018. Effects of pegbovigrastim administration on periparturient diseases, milk production, and reproductive performance of Holstein cows. *J Dairy Sci.* 2018 Dec;101(12):11199-11217. doi: 10.3168/jds.2018-14869. Epub 2018 Oct 11. PMID: 30316593
8. **Ganda, E. K.**, N. Gaeta, A. Sipka, B. Pomeroy, G. Oikonomou, Y. H. Schukken, and R. C. Bicalho. 2017. Normal milk microbiome is reestablished following experimental infection with *Escherichia coli* independent of intramammary antibiotic treatment with a third-generation cephalosporin in bovines. *Microbiome* 5(1):74.

9. Lima, S. F., A. G. Teixeira, F. S. Lima, **E. K. Ganda**, C. H. Higgins, G. Oikonomou, and R. C. Bicalho. 2017. The bovine colostrum microbiome and its association with clinical mastitis. *J Dairy Sci.* 100(4):3031-3042.
10. Oultram, J. W., **E. K. Ganda**, S. C. Boulding, R. C. Bicalho, and G. Oikonomou. 2017. A Metataxonomic Approach Could Be Considered for Cattle Clinical Mastitis Diagnostics. *Front Vet Sci* 4:36.
11. Gaeta, N. C., S. F. Lima, A. G. Teixeira, **E. K. Ganda**, G. Oikonomou, L. Gregory, and R. C. Bicalho. 2017. Deciphering upper respiratory tract microbiota complexity in healthy calves and calves that develop respiratory disease using shotgun metagenomics. *J Dairy Sci* 100(2):1445-1458.
12. **Ganda, E. K.**, R. S. Bisinotto, S. F. Lima, K. Kronauer, D. H. Decker, G. Oikonomou, Y. H. Schukken, and R. C. Bicalho. 2016. Longitudinal metagenomic profiling of bovine milk to assess the impact of intramammary treatment using a third-generation cephalosporin. *Sci Rep* 6:37565.
13. **Ganda, E. K.**, R. S. Bisinotto, A. K. Vasquez, A. G. V. Teixeira, V. S. Machado, C. Foditsch, M. Bicalho, F. S. Lima, L. Stephens, M. S. Gomes, J. M. Dias, and R. C. Bicalho. 2016. Effects of injectable trace mineral supplementation in lactating dairy cows with elevated somatic cell counts. *J Dairy Sci* 99(9):7319-7329.
14. **Ganda, E. K.**, R. S. Bisinotto, D. H. Decker, and R. C. Bicalho. 2016. Evaluation of an On-Farm Culture System (Accumast) for Fast Identification of Milk Pathogens Associated with Clinical Mastitis in Dairy Cows. *PLoS One* 11(5):e0155314.
15. Foditsch, C., G. Oikonomou, V. S. Machado, M. L. Bicalho, **E. K. Ganda**, S. F. Lima, R. Rossi, B. L. Ribeiro, A. Kussler, and R. C. Bicalho. 2016. 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* 11(1):e0146718.
16. Foditsch, C., R. V. Pereira, **E. K. Ganda**, M. S. Gomez, E. C. Marques, T. Santin, and R. C. Bicalho. 2015. Oral Administration of *Faecalibacterium prausnitzii* Decreased the Incidence of Severe Diarrhea and Related Mortality Rate and Increased Weight Gain in Preweaned Dairy Heifers. *PLoS One* 10(12):e0145485.
17. Machado, V. S., G. Oikonomou, **E. K. Ganda**, L. Stephens, M. Milhomem, G. L. Freitas, M. Zinicola, J. Pearson, M. Wieland, C. Guard, R. O. Gilbert, and R. C. Bicalho. 2015. The effect of intrauterine infusion of dextrose on clinical endometritis cure rate and reproductive performance of dairy cows. *J Dairy Sci* 98(6):3849-3858.

18. Lima, F. S., G. Oikonomou, S. . Lima, M. L. Bicalho, **E. K. Ganda**, J. C. Filho, G. Lorenzo, P. Trojancanec, and R. C. Bicalho. 2015. Prepartum and postpartum rumen fluid microbiomes: characterization and correlation with production traits in dairy cows. *Appl Environ Microbiol* 81(4):1327-1337.
19. Bicalho, M. L., F. S. Lima, V. S. Machado, E. B. Meira, Jr., **E. K. Ganda**, C. Foditsch, R. C. Bicalho, and R. O. Gilbert. 2016. Associations among *Trueperella pyogenes*, endometritis diagnosis, and pregnancy outcomes in dairy cows. *Theriogenology* 85(2):267-74
20. Bicalho, M. L., F. S. Lima, **E. K. Ganda**, C. Foditsch, E. B. Meira, Jr., V. S. Machado, A. G. Teixeira, G. Oikonomou, R. O. Gilbert, and R. C. Bicalho. 2014. 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* 97(7):4281-4295.
21. Oikonomou, G., P. Trojancanec, **E. K. Ganda**, M. L. Bicalho, and R. C. Bicalho. 2014. Association of digital cushion thickness with sole temperature measured with the use of infrared thermography. *J Dairy Sci* 97(7):4208-4215.
22. Machado, V. S., M. L. Bicalho, E. B. Meira Junior, R. Rossi, B. L. Ribeiro, S. Lima, T. Santos, A. Kussler, C. Foditsch, **E. K. Ganda**, G. Oikonomou, S. H. Cheong, R. O. Gilbert, and R. C. Bicalho. 2014. 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* 9(3):e91734.