Elizabeth Ann Staiger, MSc, Ph.D.

Assistant Professor
Department of Animal Science and Veterinary Technology
Texas A&M University-Kingsville
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EDUCATION

Ph.D.	Cornell University	January 2015	Animal Science, Genetics
M.S.	Oklahoma State University	July 2009	Animal Science, Breeding
B.S.	Oklahoma State University	May 2007	Animal Science, Pre-veterinary; Honors

EMPLOYMENT HISTORY

2022-Present	Assistant Professor, Department of Animal Science and Veterinary Technology Texas A&M University-Kingsville
2019-2021	Visiting Assistant Professor, Department of Animal Sciences Auburn University
2017-2019	Postdoctoral Associate, Department of Animal Science Cornell University
2015-2016	Postdoctoral Fellow, Department of Medical Biochemistry and Microbiology Uppsala University, Sweden
2015-2015	Postdoctoral Associate, Department of Animal Science Cornell University
2010-2015	Graduate Assistant, Department of Animal Science Cornell University
2009-2009	Lab Manager, Department of Animal Science Oklahoma State University
2007-2009	Graduate Assistant, Department of Animal Science Oklahoma State University

LIST OF COURSES TAUGHT

Texas A&M University-Kingsville

AGRI 3372	Contemporary Issues
ANSC 3306	Equine Management
ANSC 3335	Animal Breeding and Genetics
ANSC 3390	Domestic Animal Genetics
ANSC 4308	Statistics in Agriculture
ANSC 5390	Applied Animal Genetics
ANSC 5390	Statistics in Agriculture
ANSC 6335	Quantitative Genetics

Auburn University

ANSC 3500	Animal Breeding
ANSC 4050	Horse Production
ANSC 4970	Undergraduate Teaching Experience in Animal Breeding
ANSC 4980	Undergraduate Research Experience

Cornell University
ANSC 2100 Principles of Animal Genetics and Breeding

STUDENT RESEARCH MENTORSHIP

Graduate Students

Sarina Garza, MS in Animal Sciences, thesis, TAMUK, 2025-present (Major Advisor)

Yulissa Santana, MS in Animal Sciences, thesis, TAMUK, 2023-present (Major Advisor)

Meredith Harvey, MS in Animal Sciences, thesis, TAMUK, 2023-present (Committee Member)

Jacey Lorimer, MS in Animal Sciences, project, TAMUK, 2024 (Major Advisor)

Cole Anderson, MS in Wildlife Science, thesis, TAMUK, 2022 – 2024 (Committee Member)

Jose Silverio Avila Sanchez, PhD in Wildlife Sciences, TAMUK, 2023 (Graduate Council Rep)

Jennifer Giesey, MS in Animal Sciences, thesis, TAMUK, 2023 (Committee Member)

Vinika Gupta, MS in Computer Sciences, thesis, Auburn University, 2020-2021 (Committee Member)

Undergraduate Students

Violeta Lira (2024-present). Texas Scholars Program. Climate-Smart Cattle project.

Natalie Hartwick (2023-present). Texas Scholars/Leading Hispanics Programs. Association of *DRD2* gene with owner-perceived behavior in horses. Assessing the relationship between behavior and greenhouse gas emissions of cattle.

Julia Warren (2023). Drone Waves Program. The application of thermal drone use to evaluate lameness in horses.

Sarina Garza (2023-2024). McNair Scholar. Genetics of black and brown spotting patterns in Dorper sheep.

Tanya Robinson (2020-2021). Pedigree and genome wide association analysis of reproductive potential in beef and dairy cattle.

Emily Brown (2020-2021). Ancestry modeling in Tennessee Walking Horses.

PUBLICATIONS

Refereed Journal Articles

M.P. Smythe, L.S. Dewberry, **E.A. Staiger**, K. Allen, S.A. Brooks. 2025. AI-assisted digital video analysis reveals changes in gait among three-day event horses during competition. Journal of Equine Veterinary Science. In-press. doi:10.1016/j.jves.2025.105344.

L.T. Johns, M.P. Smythe, L.S. Dewberry, **E.A. Staiger**, K. Allen, S.A. Brooks. 2024. Digital video analysis reveals gait parameters that predict performance in the jumping test phase of three-day eventing. Journal of Equine Veterinary Science. doi:10.1016/j.jevs.2024.105166.

N. Niknejad, J. Caro, R. Bidese-Puhl, Y. Bao, **E.A. Staiger**. 2023. Equine kinematic gait analysis using stereo videography and deep learning: stride length and stance duration estimation. Journal of the ASABE. 66(4):865-877. doi:10.13031/ja.15386.

L. Hellmann, N. Hamilton, **E.A. Staiger**, M. Sole, B.D. Velie. 2021. Owner-perceived behaviour in thoroughbred horses in secondary careers – a pilot study. Applied Animal Behaviour Science. doi:10.1016/j.applanim.2021.105480.

M.C. Gaspar, F. Araújo, **E.A. Staiger**, K. Martin, M. Vierra, G. Foster, E. Lundquist, S.A. Brooks, L. Patterson Rosa, C. Lafayette. 2021. Las disciplinas deportivas en los caballos de razas de trabajo están asociadas con el alelo A en locus DMRT3. Revista Brasileira de Medicina. doi:

L. Patterson Rosa, **E.A. Staiger**, K. Martin, M. Vierra, G. Foster, E. Lundquist, S.A. Brooks, C. Lafayette. 2021. Stock-type equine disciplines hunter, reining and roping are associated with the A allele at the *DMRT3* locus for gait phenotypes in the horse. Animal Genetics. doi: 10.1111/age.13110.

C.J. Posbergh, **E.A. Staiger**, H.J. Huson. 2020. A stop-gain mutation within melanophilin is responsible for the lilac dilution observed in Jacob sheep. Genes. 11(6):618. doi: 10.3390/genes11060618.

C.R. Stambuk, **E.A. Staiger**, B.J. Hines, H.J. Huson. 2020. Exploring physiological and genetic variation of digital cushion thickness of Holstein and Jersey cows and bulls. Journal of Dairy Science. 103(10):9177-9194. doi: 10.3168/jds.2020-18290.

C.R. Stambuk, **E.A. Staiger**, A.N. Ghadikolaei, B.J. Hines, H.J. Huson. 2020. Phenotypic characterization and genome-wide association studies of digital cushion thickness in Holstein cows. Journal of Dairy Science. 103(4):3289-3303. doi:10.3168/jds.2019-17409.

A.N. Ghadikolaei, H.M. Yeganeh, S.R. Miarei-Aashtiani, **E.A. Staiger**, A. Rashidi, H.J. Huson. 2018. Genome-wide association studies identify candidate genes for coat color and mohair traits in the Iranian Markhoz goat. Frontiers in Genetics. doi: 10.3389/fgene.2018.00105.

E.A. Staiger, M.S. Almén, M. Promerová, S.A. Brooks, E.G. Cothran, F. Imsland, K. Jäderkvist Fegraeus, G. Lindgren, H.M. Yeganeh, S. Mikko, J.L. Vega-Pla, T. Tozaki, C.J. Rubin, L. Andersson. 2017. The evolutionary history of the *DMRT3* 'Gait keeper' haplotype. Animal Genetics. 48(5): 551-559. doi: 10.1111/age.12580.

E.A. Staiger, R.R. Bellone, N.B. Sutter, and S.A. Brooks. 2016. Morphological variation in gaited horse breeds. Journal of Equine Veterinary Science. doi:10.1016/j.jevs.2016.04.096.

E.A. Staiger, J.D. Albright, and S.A. Brooks. 2016. Genome wide association mapping of heritable temperament variation in the Tennessee Walking Horse. Genes Brain and Behavior. doi: 10.1111/gbb.12290.

E.A. Staiger, M.A. Abri, K.M. Pflug, S.E. Kalla, D.M. Ainsworth, D. Miller, T. Raudsepp, N.B. Sutter, and S.A. Brooks. 2016. Skeletal variation in Tennessee Walking Horses maps to the *LCORL/NCAPG* region. Physiological Genomics. doi:10.1152/physiolgenomics.00100.2015.

E.A. Staiger, M.A. Al Abri, C.A.S. Silva, and S.A. Brooks. 2016. Loci impacting polymorphic gait in the Tennessee Walking Horse. Journal of Animal Science. 94(4):1377-1386. doi:10.2527/jas.2015-9936.

E.A. Staiger, D. Miller, C. Tseng, J.M. Cassano, L. Nasir, D.J. Garrick, S. Brooks, and D. Antzcak. 2016. Host genetic influence on papillomavirus-induced tumors in the horse. International Journal of Cancer. doi: 10.1002/ijc.30120.

L. Jacobs, **A. Staiger**, J. Albright, and S. Brooks. 2016. The MC1R and ASIP coat color loci may impact behavior in the horse. Journal of Heredity. 107(3):214-219. doi:10.1093/jhered/esw007.

L. Patterson, **A. Staiger**, and S. Brooks. 2015. DMRT3 does not control gait ability, but is associated with gait type in Mangalarga Marchador horses. Animal Genetics. 46 (2): 213-215. doi: 10.1111/age.12273.

J. W. Buchanan, **E. A. Staiger**, M.L. Thonney, and R. G. Mateescu. 2011. Evaluation of PFKM, TFDP2, and HIP2 gene expression and muscle growth in sheep. Journal of Animal Science Advances. 1(2): 85-88.

E. A. Staiger, M. L. Thonney, J. W. Buchanan, E. R. Rogers, P. A. Oltenacu, and R. G. Mateescu. 2010. Effect of Prolactin, β-Lactoglobulin and κ-Casein on Milk Yield in East Friesian Sheep. Journal of Dairy Science. 93 (4):1736-42.

Non-refereed Articles

H.R. Smith, A.G. Parnell, S. Locke, L.V. Rutledge, J.L. Nix, S.A. Gorman, **E.A. Staiger**, P.W. Dyce, J.T. Sawyer, C.R. Mulvaney, and D.R. Mulvaney. Identification of Technology for Enhancing Virtual Classroom Instruction of Hands-On Experiences in Animal Sciences. *NACTA Journal Teaching Tips*. July 2020.

Ann Staiger. "Genetics behind Gait." *The Icelandic Horse*. 2013 Issue 3: 42.

Ann Staiger and Laura Patterson. "Genetics behind Gait." *Mangalarga Marchador*. 2012 Vol. 23, Issue 74: 174-176.

Ann Staiger. "Genetics behind gait? Cornell University searches for the answer." *NWHA National News*. 2011.

Ann Staiger. "Genetics behind the gait? Cornell University searches for the Answer." *The Rocky Mountain Horse*. Winter 2011-2012. 34-35.

Ann Staiger. "Genetics behind gait? Cornell University Searches for the Answer." *The Walking Horse Journal*. 2011 Vol. 11, Issue 2: 9, 14.

Refereed Proceedings

E.A. Staiger, A.J. Landaeta-Hernandez, N. Amati, E. Crespo, T.S. Sonstegard, H.J. Huson. 2018. Ancestry modelling of the Venezuelan JR-type composite breed. Proceedings of the World Congress on Genetics Applied to Livestock Production 11: 623.

Referred Abstracts

E. A. Staiger, R. R. Bellone, N. B. Sutter, and S. A. Brooks. 2011. Genome-wide association of polymorphic gait in the horse. Journal of Animal Science. 89 (E-Suppl. 1): 321.

E. A. Staiger, M. L. Thonney, B. W. Buchanan, and R. G. Mateescu. 2009. The effect of a single nucleotide polymorphism in beta-lactoglobulin gene and prolactin gene on milk production in East Friesian sheep. Journal of Animal Science 87 (E-Suppl. 2): 402.

Non-refereed Abstracts

L.N. Jacobs, **E.A. Staiger**, J.D. Albright, S.A. Brooks. 2015. "A sorrel is hot…": A genetic investigation of the horseman's myth. Journal of Equine Veterinary Science 35 (5): 383.

Manuscripts under Review

K. Kwang, **E.A. Staiger**, X. Smith, B.D. Velie. Equine developmental behaviors and links to future performance: a review. *Journal of Equine Veterinary Science.*

E.A. Staiger, A.P. de Toledo, V.R. Paschoal, L. Patterson-Rosa. Variation in four horse gait categories illustrated by quantitative analysis. *Veterinary Medicine International.*

Manuscripts in Preparation

J. Warren, L. Patterson-Rosa, H. Perotto, **E.A. Staiger**. The application of thermal drone use to evaluate lameness in horses.

S. Garza, Y. Santana, A. Watts, C.J. Posbergh, **E.A. Staiger**. The genetics of black and brown spotting patterns in Dorper Sheep.

V. Gupta, A. West, N. Niknejad, M. Smythe, Y. Bao, S. Brooks, **E. Staiger**. Development of a deep learning-based video processing pipeline towards marker-less equine biomechanical characterization and gait analysis.

PRESENTATIONS

* designates presenter

International - Scientific

E.A. Staiger* and S.A. Brooks. Ancestry modelling of gait type in Tennessee Walking Horses. Poster presented at the 12th Dorothy Russel Havemeyer Foundation International Equine Genome Mapping Workshop, Pavia, Italy. September 12-15, 2018.

E.A. Staiger*, A.J. Landaeta-Hernandez, N. Amati, E. Crespo, T.S. Sonstegard, H.J. Huson. Ancestry modelling of the Venezuelan JR-type composite breed. Poster presentation at the World Congress on Genetics Applied to Livestock Production, Auckland, New Zealand. February 11-16, 2018.

Ann Staiger*. Polymorphic Gait in the Horse: Unlocking the Genetics. Invited speaker for the Swedish University of Agricultural Science Locomotion and Lameness in Animals course, Uppsala, Sweden. May 23- June 02, 2016.

Ann Staiger*. Polymorphic Gait in the Horse: Unlocking the Genetics. Speaker at the Uppsala University Genomics Seminar, Uppsala, Sweden. February 5, 2016.

E.A. Staiger* and S.A. Brooks. Genome-wide association study of gait type in Tennessee Walking Horses. Poster presentation at the 10th Dorthy Russel Havemeyer Foundation International Equine Genome Mapping Workshop, Furnas, S. Miguel, Azores, Portugal. July 10-13, 2013.

International – Extension

Ann Staiger. Gait in the Horse: Unlocking the Genetics. Invited speaker at Campolina Cavalo Nationals Competition, Belo Horizonte, MG, Brazil. September 1-8, 2013.

Ann Staiger. Gait in the Horse: Unlocking the Genetics. Invited speaker at the 33rd National Mangalarga Marchador Competition, Belo Horizonte, MG, Brazil. July 20-29, 2012.

National - Scientific

S.A. Garza*, A.N. Watts, M. Harvey, Y.N. Santana, C. Posbergh, **E.A. Staiger**. Exploring genotypes of black and brown spotting in Dorper sheep. Poster presentation at the Plant and Animal Genome 32 Conference, San Diego, CA. January 10-15, 2025.

E.A Staiger. Breeding and genetics to reduce methane from cattle. Invited panelist for the State of the Science Summit Strategies to Reduce Enteric Emissions at UC Davis, May 21-22, 2024.

E.A Staiger. Research on Genetic Disorders. Invited speaker at the ARPAS-DC Mini-Symposium "Current Developments in Equine Health and Management", May 1, 2024.

E.A Staiger. Genetic selection for climate-smart cattle. Invited speaker at the Climate Smart Agriculture Student Symposium, March 25, 2024.

S.A. Garza*, Y.N. Santana, A.N. Watts, C. Posbergh, **E.A. Staiger**. Exploring genotypes of black and brown spotting in Dorper sheep. Poster presentation at the Baylor University McNair Research Conference, August 3-4, 2023.

M.P. Smythe*, S Dewberry, **E.A Staiger**, K. Allen, S.A. Brooks. Quantifying gait quality changes in Fragile Foal Syndrome carriers using artificial intelligence. Oral presentation at the Equine Science Society Symposium, June 6-9, 2023.

L. Johns*, M.P. Smythe, S Dewberry, **E.A Staiger**, K. Allen, S.A. Brooks. Assessing the effect of fatique on stadium jumping penalty scores in elite three-day event horses using artificial intelligence. Poster presentation at the Equine Science Society Symposium, June 6-9, 2023.

M.P. Smythe*, S Dewberry, **E.A Staiger**, K. Allen, S.A. Brooks. Quantifying Locomotor Phenotypes in Fragile Foal Syndrome carriers using artificial intelligence. Poster presentation at the Plant and Animal Genome 30 Conference, San Diego, CA. January 13-18, 2023.

H. Santos*, **E.A. Staiger**, A.P. de Toledo, L. Patterson-Rosa. Analoc-E: A deep phenotyping tool for horse locomotion. Poster presentation at the Plant and Animal Genome 30 Conference, San Diego, CA. January 13-18, 2023.

E.A. Staiger*. Congenital Failure of Passive Transfer in Equines. Poster presentation at the 13th Dorothy Russel Havemeyer Foundation International Equine Genome Mapping Workshop, Ithaca, NY. July 24-28, 2022.

M.P. Smythe*, S Dewberry, **E.A Staiger**, K. Allen, S.A. Brooks. Quantifying locomotor phenotypes in the horse using artificial intelligence. Poster presentation at the 13th Dorothy Russel Havemeyer Foundation International Equine Genome Mapping Workshop, Ithaca, NY. July 24-28, 2022.

N. Niknejad*, J. Caro, R.B. Puhl, Y. Bao, **E.A. Staiger**. Estimation of Equine Stride Length and Stance Duration Using Stereo 3D Videography and Deep Learning. Presentation at the ASABE Annual International Meeting, Houston, TX. July 17-20, 2022.

M.P. Smythe*, S. Dewberry, V. Gupta, N. Niknejad, **E.A. Staiger**, Y. Bao, K. Allen and S.A. Brooks. Quantifying locomotor phenotypes in the horse with artificial intelligence. Oral and poster presentation at the Plant and Animal Genome XXIX Virtual Symposium, January 8-12, 2022.

V. Gupta*, A. West, Y. Bao, S.A. Brooks, **E.A. Staiger**. A video processing pipeline for equine biomechanical parameters extraction and gait analysis. Presentation at the ASABE Annual International Virtual Meeting, July 12-16, 2021.

M.P. Smythe*, V. Gupta, **E.A. Staiger**, Y. Bao, and S.A. Brooks. Using artificial intelligence to analyze horse gait parameters for genomics research in musculoskeletal traits. Journal of Equine Veterinary Science doi:10.1016/j.jves.2021.103502. Oral presentation at the Equine Science Society Virtual Symposium, June 1-4, 2021.

A. West*, V. Gupta, M. Smythe, **E.A. Staiger**, Y. Bao, S.A. Brooks. Locomotion pattern analysis using digital video labeling by machine learning. Oral presentation at the Equine Science Society Virtual Symposium, June 1-4, 2021.

C.J. Posbergh*, **E.A. Staiger**, and H.J. Huson. Chasing colors: Identifying the genetic variants responsible to coat color variation in sheep. Poster and oral presentation at Plant and Animal Genome XXVIII Conference, San Diego, CA. January 10-15, 2020.

L. Borlle*, **E.A. Staiger**, H.J. Huson, L. Andersson, P. Johnson. The role of CDKN2A snps in ovarian cancer in the laying hen. Poster presented at the Society for the Study of Reproduction Annual Meeting, New Orleans, LA. July 10-13, 2018.

J.C. Nystrom*, M.B. Hannon, **E.A. Staiger**, M.J. Woodward-Greene, J. Soelkner, B.D. Rosen, C.P. VanTassell, T.S. Sonstegard, H.J. Huson. The genetic diversity of body size in African goats. Poster presentation at Plant and Animal Genome XXVI Conference, San Diego, CA. January 13-17, 2018.

L. Patterson Rosa*, M.A. Abri, **E.A. Staiger**, S.A. Brooks. Investigation of computationally predicted structural polymorphisms in gaited horses. Poster presentation at Plant and Animal Genome XXV Conference, San Diego, CA. January 14-18, 2017.

B.D. Rosen*, H.J. Huson, **E.A. Staiger**, T.S. Sonstegard, J.T. Silverstein, B.L. Sayre, M.J. Woodward-Greene, S.G. Schroeder, G. Spangler, E.E. Connor, T. Gondwe, M.F. Rothschild, H.A. Mulindwa, K.T. Gebre, K. Mdladla, T. Mirkena, F.C. Muchadeyi, J. Soelkner, C.P. VanTassell. African goat improvement network: Community-based breeding programs for sustainable genetic improvement. Oral and poster presentation at Plant and Animal Genome XXIV Conference, San Diego, CA. January 9-13, 2016.

E.A. Staiger*, M.A. Abri, K.M. Pflug, S.E. Kalla, D.M. Ainsworth, D. Miller, T. Raudsepp, N.B. Sutter, and S.A. Brooks. Skeletal variation in Tennessee Walking Horses maps to the *LCORL/NCAPG* region. Oral and poster presentation at Plant and Animal Genome XXIV Conference, San Diego, CA. January 9-13, 2016.

H.J. Lynaugh*, E. Hefner, D. Miller, M. Al-Jabri, J. Gless, R. Singh, M. Bateson, **E.A. Staiger**, S.A. Brooks, E. Buckles, D. Antczak. Targeted SNP testing of horses bearing sarcoid tumors. Poster presentation at Plant and Animal Genome XXIII Conference, San Diego, CA. January 10-14, 2015.

E.A. Staiger*, J.D. Albright, S.A. Brooks. Genome-wide association of temperament variation in Tennessee Walking Horses. Oral and poster presentation at Plant and Animal Genome XXIII Conference, San Diego, CA. January 10-14, 2015.

E.A. Staiger*, M.A. Abri, S.E. Kalla, N.B. Sutter, and S.A. Brooks. Genome wide association of skeletal size variation in Tennessee Walking Horses. Poster presentation at Plant and Animal Genome XXII Conference, San Diego, CA. January 11-15, 2014.

E.A. Staiger*, D. Miller, C. Tseng, J. Cassano, L. Nasir, D.J. Garrick, S. Brooks, D. Antczak. Fine-mapping of loci contributing to sarcoid development in horses. Oral and poster presentation at Plant and Animal Genome XXI Conference, San Diego, CA. January 11-16, 2013.

E.J.A. Kowalski*, **E.A. Staiger**, S. Brooks, R. Bellone. A genome-wide association study identifies locus for eye color variation in Puerto Rican Paso Fino horses. Poster presentation at Plant and Animal Genome XX Conference, San Diego, CA. January 14-18, 2012.

E. A. Staiger*, D. Miller, C. Tseng, J. Cassano, L. Nasir, D. J. Garrick, S. Brooks, D. Antczak. Genome wide association of sarcoid tumors in horses. Poster presentation at Plant and Animal Genome XX Conference, San Diego, CA. January 14-18, 2012.

E. A. Staiger*, R. R. Bellone, N. B. Sutter, and S. A. Brooks. Genome-wide association of polymorphic gait in the horse. Poster presentation at the American Society of Animal Science Joint Annual Meeting, New Orleans, LA. July 10-14, 2011.

E. A. Staiger*, N. B. Sutter, R. R. Bellone, and S. A. Brooks. Morphometric Traits in Gaited Breeds of Horse: Potential Future Targets for Mapping. Oral presentation for the Genetics Graduate student competition at the Equine Science Symposium, Murfreesboro, TN. May 31-June 2, 2011.

E.A. Staiger*, M.L. Thonney, and R.G. Mateescu. The effect of Rsa1 polymorphism in beta-lactoglobulin gene on milk production in East Friesian sheep. Poster presentation at Plant and Animal Genome XVII Conference, San Diego, CA. January 10-14, 2009.

State – Extension

E.A. Staiger and L. Patterson-Rosa. Four-beat gaits in the horse: Unlocking the genetics. Invited speaker at the First UF International Collaborative Mini-Symposium, Gainesville, FL. May 14-16, 2019.

Regional - Extension

Ann Staiger. Genetic Studies of Gait: Why do horses pace? Invited speaker at the NY Regional Horseman's Day, Goshen, NY. March 16, 2012.

Local - Scientific

Ann Staiger*. Precision phenotyping in livestock for sustainable production. Invited speaker at the Montana State University Blair Ranch Foundation Seminar Series, Bozeman, MT. February 23, 2023.

Ann Staiger*. Health and performance genetics across species. Invited speaker at the Auburn University Department of Animal Sciences Seminar series, Auburn, AL. September 6, 2019.

E. A. Staiger*. The effect of Rsa1 polymorphism in beta-lactoglobulin gene on milk production in East Friesian sheep. Oral presentation at the 14th Annual Whiteman Award Competition. Stillwater, OK. February 17, 2009.

E. A. Staiger*. The effect of Rsa1 polymorphism in beta-lactoglobulin gene on milk production in East Friesian sheep. Oral presentation at the 5th Annual Graduate Research in the Biological Sciences Symposium, Stillwater, OK. September 18-19, 2008.

Local – Extension

K. Davis, E. Long, M. McCarthy, C. Stice, **A. Staiger**, M. Valentine. "Holey Cow Workshop". Speaker at the Expanding Your Horizons Conference, Ithaca, NY. April 12, 2014.

K. Davis, M. McCarthy, C. Stice, **A. Staiger**. "Animal Adventures Holey Cow Workshop". Speaker at the 4-H Career Explorations Conference, Ithaca, NY. June 25-26, 2013.

Ann Staiger. Learning to open and close your "gaits". Invited speaker at the 4H Animal Crackers program, Ithaca, NY. May 4, 2013.

K. Davis, M. McCarthy, C. Stice, **A. Staiger**. "Holey Cow Workshop". Speaker at the Expanding Your Horizons Conference, Ithaca, NY. April 20, 2013.

RESEARCH AND SCHOLARLY ACTIVITES

Funded Grants

E.A. Staiger, M. Allen, Zoetis, Brahman Genetics, Leachman Cattle. Permanently Reshaping the National Beef Herd through Grass Roots Genetic Selection for Climate-Smart Outcomes. USDA-NRCS-COMM. Principle Investigator. (2023-2026) $4,732,769.

D. Mulvaney, T. Brandebourg, L. Dillard, P. Dyce, W. Greene, K. Mullenix, R. Muntifering, S.P. Rodning, J. Sawyer, **E.A. Staiger**. A Sustainable, Efficient, Profitable Beef Production Future. USDA FAS NNF. Co-Investigator. (2021-2026) $246,000.

E.A. Staiger, P. Dyce, S. Rodning, M. Ellmore, F. Biase. Identification of Genetic Markers in Cows for Selection of Reproductive Potential. Alabama Cattlemen's Association, Alabama State Beef Checkoff. Principle Investigator. (2020-2021) $10,000.

P. Dyce, J. Sawyer, E.A. Staiger, D. Mulvaney. Instructional Technology Enhancement Proposal. Auburn University High-Impact Course Experiences grant. Co-Investigator. (2020) $5,204.

E.A. Staiger, Y. Bao, R. Hanson, S. Moisa. Three-Dimensional Equine Gait Analysis using Computer Vision and Deep Learning for Genomic Mapping. Principle Investigator (2020-2022) $49,800.

G. Lindren, M. Rhodin, **E.A. Staiger**, B.D. Velie, K. Jaderkvist, L.S. Andersson, S. Brooks, T. Kristjansson, J. Meadows, L. Andersson. Horses Lead the Way to a Better Understanding of Genetic Regulation of Locomotion Pattern and Performance Traits. FORMAS Project Grant. Co-Investigator (2017-2018) $335,000.

E.A. Staiger, S. Brooks. Genetics of Gait in TWH. Foundation for the Advancement and Support of the Tennessee Walking Show Horse. Graduate Investigator, Author. (2013) $1,000.

E.A. Staiger. Genetics of Polymorphic Gait in Gaited Breeds of Horses. Cornell University Graduate College Research Travel Grant. Principle Investigator. (2012) $1,945.

S. Brooks, **E.A. Staiger**. Identifying Genes for Locomotor Patterns: the Horse as a Model Species. Cornell Center for Vertebrate Genomics Seed Grant. Graduate Investigator. (2011) $7,000.

Proposals Submitted And Pending

Proposals Submitted But Not Funded

M.C. Donato-Molina, F. Hernandez, B. Turner, **E.A. Staiger**, E. Sanchez, S. Nelson. Promoting 100K Climate-Smart Practices on Columbian-US Rangelands Using Systems-based Education. Co-Principal Investigator. (2024). $67,065.

B.D. Velie, G. Muscatello, **E.A. Staiger**. The Genetics Behind Passive Antibody Transfer in Mares and Foals. AgriFutures Australia Thoroughbred Horses Program. Co-Investigator. (2024-2027). $150,000.

E.A Staiger. Shy Feeders and Impact of Behavior and Conformation. C-Lock Equipment Grant. Principle Investigator. (2023-2025). $250,144.

L.A. Kinman, T. Tolen, J. Lohakare, J. Antwi, M. Daley, P. Ampim, B. Foxworth, T. Machado, J. Apple, **E.A. Staiger**, K. Gehring, L. Moore, M. Baker. From Learning to Leading: Cultivating the Next Generation of Diverse Food and Agriculture Professionals. USDA-NIFA-ARPAED. Co-Investigator. (2023-2027) $10,000,000.

L. Taylor, A. Johnson, X. **E.A. Staiger**. Implications of Genetics and Management of the Pregnant Mare on Foal Immunoglobulin G Levels. American Quarter Horse Foundation, Young Investigator Award. Co-Principle Investigator. (2020-2022) $20,000.

J. Caro, Y. Bao, **E.A. Staiger**. The Influence of Gene Expression Associated with Changes in 3D Gait Biomechanics of Performance Horses Over Time. American Quarter Horse Foundation, Young Investigator Award. Co-Principle Investigator. (2020-2022) $20,000.

E. A. Staiger, Y. Bao, S. Rodning, S. Moisa, K. Mullenix, M. Elmore, R. Hanson. Deep Learning-based Image Analysis for Automatic Scoring of Claw Shape and Leg Conformation for Genomic Mapping. Alabama Cattlemen's Association, Alabama State Beef Checkoff Grant. Principle Investigator. (2020-2021) $10,000.

E.A. Staiger, Y. Bao, S. Brooks, S. Moisa, R. Hanson. Three-Dimensional Equine Gait Analysis using Computer Vision and Deep Learning for Genomic Mapping. Morris Animal Foundation. Principle Investigator. (2020-2022) $73,075.

E.A. Staiger. Landscape Genomics: A New Tool to Characterize the Diversity of Climate Adaptation in African Goats for Sustainable Production. Cornell University Atkinson Postdoctoral Fellowship in Sustainability. Principle Investigator. (2017-2018) $150,000.

S. Brooks, L. Patterson-Rosa, H. Huson, **E.A. Staiger**, H.K. Adams. Unraveling Neural Pathways of Locomotion. Pre-proposal, National Science Foundation. Co-Investigator. (2017-2019) $-

H. Huson, **E.A. Staiger,** J. Wakshlag, H. Klink, D. Winkler. Technology and Physiology: The Keys to Unlocking the Genetics of Canine Athletic Performance. Morris Animal Foundation. Co-Principle Investigator. (2017-2019) $150,000

H. Huson, **E.A. Staiger.**A Strong Mind: Identifying the Genetic Mechanisms Underlying Working Dog Behavior for Improved Well-being. AKC Acorn Research Grant. Co-Principle Investigator. (2017) $14,175

H. Huson, **E.A. Staiger,** J. Wakshlag, H. Klink, D. Winkler. Technology and Physiology: The Keys to Unlocking the Genetics of Canine Athletic Performance. Waltham Foundation Research Grant. Co-Investigator. (2017-2019) $20,000.

H. Huson, **E.A. Staiger,** J. Wakshlag, H. Klink, D. Winkler. The Genetics Driving Elite Alaskan Sled Dogs to the Winners Podium. National Science Foundation. Co-Investigator. (2017-2019) $200,000

E.A. Staiger, G. Lindren, M. Rhodin, S. Brooks, L. Andersson. Gait Genes: Identification of genes that regulate the pattern of locomotion using the horse as a model organism. Marie Curie Horizon2020 Individual Fellowship. Principle Investigator. (2015-2016) $25,000

G. Lindren, M. Rhodin, **E.A. Staiger**, B.D. Velie, K. Jaderkvist, L.S. Andersson, S. Brooks, T. Kristjansson, J. Meadows, L. Andersson. Horses lead the way to a better understanding of genetic regulation of locomotion pattern and performance traits. FORMAS Project Grant. Co-Investigator. (2015-2017) $335,000

E.A. Staiger, G. Lindren, M. Rhodin, S. Brooks, L. Andersson. GlideRide: Identification of genes that regulate the pattern of locomotion using the horse as a model organism. Marie Curie Horizon2020 Individual Fellowship. Principle Investigator. (2014-2015) $25,000.

S. Brooks, J. Albright, **E.A. Staiger**. Neurogenetics of a unique gait phenotype and sensorimotor integration. National Institute of Health R01. Co-Investigator. (2013-2016) $1,198,907

PROFESSIONAL GROWTH AND ACTIVITES

Membership in Professional Societies

North American Colleges and Teachers of Agriculture, 2020 - present
International Society for Animal Genetics, 2011 – present
Equine Science Society, 2010 - present
American Society of Animal Science, 2007 - present

Attendance at Meetings of Professional Societies

International Society for Animal Genetics (2021)
Dorthy Russel Havemeyer Foundation International Equine Genome Mapping Workshop (2013, 2018, 2022)
Equine Science Society (2011, 2021)
American Society of Animal Science (2008, 2009, 2011)

Professional Service Activities

Ad-hoc reviewer for scientific journals, 2012 - present
Journal of Heredity; Animal Genetics; Journal of Dairy Science; Journal of Animal Science; Journal of Equine Veterinary Science; Canadian Journal of Animal Science; Journal of Animal Breeding and Genetics; PLOS ONE; Equine Veterinary Journal, Animals

Guest editor, Animals (ISSN 2076-2615), 2022 special issue "Phenotypic and Genotypic Characterization of Farm Animals"

Equine Workshop coordinator for Plant and Animal Genome 32 Conference held January 10-15, 2025

Sustainable Cattle production workshop coordinator for Climate-Smart Commodities grant held in Victoria, TX on November 15-16, 2024.

Genomic EPD workshop coordinator for Climate-Smart Commodities grant held in Harlingen, TX on May 25, 2024.

Equine Workshop co-coordinator for Plant and Animal Genome 31 Conference held January 11-17, 2024

Other Activities

Participant in TAMUK ACUE course: Effective Teaching Practices, Fall 2024.

Attended TAMUK Faculty workshop *Understanding Today's Learners*. August 21, 2024.

Attended TAMUK Faculty workshop *Have a Nice Class: Research-based Best Practices in Instruction*. August 21, 2024.

Attended TAMUK Safe Zone Training course. October 18, 2022.

Panelist for TAMUK *Discussion on Diversity, Equity, Inclusion and Respect*. October 12, 2022.

Participation in TAMUK Center for Teaching Effectiveness New Faculty Investment Program, January-May, 2022.

Attended AAES Grant Writing Workshop, Auburn University, October 14, 2020.

Participant in Auburn University Animal Sciences High Impact Practices Academy, January 2020 – January 2021.

Attended Auburn University workshop *Documenting Teaching Effectiveness for Promotion and Tenure*, November 5, 2019.

Attended Cornell University Pathways to Success Symposium, February 26, 2019.

Attended Cornell University GET SET workshop *Teaching Your Students How to Critically Read Primary Literature*, February 13, 2019.

Attended Cornell University Responsible Conduct of Research workshop *Center for Open Science Training*, November 28 - 29, 2018.

Attended Cornell University GET SET workshop *Integrating Technology into Your Classes*, October 29, 2018.

Attended Cornell University BRC Bioinformatics workshop series *RNA-Seq Data Analysis*, October 24 - November 7, 2018.

Attended Cornell University GET SET U-wide Teaching Conference, October 20, 2018.

Attended Cornell University OSP workshop *How to Write a Successful NSF Career Proposal*, May 18, 2018.

Attended Cornell University Faculty Development and Diversity workshop *How to Write a Successful NIH Grant*, April 16, 2018.

Attended Cornell University CITRL workshop series *Building Mentoring Skills for an Academic Career*, January 30 - March 27, 2018.

SERVICE ACTIVITIES

Committee Assignments

Departmental
Animal Science Nutrition Faculty Search Committee member, TAMUK (2024)
Graduate Program Committee, Auburn University (2021)
Curriculum Committee, Auburn University (2021)
Social Committee, Auburn University (2021)
Webpage/Social Media Committee, Auburn University (2020-2021)
Equine Lecturer Search Committee, Auburn University (2020)
Equipment Committee, Auburn University (2020)
Instructional Technology Equipment committee, Auburn University (2020)

College
Javelina Scholarship Committee, TAMUK (2022-present)
College of Agriculture Instructional Advisory Committee, Auburn University (2020-2021)

University
IACUC Committee, TAMUK (2022-present)
Calendar Committee, TAMUK (2022-present)

Leadership Roles on Committees

Chair of Animal Science Lecturer Search Committee, TAMUK (2022)

Student Organization Advisor

Javelina Equestrian Club and Team, TAMUK (2022-present)
Block & Bridle Club, Auburn University (2020-2021)
Collegiate Horseman's Association, Auburn University (2020-2021)

Other Services to the University

Grant review panelist for the National Science Foundation (2024)

Grant review panelist for the National Academies of Sciences U.S. –Egypt Science and Technology Joint Fund (2022)

Representative on the S1094 multistate project "Genomic tools to improve equine health, wellbeing and performance" (2022-present)

Representative on the NRSP8 project "Genomic Capacity: Building Applied Genomic Capacity for Animal Industries" (2025-present)

Representative on the S1086 multistate project "Enhancing sustainability of beef cattle production in Southern and Central US through genetic improvement" (2019-2022)

Representative on the NRSP8 project "National Animal Genome Research Program" (2019-2023)

HONORS AND AWARDS

Everingham Award for Teaching, Cornell University (2014)

Equine Neal A. Jorgenson Travel Grant for best graduate student abstract (2013, 2014)

Equine Science Society Graduate Student Genetics oral presentation competition (2011) 1st place