

# Thomas E. Burkey, Ph.D.

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## Education

**Kansas State University--Manhattan, KS**

PhD. Animal Physiology, 2006

Emphasis: Mucosal innate immunity

Dissertation title: Expression and regulation of porcine Toll-like receptors

**Kansas State University--Manhattan, KS**

M.S. Animal Science, 2003

Emphasis: Mucosal immunity and nutrition of swine

Thesis title: Effect of dietary mannanoligosaccharide and sodium chlorate on growth performance of weaned pigs challenged with *Salmonella enterica* serotype Typhimurium

**Rockford University -- Rockford, Illinois**

B.A. Biology; Chemistry, Physics and Secondary Education minors (12/1996)

## Experience

- 1/20-present: **Associate Dean for Graduate Education & Partnership Engagement**, College of Agricultural Sciences & Natural Resources, University of Nebraska, Lincoln, NE
  - Assignment: 50% Administration
- 7/19-present: **Professor**, Animal Science Dept., University of Nebraska, Lincoln, NE
  - Assignment: 30% Research, 20% Teaching
- 7/17 – present: **Co-Founder, Synbiotic Health**; <https://synbiotichealth.com/>
- 12/22-7/23: **Interim Department Head**, Animal Science Department, University of Nebraska, Lincoln, NE
- 7/12-6/19: **Associate Professor**, Animal Science Dept., University of Nebraska, Lincoln, NE
- 7/06-6/12: **Assistant Professor**, Animal Science Dept., University of Nebraska, Lincoln, NE
- 8/01-5/06: **Graduate Teaching/Research Assistant**, Kansas State University, Manhattan, KS
- 8/98-6/01: **Secondary Science Teacher**, Hononegah Community High School, Rockton, IL
- 8/97-6/98: **Secondary Science Teacher**, North Boone High School, Poplar Grove, IL
- 8/96-6/97: **Secondary Science Teacher**, Auburn High School, Rockford, IL

## Leadership Development

- Leadership Coaching, Leadership Resources, 2022-23
- University of Nebraska System
  - Developing Excellence in Academic Leaders Program, 2024-26
- UNL Office of the Executive Vice Chancellor
  - Department Executive Officer Leadership Series, 2023
  - Associate Deans Leadership Series, 2021-present
- Profile XT Assessment – Thinking, Learning and Behavioral Preferences, 2022
- Profile XT Assessment – Thinking, Learning and Behavioral Preferences, 2014
- Effective Personal Productivity (EPP) Development Program, Leadership Resources, 2014

## **Diversity and Inclusive Excellence Programming**

- Department of Animal Science DEI Committee, 2021 – present
- OUCH! Training, 2020
- OASIS Diversity & Inclusion Basics Training, 2020
- CASNR Interim Teaching and Learning Workshop on Diversity and Inclusion, 2018

## **Awards/Honors**

- 2024 UNL CASNR Holling Family Sustained Excellence in Teaching/Learning Award
- 2017 Nebraska Chapter of Gamma Sigma Delta Excellence in Teaching Award
- 2010 Research Development Fellows Program, UNL Office of Research & Economic Development
- 2009 Faculty of the Year Award, Presented by the UNL/ISU PPVM, Class of 2012

## **Teaching Activities-University of Nebraska**

- VMED 550: Nutritional Biochemistry (Fall, 2009 - present)
- BMS 336 (Iowa State University CVM): Veterinary Nutrition (Fall, 2019-present)
- ASCI 120: Animal Biology (Fall, 2024 - present)
- ASCI 491: Animal Science Senior Seminar (Spring, 2023)
- ASCI (NUTR) 927: Amino acid and protein nutrition (Spring, 2008 - present)
- ASCI 496/896: Domestic Animal Immunology, New Course, (Fall, 2018 – present)
  - Co-taught with Dr. Hiep Vu
- ASCI 320: Animal nutrition and feeding (Fall, 2016)
- AGRI 310: Study tours in International Agriculture (Spring, 2016, 2018, 2020, 2024)
  - Faculty Leader for “New Zealand: Land of the Long White Cloud”
- VMED 646/ASCI 846: Digestive physiology and metabolism (Spring, 2007 - 2014)
- ASCI (NUTR) 921: Nutrition Seminar (Fall, 2007; Spring, 2013; Fall, 2019; Spring, 2020; Fall, 2023)
- ASCI 421/821: Advanced animal nutrition (Fall, 2007 and 2008)

## **University of Nebraska Service**

### Department of Animal Science

- Animal Science Internal Advisory Committee, 2023 – present
- Animal Science Promotion and Tenure Committee, 2020 – 2022
  - Chair, 2022
- Animal Science Academic Program Review Writing Committee, 2018
- Interdisciplinary Department Seminar Committee, 2014 – present
- Animal Science Curriculum Review Committee, 2012 – 2014
- Animal Science Graduate Committee, 2009 – 2020
  - Co-chair, 2019 – 2020
- Animal Science Block and Bridle Club (Advisor), 2009 - 2012, 2015 – 2020, 2023 – present
  - Future Pork Leaders (Advisor), 2015 - 16
- Animal Science Academic Quadrathlon (Chair), 2008 – 2020
- Animal Science Undergraduate Teaching and Advisement Committee
  - Curriculum (2007 - 09, 2013 - 2022)

- Advising (2017 – 2022)
- Animal Science Graduate Student Association (Advisor), 2007 - 09
- Animal Science Safety Committee (Chair), 2006 – 08

#### School of Veterinary Medicine and Biomedical Sciences

- UNL/ISU Professional Program in Veterinary Medicine Honor Board, 2018 - 2021
- UNL/ISU Professional Program in Veterinary Medicine Admissions Committee, 2010 - 2017
- Committee Co-Chair (2014)
- UNL/ISU Professional Program in Veterinary Medicine Curriculum Committee, 2008 – 2017

#### UNL Interdepartmental Nutrition Program (INP)

- Interdepartmental Nutrition Program, Executive Committee, 2016 – 2019
- Committee Member, 2007 – 2019

#### College of Agriculture and Natural Resources (CASNR)

- CASNR Teaching and Learning Improvement Council, 2019 – 2022
- CASNR Pre-Vet Coordinating Committee, 2017 – present

#### Institute for Agriculture and Natural Resources (IANR)

- Search Committee Member, Associate Dean of Extension, 2023 – 24
- Ad hoc IANR Budget Advisory Committee, 2023 – present
- Great Plains Veterinary Education Center Working Group, 2019
- Gut Function Initiative, University of Nebraska, 2006
- Interdepartmental Nutrition Program, University of Nebraska, 2006

#### University-wide

- UNL Office of Graduate Studies Student Services Working Group, 2024 - present
- UNL Office of Graduate Studies Onboarding Working Group, 2023 - present
- UNL GEM Consortium, 2022
- UNL Academic Senate, 2018 – 2020
- UNL Intercollegiate Athletic Committee, 2015 – 2016
  - Secretary (2015-16)

### **Professional Service**

- National Academies of Science, Engineering, Medicine (NASEM)
  - Nutrient Requirements of Swine, 12<sup>th</sup> revised edition
    - Committee Member, 2023
- American Society of Animal Science
  - Midwest Program Chair, 2024 – 2026
  - Midwest Section, Student Paper Competitions Chair, 2021 – 2024
  - Journal of Animal Science, Associate Editor, 2016 – 2019
  - Translational Animal Science, Editorial Board, 2018 – present
  - Midwest ASAS/ADSA Nonruminant Nutrition Committee, 2014 - 2016
    - Committee Chair, 2015
  - Midwest Section Academic Quadrathlon Committee, 2009 - 2020
  - Joint Annual Meeting, Swine Program Committee, 2009 - 2012
  - Journal of Animal Science, Ad hoc journal reviewer, 2006 – present

- Digestive Physiology of Pigs
  - International Steering Committee, 2015 – present
- Digestive Physiology of Pigs – North America
  - Board of Directors, President, 2018 – present
  - Board of Directors, Secretary, 2014 – 2018
  - 16<sup>th</sup> International Symposium (2025), Tri-Chair of Local Steering Committee
  - 12<sup>th</sup> International Symposium (2012), Local Steering Committee (Registration Co-chair)
- Nebraska Cattlemen
  - Board of Directors, *ex officio* (2023)
- Nebraska Pork Producers
  - Board of Directors, *ex officio* (2023)
- Nebraska Poultry Industries
  - Board of Directors, *ex officio* (2023)
- National Pork Board
  - Member of Nutrition x Health Focus Group, 2010
- Natural Sciences and Engineering, Research Council of Canada
  - Research Proposal Reviewer, 2014
- American Association of Veterinary Immunologists
  - Veterinary Immunology and Immunopathology, Ad hoc reviewer, 2007 - present
- National Swine Nutrition Guide
  - Ad hoc reviewer, 2009
- The Poultry Science Association
  - Poultry Science, Ad hoc reviewer
- Veterinary Research
  - Ad hoc reviewer
- Alberta Innovates, Canada – Bio Solutions
  - Research proposal reviewer, 2010
- Veterinary Microbiology
  - Ad hoc reviewer
- The Nutrition Society
  - British Journal of Nutrition, Ad hoc reviewer
- PLOS ONE
  - Ad hoc reviewer
- Livestock Science
  - Ad hoc reviewer
- Gut Microbes
  - Ad hoc reviewer

## **Graduate Advisory Committees, Visiting Scholars and UCARE Students**

### **M.S./M.A.S.**

2024-present	Alex Marley, UNL Animal Science (Committee Chair)
2023-present	Kortney Harpestad, UNL Animal Science (Committee Member)
2023-present	Morgan Kienzle, UNL Animal Science (Committee Co-Chair)
2021-2023	Ty Ubben (MAS), UNL SVMBS (Committee Member)
2020-present	Katherine Connell, UNL Animal Science (Committee member)
2020-2022	Akintayo Afolabi (MAS), UNL BSE (Committee Member)
2020-2022	J’Nan Wittler, UNL Animal Science (Committee member)

2018	Tyler Pickinpaugh, UNL Animal Science (Committee Chair)
2017-2019	Sydney Kinsler, UNL Animal Science (Committee member)
2014-2017	Ellan DuFour, UNL Animal Science (Committee member)
2014-2017	Ashley Bigge, UNL Animal Science (Committee member)
2015-2017	Shana Barnett, UNL Animal Science (Committee Chair)
2014-2017	Kelly Moore, UNL Animal Science (Committee member)
2012-2014	Chad Jenkins, UNL Animal Science (Committee member)
2012-2014	Taylor Engle, UNL Animal Science (Committee member)
2012-2014	Gabriel Mastromano, UNL Animal Science (Committee Chair)
2010-2013	Yanshuo Li, UNL Animal Science (Co-advised with P.S. Miller)
2008-2011	Rashed Alhotan, UNL Animal Science (Committee member)
2008-2010	Dana Hahn, UNL Animal Science (Committee member)
2007-2009	Huyen Tran, UNL Animal Science (Co-advised with P.S. Miller)
2007-2009	Zhigang Wang, UNL Animal Science (Committee member)
2007-2009	Erin Carney, UNL Animal Science (Co-advised with P.S. Miller)
2007-2009	Celine Aperce, KSU Dept. of Animal Science (Committee member)

## **Ph.D.**

2023-present	Bo Garcia, UNL Animal Science (Committee member)
2022-present	Natalie Erker, UNL Animal Science (Committee Chair)
2022-present	Seidu Adams, UNL Animal Science (Committee member)
2018-2022	Joshua Knapp, UNL Animal Science (Committee Chair)
2017-2020	Joice San Andres, UNL Animal Science (Committee Chair)
2017-2020	Shana Winkel, UNL Animal Science (Committee co-chair with L. Karr)
2015-2022	Nirosh Aluthge, UNL Food Science & Technology (Committee member)
2014-2018	Dan van Sambeek, UNL Animal Science (Committee Chair)
2013-2017	Yanshuo Li, UNL Animal Science (Committee member)
2011-2014	Pamela Eusebio-Balcazar, UNL Animal Science (Committee member)
2010-2014	Wei Wang, UNL Animal Science (Committee member)
2009-2013	Huyen Tran, UNL Animal Science (Committee co-chair with J. Walter)
2008-2013	Justin Bundy, UNL Animal Science (Committee member)
2009-2012	Erin Hinkle, UNL Animal Science (Committee co-chair with P.S. Miller)
2006-2008	Jared Bates, UNL Animal Science (Committee member)

## **Postdoctoral Scholars**

2023-present	Nirosh Aluthge, UNL Animal Science
2014-2015	Huyen Tran, UNL Animal Science

## **Fulbright Scholars**

2017-2020	Joice San Andres, UNL Animal Science (Committee Chair)
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## **Visiting Scholars**

2014-15	Marco Monteiro de Lima (Universidade Estadual Paulista, Brazil)
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## **UNL/ISU CVM Summer Scholar Research Program**

2012	Craig Kreikemeier
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Project Title: Genome-wide Analysis of Indicators of Oxidative Stress and Immune Response in Pigs Challenged with Porcine Circovirus 2b

## Undergraduate Creative Activities and Research Experiences (UCARE)

2016-17	Alissa Martindale Project Title: The effects of a high protein corn by-product on growth performance of weanling pigs
2013-14	Holly Fujan Talia Everding Mackenzie Schneekloth Project Title: How do you feed a sick pig?
2012-13	Holly Fujan Project Title: Effects of dietary fiber on sow microbial ecology
2010-12	Whitney Burger Project Title: Evaluation of the fecal microbial profile in developing gilts fed high-fiber diets
2010-11	Sarah Tangeman Project Title: Immunoglobulin transport and neonatal Fc receptor gene expression in porcine jejunal epithelial cells treated with digested milk
2009-10	Mai Kuribayashi Project Title: The expression of nutrient and mineral transporters in porcine jejunal epithelial cells
2007-08	Meghan Hungerford Project Title: Beta-glucan as an immunomodulator in porcine immune cells and enterocytes

## Extramural Support

### Grants-Pending:

USDA-NIFA. \$649,871. 2023. Agricultural Biosecurity: Developing surveillance and diagnostic tools and methods for current, and emerging viral and bacterial pathogens. S. Fernando, D. Loy, **T.E. Burkey**, P.S. Miller

### Grants-Funded (Total = \$3,148,396):

USDA-NIFA. \$649,929. 2024. Assessment of environmental impacts and ecological consequences associated with genetically engineered microbes in livestock production systems. S. Fernando, **T.E. Burkey**, P.S. Miller, S. Ryu

USDA-NIFA. \$999,981. 2023. Identifying AMR gene reservoirs and bacterial host-AMR gene associations to identify bacterial host range of AMR genes in swine production systems. S. Fernando, **T.E. Burkey**, P.S. Miller, A. Schmidt

Intrinsic Organics. \$27,917. 2022. Evaluation of Feeding Jerusalem Artichoke Tubers to Weanling Pigs on Growth Performance and Biomarkers of Gut Health. **T.E. Burkey**, P.S. Miller

UNL CASNR Holling Family Teaching and Learning Innovation Grants. \$20,000. 2021. Animal Science Discovery (ASCI) Program. L. Karr, **T.E. Burkey**, L. Luck, K. Smith

BASF Corporation. \$71,669. 2019. Evaluation of Proso Millet as a partial or complete replacement for corn in growing-finishing diets of pigs. **T.E. Burkey**, P.S. Miller

Jeneil Biotech Inc. \$69,290. 2019. Lactobacillus fermentum LfQi6 as a Probiotic in Weaning and Weaned Piglets. **T.E. Burkey**, S.C. Fernando, P.S. Miller

White Dog Labs. \$51,790. 2019. Evaluation of Feeding MiruTyton on Growth Performance of Nursery Pigs. P.S. Miller, **T.E. Burkey**

Sunseo Omega 3 Inc. \$115,290. 2019. Evaluation of feeding GREEN GRASS to growing/finishing pigs on growth performance, gastrointestinal microbiome, carcass characteristics, tissue fatty acid profile, meat quality, and sensory characteristics. G. Sullivan, S. Fernando, **T.E. Burkey**, and P.S. Miller.

NUGut. \$21,472. 2018. Analysis pipeline for targeted AMR sequencing. **T. E. Burkey**

The John Ewing Company. \$9,523. 2017. The In vitro Effects of Rhamnolipids on the Inflammatory Response and Epithelial Integrity Using Model Porcine Jejunal Epithelial Cells (IPEC-J2). **T.E. Burkey**

Flint Hills Resources. \$23,400. 2016. Evaluating the effects of a high protein corn co-product on the growth performance of nursery pigs. P.S. Miller, and **T.E. Burkey**.

National Pork Board. \$15,600. 2016. Evaluation of the Kinetic v2 motion-sensing camera to develop a rapid and effective tool for identifying compromised pigs. T. Schmidt, **T.E. Burkey**, P.S. Miller, L. Perez, and E. Psota.

Nebraska Center on the Prevention of Obesity Diseases through Dietary Molecules (NPOD). \$100,000. 2015. A novel cecum cannulated human gut microbiota associated pig gastrointestinal model to study signals produced by the gut microbiome that interact with host gene expression leading to a lean or obese phenotype. S.C. Fernando, **T.E. Burkey**.

Pellet Technology USA. \$21,600. 2015. Digestion and Metabolism of Specialty-processed Corn Stover, Wheat Middlings, and High-protein Distillers Grains. P.S. Miller and **T.E. Burkey**.

Egg Industry Center. \$35,000. 2015. The effects of egg yolk on piglet growth, health, and gut microbial populations. P.S. Miller, **T.E. Burkey**, S. Fernando.

Nebraska Pork Producers Association. \$24,873. 2015. Effect of GnRH-II on Feed Efficiency and Immune Function of Growing/Finishing Pigs. B.R. White, and **T.E. Burkey**.

Nebraska Pork Producers Association. \$26,638. 2015. Refining a model to investigate the interactive effects of health status and nutrition on nutrient and energy utilization in pigs. **T.E. Burkey**, D.C. Ciobanu, S. Fernando, and P.S. Miller.

USDA Animal Health. \$95,000. 2013-2018. How do the effects of host-microbial interactions converge to shape gut health and nutrient metabolism in weaning pigs fed prebiotics? **T.E. Burkey**.

Nebraska Center on the Prevention of Obesity Diseases through Dietary Molecules (NPOD). \$100,000. 2014. A novel cecum cannulated human gut microbiota associated pig gastrointestinal model to study signals produced by the gut microbiome that interact with host gene expression leading to a lean or obese phenotype. S.C. Fernando, **T.E. Burkey**.

UNL Office of Research and Economic Development, Layman Seed Grant. \$19,900. 2013. Development of a cecum cannula humanized pig model to investigate the human microbiome. S. Fernando, **T.E. Burkey**, D. Hostetler, P.S. Miller.

National Pork Board. \$99,204. 2013. Impact of disease on amino acid requirements of growing pigs. A. Rakhshandeh, N. Gabler, K. Schwartz, C.F.M. de Lange, **T.E. Burkey**.

National Pork Board. \$121,478. 2012. A longitudinal assessment of the impact PRRSV has on grow-finisher pig tissue accretion and digestibility in commercial production. N. Gabler, **T.E. Burkey**, G. Gourley, M. FitzSimmons, K. Schwartz, C. Sparks, J. Patience, and L. Karriker.

Nebraska Pork Producers Association. \$30,318. 2012. Development of a Nutrition x Health Interaction Model to Study Nursery Pig Performance. P. Miller, **T.E. Burkey**, D. Ciobanu, and S. Fernando.

National Pork Board. \$69,000. 2012. The Effects of Disease Challenge (PRRS) on Pig Growth and Metabolic Pathways. N. Gabler, G. Gourley, T. Weber, M. Fitzsimmons, K. Schwartz, **T.E. Burkey**, J. Odle, and J. Dekkers.

Oxbow Animal Health. \$10,688. 2010. Effects of Vitamin C Supplementation Source on Health of Adult Guinea Pigs. **T.E. Burkey** and L. Karr-Lillienthal.

Nebraska Pork Producers Association. \$40,000. 2010. Using high-fiber diets to limit energy intake in developing gilts: effects on puberty, reproduction, culling rates, lifetime productivity, and progeny health and growth. R. Johnson, D. Ciobanu, P. Miller, **T.E. Burkey**, B. White, and J. Wood.

Pioneer Hi-Bred. \$43,500. 2009. Nutritional equivalency study of transgenic maize grain containing event DP-098140-06 & transgenic soybeans containing event DP-356043-5 on swine performance & carcass quality traits. P.S. Miller and **T.E. Burkey**.

Pioneer Hi-Bred. \$43,500. 2008. Evaluation of soybean meal with the genetically modified input trait DP-305423-1 when fed to swine. P.S. Miller and **T.E. Burkey**.

Pioneer Hi-Bred. \$34,684. 2008. Evaluation of soybean meal with the genetically modified input trait DP-356043-5 when fed to swine. P.S. Miller and **T.E. Burkey**.

USDA Animal Health. \$42,000. 2007-12. Does dam parity affect progeny growth performance and health status? **T.E. Burkey**.

Monsanto Company. \$19,152. 2007. Estimation of the lysine requirement for terminal-sired pigs: A lysine titration study. P.S. Miller, R.K. Johnson, and **T.E. Burkey**.

Nebraska Corn Board. \$26,000. 2007. Incorporation of 40% distillers dried grains with solubles (DDGS) in diets for growing-finishing pigs: Potential for interactions with dietary Paylean supplementation. P.S. Miller, **T.E. Burkey**, S.J. Jones, D.E. Reese, and T. Carr.

USDA Animal Health. \$70,000. 2007. Does dam parity affect progeny health status and growth performance? **T.E. Burkey**.

**Grants-Not funded:**

USDA-NIFA. \$649,998. 2022. Utilizing of colonization history and associations between host genetics and the microbiome to develop disease resistant microbiomes in pigs. S. Fernando, **T.E. Burkey**, D.C. Ciobanu, P.S. Miller

USDA-NIFA. \$241,000. 2022. Training graduate students in targeted expertise shortage areas (TESA) in Animal Production. S. Fernando, **T.E. Burkey**, D.C. Ciobanu

National Pork Board. \$569,166. 2021. Improving feed efficiency in swine through microbiome establishment. S. Fernando, **T.E. Burkey**, P.S. Miller

USDA-NIFA. \$649,999. 2021. Understanding genomic determinants and the functional role of the gut microbiome in swine towards improving feed efficiency. S.C. Fernando, **T.E. Burkey**, D.C. Ciobanu.



USDA-NIFA. \$499,999. 2020. Understanding genomic determinants and the functional role of the gut microbiome in swine towards improving feed efficiency. S.C. Fernando, **T.E. Burkey**, D.C. Ciobanu.

USDA-NIFA. \$500,000. 2019. Understanding Gastrointestinal microbiota function and developing novel nutritional strategies to increase feed efficiency in swine. S.C. Fernando, **T.E. Burkey**.

USDA-NIFA. \$500,000. 2018. Uncovering antimicrobial gene reservoirs and development of direct fed microbials as an alternative to antibiotics. S.C. Fernando, **T.E. Burkey**, P.S. Miller.

Jeneil Biotech Inc. \$30,765. 2018. Evaluating the effects of rhamnolipid (JBR 425) on nutrient digestibility and growth performance of nursery pigs. **T.E. Burkey**, P.S. Miller, and D.M. van Sambeek

USDA-NIFA. \$499,999. 2018. Uncovering antimicrobial gene reservoirs and development of direct fed microbials as an alternative to antibiotics. S.C. Fernando, **T.E. Burkey**, P.S. Miller.

National Pork Board. \$1,999,971. 2018. Multidisciplinary approach to improving sow and piglet survival from implantation to market. B. Mote, **T.E. Burkey**, D. Keshwani, L. Perez, E. Psota, T. Schmidt, Y. Shi, B. White.

National Pork Board. \$28,965. 2018. Evaluating the effects of rhamnolipid on nutrient digestibility and growth performance of nursery pigs. D.M. van Sambeek, P.S. Miller, and **T.E. Burkey**.

USDA-NIFA. \$349,905. 2017. Automated Activity Tracking for Well Being and Growth-Rate Efficiency Monitoring of Group-Housed Pigs Using Depth-Enabled Video Tracking. E. Psota, B. Mote, **T.E. Burkey**, L. Perez, and T. Schmidt.

NSF. \$480,263. 2017. CPS: Small: Long-Term Multi-Object Tracking of Homogeneous Targets. E. Psota, B. Mote, **T.E. Burkey**, L. Perez, and T. Schmidt.

National Pork Board. \$48,867. 2016. Energy restriction during gilt development increases sow lifetime production efficiency and progeny health and growth. B. Mote, P.S. Miller, D.C. Ciobanu, and **T.E. Burkey**.

DHHS-NIH-Nat Inst Health. \$1,673,480. 2016. Understanding the effect of early administration of antibiotics on the gut microbiome and its long-term effects on the obesity phenotype in humans and growth performance in pigs using a gnotobiotic pig model. S.C. Fernando, and **T.E. Burkey**.

USDA-NIFA. \$499,996. 2016. Characterizing emerging and under-researched viral and zoonotic pathogens in the swine production system. B. Mote, P.S. Miller, **T.E. Burkey**, and S.C. Fernando.

USDA-NIFA-AFRI. \$295,752. 2016. Behavioral Analysis and Health State Monitoring of Group-Housed Pigs using Depth-Enabled Video Tracking. T. Schmidt, L. Perez, B. Mote, **T.E. Burkey**, and E. Psota.

Nebraska Environmental Trust. \$435,958. 2015. Improving soil health using biofertilizers. S.C. Fernando, **T.E. Burkey**, P. Kononoff.

USDA-NIFA. \$361,384. 2015. Protecting and improving swine production and wellbeing through minimizing the impact of inevitable health challenges. **T.E. Burkey**, S.C. Fernando.

USDA-NIFA-AFRI. \$499,877. 2015. Identifying emerging viral zoonotic pathogens in swine using a novel high throughput screening method and identifying phages against zoonotic bacterial pathogens in swine for phage therapy. S. Fernando, **T.E. Burkey**, J. Clarke, P.S. Miller, F. Osorio, and Y. Zhou.

National Pork Board. \$44,811. 2015. Utilization of Kinect and infrared imaging systems to determine immune compromised swine prior to exhibiting clinical symptoms. T. Schmidt, **T.E. Burkey**, P.S. Miller, L. Perez, and E. Psota.

USDA-NIFA-AFRI. \$99,988. 2014. A novel cecum cannulated human gut microbiota associated pig gastrointestinal model to study microbial triggers that influence the obesity phenotype in children. S. Fernando, **T. E. Burkey**, D. Hostetler, and P.S. Miller.

NIH. \$1,757,890. 2014. Humanized pig model for characterizing the microbiota in Clostridium difficile infection and development of a probiotic microbial community for treatment of Clostridium difficile infection. S. Fernando, **T. E. Burkey**, D. Hostetler, and P.S. Miller.

USDA-NIFA-AFRI. \$438,264. 2014. Does nutrition, microbial ecology, and health status interact to shape nutrient utilization and efficiency in pigs? **T.E. Burkey**, S. Fernando, P.S. Miller, D. Ciobanu.

USDA-NIFA-AFRI. \$499,242. 2014. Understanding the interaction between rumen microbes and host metabolism during milk fat depression in dairy cows. P. Kononoff, **T.E. Burkey**, S. Fernando, D. Hostetler.

National Pork Board. \$85,821. 2013. Refinement of a nutrition x health interaction model to investigate nutrient and energy utilization in pigs. T.E. Burkey, D.C. Ciobanu, S. Fernando, P.S. Miller.

NIH. \$385,838. 2013. Gut microbial triggers and host microbe interactions that influence the obesity-associated phenotype. S. Fernando, **T.E. Burkey**, D. Hostetler, P.S. Miller.

USDA-AFRI. \$499,568. 2013. How do the effects of host-microbial interactions converge to shape nutrient metabolism in weaning pigs fed prebiotics? **T.E. Burkey**, D.C. Ciobanu, S. Fernando, P.S. Miller, J. Walter.

USDA-NIFA. \$799,966. 2012. Reducing carriage of Salmonella in swine by anti-adherence agents: an alternative to antibiotics. R. Hutkins, **T.E. Burkey**, J. Walter, J. DeRouchey, A. Ramer-Tait, A.T. Hotchkiss.

Department of Defense. \$178,276. 2012. A cecum cannulated human gut microbiota associated pig gastrointestinal model to understand microbial gene expression in inflammatory bowel disease patients. S. Fernando, E. Moriyama, D. Hostetler, P. Miller, and **T.E. Burkey**.

American Diabetes Association. \$374,870. Gut microbial triggers and host microbe interactions that influence the obesity-associated phenotype. S. Fernando, **T.E. Burkey**, P. Miller, D. Hostetler.

National Pork Board. \$140,082. 2012. Impact of disease on protein and amino acid metabolism in growing pigs. A. Rakhshandeh, N. Gabler, K. Schwartz, **T.E. Burkey**.

USDA-AFRI. \$75,000. 2012. Pre-Doctoral Fellowship: Determining the effect of dam parity on passive immunity and gastrointestinal microbiota using a crossfostering model in swine. E. Hinkle, **T.E. Burkey**, P. Miller, J. Walter, and R. Johnson.

USDA-AFRI. \$371,924. 2011. Is Nutrient Metabolism Maximized in Weanling Pigs Fed Prebiotics. **T.E. Burkey**, D.C. Ciobanu, S. Fernando. P.S. Miller, and J. Walter.

DHHS-National Institutes for Health. \$356,978. 2011. A New Humanized Cannulated Pig Model to Study Gut Microbial Communities and their Roles in Infants. S. Fernando, **T.E. Burkey**, P.S. Miller, and R. Moxley.

American Meat Institute. \$180,000. 2011. A new innovative approach to control salmonella in pork using natural bacterial competitors. S. Fernando, **T.E. Burkey**, and P.S. Miller.

National Institutes for Health - PAR-10-276: Dual Purpose with Dual Benefit: Research in Biomedicine and Agriculture Using Agriculturally Important Domestic Species (R01). \$527,652. 2010. Synbiotics: A function driven intervention for control of *Salmonella* reservoirs in swine. **T.E. Burkey**, R. Hutkins, P. Miller, R. Moxley, and J. Walter.

USDA-AFRI. \$2,496,613. 2010. Systematic approach to determining diet influence and intervention on shiga toxin-producing *E. coli* by feedlot cattle. G. Erickson, D. Smith, R. Moxley, T. Klopfenstein, R. Hutkins, **T.E. Burkey**, J. Keen, J. Walter.

UNL-IANR Strategic Investments. \$306,266. 2010. A function driven approach to develop synbiotics for pre-harvest reduction and control of Salmonella in swine. **T.E. Burkey**, J. Walter, R. Hutkins, R. Moxley.

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34. Moreno, R., P.S. Miller, **T.E. Burkey**, S.J. Jones, S.L. Cuppett, T.P. Carr, T.F. Jones, and R.M. Diedrichsen. 2008. The effect of corn distillers dried grain with solubles (DDGS) on carcass characteristics and pork quality. Nebraska Swine Report. Ext. Publ. EC08-219:8–11. Univ. Nebraska, Lincoln.
35. Moreno, R. P.S. Miller, and **T.E. Burkey**. 2008. Effect of increasing lysine:net energy ratio on growth performance and plasma urea nitrogen concentration of late-finishing barrows fed low-

- protein amino acid-supplemented diets and ractopamine. Nebraska Swine Report. Ext. Publ. EC08-219:30–32. Univ. Nebraska, Lincoln.
36. Miller, P.S., R. Moreno, **T.E. Burkey** and R.K. Johnson. 2008. Estimation of lysine requirements for high-lean growth pigs. 2008. Nebraska Swine Report. Ext. Publ. EC08-219:26–29. Univ. Nebraska, Lincoln.
37. **Burkey, T.E.**, K.A. Skjolaas, S.S. Dritz, D.C. Robertson, G.A. Anderson, R. E. Musser, N. Scicutella, and J.E. Minton. 2007. Effects of Repaxol® and Aciprol on growth performance of weaned pigs challenged with *Escherichia coli* K88. Nebraska Swine Report. Ext. Publ. EC07-219:24–27. Univ. Nebraska, Lincoln.

### Invited Presentations:

1. **Burkey, T.E.** 2021. Interactivity of health, nutrition and microbial ecology. Kemin Intestinal Health Symposium. Tucson, AZ, United States
2. **Burkey, T.E.** 2020. Protein and amino acid effects on pig microbial ecology, health and nutrition. ASAS-CSAS-WSASAS 2020 Virtual Annual Meeting and Trade Show.
3. **Burkey, T.E.** 2017. Innovative Commercial Protein Products from Grain Ethanol Processing in Diets for Swine. Distillers Grains Technology Council Symposium, Fluid-Quip Process Technologies Satellite Session. Indianapolis, IN.
4. **Burkey, T.E.** 2016. Complex interactions between the gut and nutrition from a practical swine production perspective. Jefe Swine & Poultry Tour. Quebec City, Canada.
5. **Burkey, T.E.** and M.D. Lindemann. 2015. An overview of the 2015 Digestive Physiology of Pigs Symposium. 15<sup>th</sup> Annual Midwest Swine Nutrition Conference. Indianapolis, IN.
6. **Burkey, T.E.** 2014. Disease challenge models: Probing interactions between health and nutrition. UNL Animal Science Departmental Seminar.
7. **Burkey, T.E.** 2014. Can we manage the gut microbiome? Nanjing Agricultural University. Nanjing, China.
8. **Burkey, T.E.** 2014. Nutrition x Health Interactions (PCV, PRRS, PEDV, Salmonella). Nanjing Agricultural University. Nanjing, China.
9. **Burkey, T.E.** 2014. Cecum-cannulated gnotobiotic pig model for animal and human research. Nanjing Agricultural University. Nanjing, China.
10. **Burkey, T.E.** 2014. Host-Microbe Interactions: Effects on nutrition and physiology. Allan D. Lemman Swine Conference. St. Paul, MN.
11. **Burkey, T.E.**, and P.S. Miller. 2014. Impact of disease on metabolism. Midwest Section ASAS, Physiology Symposium. Des Moines, IA.
12. **Burkey, T.E.** 2013. Nutritional Management of PRRS. North American PRRS Symposium. Chicago, IL.
13. **Burkey, T.E.** 2013. Host-Microbe Interactions: Effects on porcine growth and health. Iowa State University Nutritional Sciences Council Wise and Helen Burroughs Lectureship of Modern Views in Nutrition. Ames, IA.
14. **Burkey, T.E.** 2013. Host-Microbe Interactions: Effects on porcine growth and health. Kansas State University Dept. of Animal Science Physiology Seminar. Manhattan, KS.
15. Gabler, N.K., W. Schweer, J.F. Patience, L. Karriker, C. Sparks, G. Gourley, M. FitzSimmons, K. Schwartz, and **T.E. Burkey**. 2013. The impact of PRRSV on feed efficiency, digestibility and tissue accretion in grow-finisher pigs. Allan D. Lemman Swine Conference. St. Paul, MN.

16. **Burkey, T.E.** 2012. Effects of microecology on growth performance and immunologic function in pigs. Mount. Tai International Technical Innovation Forum About Animal Micro-ecology. Taian, Shandong Province, China.
17. **Burkey, T.E.**, T. E. Weber, and N. K. Gabler. 2012. Nutritional aspects of animal health and oxidative stress. Midwest Section ASAS, David H. Baker Amino Acid Symposium. Des Moines, IA.
18. **Burkey, T.E.** 2007. Applied and Basic Swine Research at UNL. Iowa Feed and Nutrition Seminar, Des Moines, IA.
19. **Burkey, T.E.**, K.A. Skjolaas-Wilson, B.M. Hildabrand, C.R. Neill, S.S. Dritz, B.J. Johnson, and J.E. Minton. 2004. Effects of yeast on weanling pig performance and binding of *Salmonella* serovars. Symposium Proceedings: Saf Agri VI International Seminar “Applied Microbiology to Animal Nutrition.” Veracruz, Mexico.
20. **Burkey, T.E.** 2004. The Effect of Feed Form on *Salmonella* Prevalence in Swine. Symposium Proceedings: 2004 Pork Quality and Safety Summit. National Pork Board. Des Moines, IA.
21. Minton, J.E., **T. E. Burkey**, K. A. Skjolaas, and S. S. Dritz. 2003. The gut as an immune tissue: new jobs for the gut epithelium? Symposium Proceedings: 64th Minnesota Nutrition Conference & Pre-Conference Symposium, St. Paul, MN.

#### **Abstracts of Presentations at National/Regional Conferences:**

1. Erker, N., P.S. Miller, T.E. Burkey. 2024. Growth performance of weaned pigs fed Jerusalem Artichoke tubers. *J. Anim. Sci.* 102 (Supplement 2): 276-77. <https://doi.org/10.1093/jas/skae102.315>
2. Adams, S., N. Aluthge, W. Abbas, M.L. Spangler, J. Wells, K. Hales, L.A. Kuehn, W. Oliver, **T.E. Burkey**, P.S. Miller, S.C. Fernando. 2023. Microbiomes from the theory to application. *J. Anim. Sci.* 101 (Supplement 2): 63. <https://doi.org/10.1093/jas/skad341.070>
3. Adams, S., J.P. Knapp, A. Neujahr, **T.E. Burkey**, P.S. Miller, S.C. Fernando. 2023. Investigating the colonization history of early-life microbiome of piglets. *J. Anim. Sci.* 101 (Supplement 2): 165–166. <https://doi.org/10.1093/jas/skad341.183>
4. Knapp, J.P., A.C. Neujahr, M.D. Trenhaile-Grannemann, K.A. Nguyen, J. Wittler, S.C. Fernando, P. S. Miller, **T. E. Burkey**. 2022. Role of the cecum on fiber digestion in finisher pigs using a cecectomized pig model. Proc. 15th Int. Symp. Dig. Phys. Pigs. Rotterdam, The Netherlands.
5. Knapp, J.P., A.C. Neujahr, M.D. Trenhaile-Grannemann, K.A. Nguyen, J. Wittler, S.C. Fernando, P. S. Miller, **T. E. Burkey**. 2022. The evaluation of cecal and fecal microbial community structure in a cecum-cannulated grower pigs fed a high fiber diet. Proc. 15th Int. Symp. Dig. Phys. Pigs. Rotterdam, The Netherlands.
6. Connell, K.R., P.S. Miller, **T.E. Burkey**, J.D. Loy, S.C. Fernando. 2022. Identifying probiotic bacteria to reduce pathogen colonization in nursery pigs. *J. Anim. Sci.* 100 (Supplement\_2): 160. <https://doi.org/10.1093/jas/skac064.273>
7. Eaton, C., K. Sutton, B.E. Mote, **T.E. Burkey**, T. Borza, J.D. Loy, D.C. Ciobanu. 2022. 2 5’Untranslated Region-Based Detection of Genetically Diverse APPV Strains in US Midwest. *J. Anim. Sci.* 100 (Supplement\_2): 6–7. <https://doi.org/10.1093/jas/skac064.007>
8. Sutton, K.M., C. Eaton, T. Borza, **T.E. Burkey**, B.E. Mote, J.D. Loy, D.C. Ciobanu. 2022. Genetic diversity and detection of atypical porcine pestivirus infections. *J. Anim. Sci.* 100 (Issue 1): skab360. <https://doi.org/10.1093/jas/skab360>

9. Knapp, J.P., A. Bartenslager, S. M. Winkel, M. D. Trenhaile-Grannemann, J. V. San Andres, K.A. Nguyen, J. Wittler, S. R. Kinstler, S. C. Fernando, P. S. Miller, **T. E. Burkey**. 2021. The Effects of *Lactobacillus Fermentum* on Nursery Pig Performance. *J. Anim. Sci.* 99 (Supplement\_1):159–160. <https://doi.org/10.1093/jas/skab054.273>
10. Knapp, J.P., A. Bartenslager, S. M. Winkel, M. D. Trenhaile-Grannemann, J. V. San Andres, K.A. Nguyen, J. Wittler, S. R. Kinstler, S. C. Fernando, P. S. Miller, **T. E. Burkey**. 2021. The Effects of *Lactobacillus Fermentum* on sow and litter performance. *J. Anim. Sci.* 99 (Supplement\_1):160. <https://doi.org/10.1093/jas/skab054.274>
11. Nguyen, K.A., M.D. Trenhaile-Grannemann, **T.E. Burkey**, P.S. Miller. 2021. Evaluation of Proso Millet as a Partial or Complete Replacement for Corn in Growing-finishing Diets for Pigs. *J. Anim. Sci.* 99 (Supplement\_1):71–72. <https://doi.org/10.1093/jas/skab054.117>
12. **Burkey, T.E.** and M.D. Lindemann. 2021. Digestive Physiology of Pigs: Past, Present, and Future. *J. Anim. Sci.* 99 (Supplement\_1):14–15. <https://doi.org/10.1093/jas/skab054.025>
13. **Burkey, T.E.** 2020. Protein and amino acid effects on pig microbial ecology, health and nutrition. *J. Anim. Sci.* 98 (E-Suppl. 4):112. <https://doi.org/10.1093/jas/skaa278.206>
14. Winkel, S.M., L. Karr, **T.E. Burkey**. 2020. Assessment of Undergraduate Research Students in the Animal Science Department. *J. Anim. Sci.* 98(E-Suppl. 3):223-4. <https://doi.org/10.1093/jas/skaa054.390>
15. Furbeck, R.A., J.P. Knapp, M.D. Trenhaile-Grannemann, **T.E. Burkey**, S.C. Fernando, G.A. Sullivan, and P.S. Miller. 2020. Effect of Green Grass supplementation of swine diet on pork quality characteristics. *J. Anim. Sci.* 98(E-Suppl. 3):169-70. <https://doi.org/10.1093/jas/skaa054.301>
16. San Andres, J.V., J.P. Knapp, S.R. Kinstler, M.D. Trenhaile-Grannemann, S.M. Winkel, A. Schlageter-Tello, **T.E. Burkey**, and P.S. Miller. 2020. Effects of ammonium butyrate on growth performance in nursery pigs. *J. Anim. Sci.* Abstract Accepted.
17. Walker, L.R., T.B. Engle, H. Vu, E.R. Tosky, D.J. Nonneman, T.P.L. Smith, T. Borza, **T.E. Burkey**, G.S. Plastow, S.D. Kachman, and D.C. Ciobanu. 2019. Deciphering the dynamics of Porcine Circovirus Associated Diseases using Gene Silencing and Editing. *Plant and Animal Genome XXVII* (Abstr.)
18. Walker, L.R., T.B. Engle, H. Vu, E.R. Tosky, D.J. Nonneman, T.P.L. Smith, T. Borza, **T.E. Burkey**, G.S. Plastow, S.D. Kachman, and D.C. Ciobanu. 2019. Host Genetics Influences Replication of Porcine Circovirus 2b. *Plant and Animal Genome XXVII* (Abstr.)
19. Winkel, S.M., **T.E. Burkey**, D. Brink, and L. Karr. 2019. Assessment of undergraduate student learning in an animal science major. *J. Anim. Sci.* 97(E-Suppl. 2):236-37. doi: 10.1093/jas/skz122.416
20. Kinstler, S.R., Y.S. Li, P.S. Miller, **T.E. Burkey**, M.D. Trenhaile-Granneman, S.C. Fernando, A. Knoell, W. Tom. 2019. Effects of carbohydrate source on performance and gastrointestinal microbiota in nursery pigs. *J. Anim. Sci.* 97(E-Suppl. 2):86. doi: 10.1093/jas/skz122.156
21. San Andres, J.V., D.M. van Sambeek, S.R. Kinstler, M.D. Trenhaile-Granneman, S.M. Winkel, A. Schlageter-Tello, P.S. Miller, and **T.E. Burkey**. 2019. Potential biomarkers of intestinal injury and inflammation in nursery pigs fed prebiotics. *J. Anim. Sci.* 97(E-Suppl. 2):220. doi: 10.1093/jas/skz122.388
22. Aluthge, N.D., W. Tom, A. Bartenslager, **T.E. Burkey**, K.D. Heath, C. Kreikemeier-Bower, H. Kittana, A.E. Ramer-Tait, and S.C. Fernando. 2019. Direct comparison of human microbiota-associated (HMA) gnotobiotic piglet and mouse models. *J. Anim. Sci.* 97(E-Suppl. 2):114-5. doi: 10.1093/jas/skz122.203

23. Constance, L.A., R.R.R. Rowland, W. Abbas, S.C. Fernando, M.L. Potter, M.A. Sheahan, **T.E. Burkey**, R.A. Hesse, A.G. Cino-Ozuna, M.C. Niederwerder. 2018. Fecal microbiota transplantation shifts microbiome composition and reduced morbidity and mortality associated with PCVAD. 99<sup>th</sup> Conference of Research Workers in Animal Diseases. Abstr. 12. Chicago, IL.
24. Walker, L., T. Engle, H. Vu, E. Tosky, D. Nonneman, T. Smith, T. Borza, **T.E. Burkey**, G. Plastow, S. Kachman, D.C. Ciobanu. 2018. Investigation of host genetic role PCV2 and PRRSV susceptibility. 99<sup>th</sup> Conference of Research Workers in Animal Diseases. Abstr. 217. Chicago, IL.
25. van Sambeek, D.M., M.D. Trenhaile-Granneman, S.C. Fernando, P.S. Miller, and **T.E. Burkey**. 2018. Supplementation of tryptophan alters piglet growth performance, digestibility, and Lactobacillus populations. Proc. 14th Int. Symp. Dig. Phys. Pigs. Brisbane, Australia.
26. Martindale, A., M.D. Trenhaile-Grannemann, S.M. Barnett, P.S. Miller, and **T.E. Burkey**. 2018. Growth performance of weaned pigs fed a high-protein corn co-product. J. Anim. Sci. 96(E-Suppl. 3):295 (Abstr.) doi: 10.1093/jas/sky404.649
27. Williams, H.E., J.C. Woodworth, J.M. DeRouchey, S.S. Dritz, M.D. Tokach, R.D. Goodband, S.C. Fernando, **T.E. Burkey**, and Y.S. Li. 2018. Effects of Crystalline Amino Acid concentration with or without Formaldehyde-treatment of diets on Nursery Pig Growth Performance and Fecal Microbial Populations. J. Anim. Sci. 96(E-Suppl. 2):70-71 (Abstr.) doi: 10.1093/jas/sky073.130
28. van Sambeek, D.M., **T.E. Burkey**, and L. Smalley. 2018. Response of IPEC-J2 cells and jejunal explants to treatment with rhamnolipids. J Anim Sci. 96(E-Suppl. 2):214-15. (Abstr.) doi: 10.1093/jas/sky073.396
29. Barnett, S.M., M.D. Trenhaile-Grannemann, D.M. Van Sambeek, P.S. Miller, J. Salcedo, D. Barile, and **T.E. Burkey**. 2018. Effects of Energy Restriction during Gilt Development on Characterization and Quantification of Milk Oligosaccharides. J Anim Sci. 96(E-Suppl. 2):78-79. (Abstr.) doi: 10.1093/jas/sky073.145
30. Gebhardt, J.T., S. S. Dritz, J. C. Woodworth, M. D. Tokach, J. M. DeRouchey, R. D. Goodband, M. C. Niederwerder, S. C. Fernando, and **T. E. Burkey**. 2018. Medium chain fatty acids modulate gastrointestinal microbiota and promote growth in nursery pig diets. Proc. 49th Annu. Meet. Am. Assoc. Swine Veterinarians, San Diego, CA. (Abstr.)
31. Niederwerder, M.C., R.R.R. Rowland, L.A. Constance, S.C. Fernando, M.L. Potter, M.A. Sheahan, **T.E. Burkey**, R.A. Hesse, and A.G. Cino-Ozuna. 2017. Fecal microbiota transplantation improves outcome in nursery pigs following co-infection with PRRSV and PCV2d. North American PRRS Symposium on PRRS, Emerging and Foreign Animal Diseases and National Swine Improvement Federation NAPRRS-NSIF Joint Conference.
32. Aluthge, N.D., W. Tom, S. Rohde, **T.E. Burkey**, K. D. Heath, C. Kreikemeier-Bower, H. Kittana, A.E. Ramer-Tait, and S. C. Fernando. 2017. Direct comparison of human microbiota-associated gnotobiotic piglet and mouse models for infant gut microbiota studies. Symposium on Gut Health in Production of Food Animals, St. Louis, MO.
33. van Sambeek, D.M., M.D. Trenhaile-Grannemann, P.S. Miller, and **T.E. Burkey**. 2017. Evaluation of a QTL for porcine circovirus type 2b (PCV2) viral load on long-term growth performance and nutrient digestibility in inoculated or vaccinated pigs for PCV2. J. Anim. Sci. 95(E-Suppl. 2):158 (Abstr.) doi: 10.2527/asasmw.2017.326
34. Barnett, S.M., M.D. Trenhaile-Grannemann, **T.E. Burkey**, P.S. Miller, and D.C. Ciobanu. 2017. Effects of energy restriction during gilt development on parity 1 progeny growth performance. J. Anim. Sci. 95(E-Suppl. 2):76 (Abstr.) doi: 10.2527/asasmw.2017.12.160

35. Barnett, S.M., M.D. Trenhaile-Grannemann, P.S. Miller, **T.E. Burkey**, and D.M. van Sambeek. 2017. Effects of energy restriction during gilt development on milk nutrient profile and progeny biomarkers. *J. Anim. Sci.* 95(E-Suppl. 2): 78-79 (Abstr.). doi:10.2527/asasmw.2017.12.166
36. Li, Y.S., M.D. Trenhaile, D.M. van Sambeek, K.C. Moore, S.M. Barnett, S.C. Fernando, **T.E. Burkey**, and P.S. Miller. 2017. Effects of mannan oligosaccharides and lactobacillus mucosae on the growth performance and immune response of weanling pigs challenged with Escherichia coli lipopolysaccharides. *J. Anim. Sci.* 95(E-Suppl. 2):140 (Abstr.) doi: 10.2527/asasmw.2017.289
37. Li, Y.S., M.D. Trenhaile, D.M. van Sambeek, K.C. Moore, S.M. Barnett, S.C. Fernando, **T.E. Burkey**, and P.S. Miller. 2017. Effects of mannan oligosaccharides and lactobacillus mucosae on the intestinal morphology of weanling pigs challenged with Escherichia coli lipopolysaccharides. *J. Anim. Sci.* 95(E-Suppl. 2):101-102 (Abstr.) doi: 10.2527/asasmw.2017.12.212
38. Aluthge, N.D., W. Tom, **T.E. Burkey**, P.S. Miller, D.E. Hostetler, K.D. Heath, C. Kreikemeier, and S.C. Fernando. 2017. A humanized gnotobiotic piglet model to study host-microbiota interactions. *J. Anim. Sci.* 95(E-Suppl. 2):159 (Abstr.) doi: 10.2527/asasmw.2017.327
39. Aluthge, N.D., W. Tom, **T.E. Burkey**, D.E. Hostetler, K.D. Heath, C. Kreikemeier, and S.C. Fernando. 2016. The development of a cecum-cannulated gnotobiotic piglet model to study the human gut microbiota. *J. Anim. Sci.* 94(E-Suppl. 5):211-12. (Abstr.) doi:10.2527/jam2016-0440
40. Barnett, S.M., K.C. Moore, M.D. Trenhaile, A.T. Desaulniers, Y.S. Li, D.M. van Sambeek, H. Tran, B.R. White, and **T.E. Burkey**. 2016. Effect of energy restriction on feed efficiency, nutrient digestibility, and immune biomarkers of growing/finishing pigs. *J. Anim. Sci.* 94(Suppl. 2):92-93. (Abstr.) doi:10.2527/msasas2016-195
41. Moore, K.C., S.M. Barnett, Y.S. Li, M.D. Trenhaile, **T.E. Burkey**, P.S. Miller, and S.C. Fernando. 2016. The effects of egg yolk on nursery pig growth performance. *J. Anim. Sci.* 94(Suppl. 2):135. (Abstr.) doi:10.2527/msasas2016-289
42. van Sambeek, D.M., E.R. Tosky, P.S. Miller, D.C. Ciobanu, and **T.E. Burkey**. 2016. Evaluation of a QTL for porcine circovirus type 2b (PCV2) viral load on growth performance in inoculated and vaccinated pigs for PCV2. *J. Anim. Sci.* 94(Suppl. 2):145. (Abstr.) doi:10.2527/msasas2016-309
43. Li, Y.S., S. C. Fernando, P. S. Miller, **T. E. Burkey**. 2016. Alteration of fecal bacterial communities in weanling pigs fed diets supplemented with chicory, mannan oligosaccharides, or chitosan. *J. Anim. Sci.* 94(Suppl. 2):138. (Abstr.) doi:10.2527/msasas2016-294
44. Li, Y.S., M.D. Trenhaile, M.M. Lima, K.C. Moore, D. M. van Sambeek, **T. E. Burkey**, and P. S. Miller. 2016. Growth performance and serum IgA concentrations in weanling pigs fed dietary prebiotics. *J. Anim. Sci.* 94(Suppl. 2):72. (Abstr.) doi:10.2527/msasas2016-155
45. Stuart, W.D., **T.E. Burkey**, N.K. Gabler, K.J. Schwartz, D. Klein, J.A. Dawson, A.R. Pendleton, C.F.M. de Lange, and A. Rakhshandeh. 2016. Immune system stimulation (ISS) induced by E. coli lipopolysaccharide (LPS) alters amino acid metabolism in growing pigs. *J. Anim. Sci.* 94(Suppl. 2):51-2. (Abstr.) doi:10.2527/msasas2016-110
46. Ciobanu, D.C., E.R. Tosky, S. Olson, M.D. Trenhaile, C. Lents, T.P.L. Smith, D.J. Nonneman, G. Rohrer, J. Chin, P. Miller, **T.E. Burkey**, M.L. Spangler, J.J. Riethoven, G.S. Plastow, and S.D. Kachman. 2016. Development of resources and tools for mapping genetic sources of phenotypic variation. *Plant and Animal Genome XXIV* (Abstr.)
47. **Burkey, T.E.**, and Lindemann, M.D. 2015. An overview of the 2015 Digestive Physiology of Pigs Symposium. 15th Annual Midwest Swine Nutrition Conference Proceedings, Indianapolis, Indiana, USA, September 10, 2015, pp.49-53

48. Lima, M.M., D.M. van Sambeek, H. Tran , D.C. Ciobanu, P.S. Miller, and **T.E. Burkey**. 2015. Effect of complex and prebiotic diets on intestinal health of nursery pigs inoculated to porcine circovirus 2 (PCV2). *J. Anim. Sci.* 93 (E-Suppl. 3):657. (Abstr.)
49. Lima, M.M., M.C. Thomaz, F.F. Castro, R.S. Filardi, D.J. Rodrigues, M.S.F. Oliveira, M.V. Marujo, E. Daniel, A.C. Laurentiz, and **T.E. Burkey**. 2015. Mitotic and apoptosis rate of intestinal cells of nursery pigs fed with a blend of organic acids and medium chain fatty acids. *J. Anim. Sci.* 93 (E-Suppl. 3):657. (Abstr.)
50. Lima, M.M., M.C. Thomaz, F.F. Castro, R.S. Filardi, D.J. Rodrigues, M.S.F. Oliveira, M.V. Marujo, D.M. van Sambeek, and **T.E. Burkey**. 2015. Effects of organic acids and medium-chain fatty acids on gut health of nursery pigs. *J. Anim. Sci.* 93 (E-Suppl. 3):657. (Abstr.)
51. Stuart, W.D., **T.E. Burkey**, N.K. Gabler, K. Schwartz, T. Dinh, C.F.M. de Lange, D. Klein, J.D. Dawson, and A. Rakhshandeh. 2015. Infection with porcine reproductive and respiratory syndrome virus (PRRSV) affects body protein deposition and alters amino acid metabolism in growing pigs. *J. Anim. Sci.* 93 (E-Suppl. 3): 855. (Abstr.)
52. van Sambeek, D.M., H. Tran, S.C. Fernando, D.C. Ciobanu, P.S. Miller, and **T.E. Burkey**. 2015. Alteration of the pig intestinal microbiome when vaccinated against or inoculated with porcine circovirus 2 using a multivariate analysis model. *Proc. 13th Int. Symp. Dig. Phys. Pigs.* Kliczkow, Poland.
53. Li, Y.S., H. Tran, **T.E. Burkey**, and P.S. Miller. 2015. Can the effects of lactose on nursery pig performance and immune parameters be attributed to glucose, galactose, a combination of both, or sucrose? *J. Anim. Sci.* 93 (E-Suppl. 2):141. (Abstr.)
54. Stuart, W., **T.E. Burkey**, N.K. Gabler, K. Schwartz, C.F.M. de Lange, and A. Rakhshandeh. 2015. Models of immune system stimulation in growing pigs: porcine reproductive and respiratory syndrome (PRRS) versus *E. coli* lipopolysaccharide. *J. Anim. Sci.* 93 (E-Suppl. 2):165. (Abstr.)
55. Serão, N.V.L., **T.E. Burkey**, G. Gourley, T.E. Weber, M. Fitzsimmons, K. Schwartz, C. Sparks, J. Odle, J.C.M. Dekkers, and N.K. Gabler. 2014. Blood Biomarkers for Growth Performance in Growing Gilts Infected with PRRS virus. *NA PRRS Symposium*, Abstract 82.
56. Wooten, H., J.J. McGlone, W. Stuart, **T.E. Burkey**, N.K. Gabler, K. Schwartz, C.F.M. de Lange, and A. Rakhshandeh. 2015. Impact of porcine respiratory and reproductive virus on behavior of growing pigs. *J. Anim. Sci.* 93 (E-Suppl. 2):193. (Abstr.)
57. Kaiser, M.E., C.L. Anderson, N. Aluthge, **T.E. Burkey**, P.S. Miller, D. Hostetler, and S.C. Fernando. 2015. New cecum cannulated pig model to investigate the human microbiota through inter species transfer of gut microbiota from humans to pigs. *J. Anim. Sci.* 93 (E-Suppl. 2):198. (Abstr.)
58. **Burkey, T.E.**, and P.S. Miller. 2014. Impact of disease on metabolism. *Midwest Section ASAS, Physiology Symposium.* Des Moines, IA. *J. Anim. Sci.* 92 (E-Suppl. 2):196 (Abstr.)
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