

Sangwoo Park

Department of Animal Science
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EDUCATION

Ph.D. in Animal Biology

University of California, Davis, September 28, 2020 – Present
Adviser: Yanhong Liu, Ph.D.

M.S. in Animal Science

Chungnam National University, Daejeon, Republic of Korea, February 2017
Thesis: Effects of protease on growth performance, nutrient digestibility,
and carcass characteristics of growing-finishing pigs
Adviser: Minh Song, Ph.D.

B.S. in Animal Science & Biotechnology

Chungnam National University, Daejeon, Republic of Korea, February 2015
Thesis: Mitigation strategies for greenhouse gas emission in pig production

RESEARCH EXPERIENCE

Research Assistant

Comparative Animal Nutrition & Physiology Laboratory
Department of Animal Science, University of California, Davis, CA
Sep 30, 2020 – Present

Research Assistant

Non-Ruminant Nutrition Laboratory
Division of Animal and Dairy Science, Chungnam National University, Daejeon, Republic of Korea
May 2018 – Sep 2020

Research Scholar

Non-Ruminant Nutrition Laboratory
Department of Animal Science, South Dakota State University, Brookings, SD
Mar 2017 – May 2018

Research Assistant

Non-Ruminant Nutrition Laboratory
Division of Animal and Dairy Science, Chungnam National University, Daejeon, Republic of Korea
Sep 2014 – Mar 2017

TEACHING EXPERIENCE

Teaching Assistant

Department of Animal Science, University of California, Davis, CA

▶ Animal Biochemistry & Metabolism (ABI 103)	Mar – Jun 2023
▶ Animal Nutrition Laboratory (ANS 134)	Jan – Mar 2023
▶ Animal Health & Disease (ANS 150)	Mar – Jun 2022
▶ Meat Science (ANS 120)	Jan – Mar 2022
▶ Meat Science Laboratory (ANS 120L)	Jan – Mar 2022
▶ Animal Nutrition Laboratory (ANS 134)	Jan – Mar 2022

Department of Animal Science, Chungnam National University, Daejeon, Republic of Korea

- ▶ Animal Biochemistry
- ▶ Animal Nutrition
- ▶ Animal Immunology
- ▶ Animal Environment & Welfare

PROFESSIONAL EXPERIENCE

ASAS Young Scholar Awardee Talk at the 2024 ASAS-CSAS-WSASAS Annual Meeting

Dietary supplementation of blends of organic acids and monoglycerides alleviated diarrhea and systemic inflammation of weaned pigs experimentally infected with enterotoxigenic *Escherichia coli* F18

Graduate Student Oral Competition: Ph.D. Divisions at the 2024 ASAS Midwest Meeting

Effects of blends of organic acids and monoglycerides on immune responses of weaned pigs experimentally infected with enterotoxigenic *Escherichia coli* F18

Oral Presentation at the 2023 ASAS-CSAS-WSASAS Annual Meeting

Effects of monoglycerides on serum metabolomic profiles in weanling pigs experimentally infected with a pathogenic *Escherichia coli*

Graduate Student Poster Competition: Ph.D. Divisions at the 2023 ASAS-CSAS-WSASAS Annual Meeting

In vitro effects of monoglycerides and zinc glycinate: anti-inflammatory and epithelial barrier function

Animal Science Young Scholar Awardee Talk at the 2023 ASAS Midwest Meeting

Effects of monoglycerides on intestinal morphology and immune responses of weanling pigs experimentally infected with a pathogenic *Escherichia coli*

Oral Presentation at the 2023 ASAS Midwest Meeting

Dietary supplementation of blends of organic acids and monoglycerides alleviated diarrhea and systemic inflammation of weaned pigs experimentally infected with enterotoxigenic *Escherichia coli* F18

Graduate Student Oral Competition: Ph.D. Divisions at the 2022 ASAS Midwest Meeting

Effects of monoglycerides on growth performance and diarrhea of weanling pigs experimentally infected with a pathogenic *Escherichia coli*

Oral Presentation at the 2019 ASAS-CSAS Annual Meeting

Alleviation of piglet allergic reaction to soybean meal via supplementation with protease

Breeding Chicken and Duck for School Internship Program

Department of Animal Resources Development
National Institute of Animal Science, Cheonan, Republic of Korea

PUBLICATIONS

1. Kovanda, L., J. Park, **S. Park**, K. Kim, X. Li, and Y. Liu. 2023. Dietary butyrate and valerate glycerides impact diarrhea severity and immune response of weaned piglets under ETEC F4-ETEC F18 coinfection conditions. *J. Anim. Sci.* doi:10.1093/jas/skad401.
2. **Park, S.**, J. Choe, J. Cho, K. B. Jang, H. Kyoung, K. Il Park, Y. Kim, J. Ahn, H. B. Kim, and M. Song. 2023. Determination of optimal energy system and level for growing pigs. *J. Anim. Sci. Technol.* doi:10.5187/jast.2023.e63.
3. Wong, B., **S. Park**, L. Kovanda, Y. He, K. Kim, S. Xu, C. Lingga, M. Hejna, E. Wall, R. Sripathy, X. Li, Y. Liu. 2022. Dietary supplementation of botanical blends enhanced performance and disease resistance of weaned pigs experimentally infected with enterotoxigenic *Escherichia coli* F18. *J. Anim. Sci.*
4. Song, M., B. Kim, J. H. Cho, H. Kyoung, **S. Park**, J. Cho, K. I. Park, H. B. Kim, and J. J. Lee. 2022. Effects of dietary protease supplementation on growth rate, nutrient digestibility, and intestinal

- morphology of weaned pigs. *J. Anim. Sci. Technol.* 64:462-470.
5. **Park, S.**, J. W. Lee, A. J. Cowieson, G. Pappenberger, and T. A. Woyengo. 2020. Soybean meal allergenic protein degradation and gut health of piglets fed protease-supplemented diets. *J. Anim. Sci.* 98:1-9.
 6. **Park, S.**, J. W. Lee, K. Jerez Bogota, D. Francis, J. C. González-Vega, J. K. Htoo, and T. A. Woyengo. 2020. Growth performance and gut health of *Escherichia coli*-challenged weaned pigs fed diets supplemented with a *Bacillus subtilis* direct fed microbial. *Transl. Anim. Sci.* 4:1-10.
 7. **Park, S.**, J. J. Lee, H. Kyoung, J. Kang, S. Kim, J. Choe, M. Song, and Y. Kim. 2020. Comparison of growth performance of weaned pigs based on ideal protein of Korea swine feeding standard and US nutrient requirements of swine. *Korean J. Agric. Sci.* 47:783-789.
 8. **Park, S.**, W. Li, B. St-Pierre, Q. Wang, and T. A. Woyengo. 2020. Growth performance, nutrient digestibility, and fecal microbial composition of weaned pigs fed multi-enzyme supplemented diets. *J. Anim. Sci.* 98:1-10.
 9. **Park, S.**, J. Kang, J. J. Lee, H. Kyoung, S.-K. Kim, J. Choe, M. Song, and S. K. Lee. 2020. Growth performance and nutrient digestibility of growing-finishing pigs under different energy concentrations. *Korean J. Agric. Sci.* 47:275-282.
 10. Kyoung, H., **S. Park**, J. J. Lee, J. Kang, S.-K. Kim, J. Choe, and M. Song. 2020. Growth performance and nutrient digestibility of grower and finisher pigs fed diets containing non-genetically modified organism soybean meal. *Korean J. Agric. Sci.* 47:229-237.
 11. Lee, J. J., J. Choe, J. Kang, J. H. Cho, **S. Park**, R. Perez-maldonado, J.-Y. Cho, I.-H. Park, H. B. Kim, and M. Song. 2020. Dietary protease improves growth rate and protein digestibility of growing-finishing pigs. *J. Anim. Sci. Technol.* 62:313-320.
 12. Lee, J. J., J. Kang, **S. Park**, J. H. Cho, S. Oh, D. Park, R. Perez-maldonado, J.-Y. Cho, I.-H. Park, H. B. Kim, and M. Song. 2020. Effects of dietary protease on immune responses of weaned pigs. *J. Anim. Sci. Technol.* 62:174-179.
 13. **Park, S.**, J. J. Lee, B. M. Yang, J. H. Cho, S. Kim, J. Kang, S. Oh, D. Park, R. Perez-maldonado, J.-Y. Cho, I.-H. Park, H. B. Kim, and M. Song. 2020. Dietary protease improves growth performance, nutrient digestibility, and intestinal morphology of weaned pigs. *J. Anim. Sci. Technol.* 62:21-30.
 14. **Park, S.**, T. A. Woyengo, and W. Li. 2019. Enzymes target fiber in nursery pig diets to improve nutrient utilization. *National Hog Farmer*.
 15. Lee, J. J., S. H. Choi, J. H. Cho, J. Choe, J. Kang, S. Kim, **S. Park**, H. Kyoung, D. Seo, J. Cho, I. Park, S. Oh, H. B. Kim, and M. Song. 2019. Effects of dietary carbohydrases on productive performance and immune responses of lactating sows and their piglets. *J. Anim. Sci. Technol.* 61:359-365.
 16. Choe, J., S. Kim, J. H. Cho, J. J. Lee, **S. Park**, B. Kim, J. Kim, S. K. Baidoo, S. Oh, H. B. Kim, and M. Song. 2017. Effects of different gestation housing types on reproductive performance of sows. *Anim. Sci. J.* 89:722-726.
 17. Choe, J., K. S. Kim, H. B. Kim, **S. Park**, J. Kim, S. Kim, B. Kim, S. H. Cho, J. Y. Cho, I. H. Park, J. H. Cho, and M. Song. 2017. Effects of protease on growth performance and carcass characteristics of growing-finishing pigs. *S. Afr. J. Anim. Sci.* 47:697-703.
 18. **Park, S.**, B. Kim, S. Kim, K. Jang, Y. Kim, J. Park, M. Song, and Oh. S. 2016. Nutrition and feed approach according to the pig physiology. *Korean J. Agric. Sci.* 43:750-760.
 19. Kim, J., J. Seo W. Kim, H. M. Yun, S. C. Kim, Y. Jang, K. Jang, K. Kim, B. Kim, **S. Park**, I. Park, M. K. Kim, K. S. Seo, H. B. Kim, I. H. Kim, S. Seo, and M. Song. 2015. Effects of palm kernel expellers on productive performance, nutrient digestibility, and white blood cells of lactating sows. *Asian-Australas. J. Anim. Sci.* 28:1150-1154.
 20. Seo, J., W. Kim, J. Kim, J. K. Kim, S. C. Kim, Y. Jang, K. Jang, K. Kim, B. Kim, **S. Park**, I. Park, M. K. Kim, K. S. Seo, H. B. Kim, I. H. Kim, S. Seo, and M. Song. 2015. Effects of palm kernel expellers on growth performance, nutrient digestibility, and blood profiles of weaned pigs. *Asian- Australas. J. Anim. Sci.* 28:987-992.

ABSTRACTS

1. **Park, S.**, Y. Chen, R. Wolfenden, and Y. Liu. 2024. Dietary supplementation of blends of organic acids and monoglycerides alleviated diarrhea and systemic inflammation of weaned pigs experimentally infected with enterotoxigenic *Escherichia coli* F18. 2024 ASAS-CSAS-WSASAS Annual Meeting. ASAS Young Scholar Award (*Awardee Talk*).
2. **Park, S.**, Y. Chen, R. Wolfenden, and Y. Liu. 2024. Effects of blends of organic acids and monoglycerides on immune responses of weaned pigs experimentally infected with enterotoxigenic *Escherichia coli* F18. 2024 ASAS Midwest Meeting.
3. Kovanda, L., S. Rengman, S. Tawde, J. Pos, J. Park, **S. Park**, K. Kim, and Y. Liu. 2024. Effects of dietary valerate glycerides on weanling piglet diarrhea and immunity. 2024 ASAS Midwest Meeting.
4. Wongchanla, S., **S. Park**, K. Kim, S. Sun, X. Li, and Y. Liu. 2024. Effects of L-glutamate and L-aspartate supplementation on systemic and intestinal immune responses of weaned piglets challenged with F18 ETEC. 2024 ASAS Midwest Meeting.
5. **Park, S.**, K. Kim, A. Sokale, A. Barri, and Y. Liu. 2023. Effects of monoglycerides on serum metabolomic profiles in weanling pigs experimentally infected with a pathogenic *Escherichia coli*. 2023 ASAS-CSAS-WSASAS Annual Meeting.
6. **Park, S.**, L. Kovanda, A. Sokale, A. Barri, and Y. Liu. 2023. *In vitro* effects of monoglycerides and zinc glycinate: anti-inflammatory and epithelial barrier function. 2023 ASAS-CSAS-WSASAS Annual Meeting.
7. Wongchanla, S., **S. Park**, K. Kim, S. Sun, X. Li, and Y. Liu. 2023. Effects of L-glutamate and L-aspartate supplementation on growth performance, severity of diarrhea, and systemic immunity of weaned piglets challenged with F18 ETEC. 2023 ASAS-CSAS-WSASAS Annual Meeting.
8. **Park, S.**, S. Sun, K. Kim, A. Sokale, A. Barri, and Y. Liu. 2023. Dietary supplementation of monoglycerides on growth performance, diarrhea, and intestinal health of weaned pigs experimentally infected with a pathogenic *Escherichia coli*. 2023 California Animal Nutrition Conference.
9. Kovanda, L., **S. Park**, S. Rengman, S. Tawde, J. Pos, K. Kim, and Y. Liu. 2023. Dietary valerate glycerides: Effects on growth, diarrhea, fecal culture, and inflammatory status of weanling piglets infected with *Escherichia coli* F18. 2023 California Animal Nutrition Conference.
10. **Park, S.**, S. Sun, K. Kim, A. Sokale, A. Barri, and Y. Liu. 2023. Effects of monoglycerides on intestinal morphology and immune responses of weanling pigs experimentally infected with a pathogenic *Escherichia coli*. 2023 ASAS Midwest Meeting. Animal Science Young Scholar Award (*Awardee Talk*).
11. **Park, S.**, S. Sun, S. Wongchanla, Y. Zhao, L. Kovanda, R. Hernandez, K. Kim, Y. Chen, and Y. Liu. 2023. Dietary supplementation of blends of organic acids and monoglycerides alleviated diarrhea and systemic inflammation of weaned pigs experimentally infected with enterotoxigenic *Escherichia coli* F18. 2023 ASAS Midwest Meeting.
12. **Park, S.**, K. Kim, A. Sokale, A. Barri, and Y. Liu. 2022. Effects of monoglycerides on growth performance and diarrhea of weanling pigs experimentally infected with a pathogenic *Escherichia coli*. *J. Anim. Sci.* 100(Suppl_2):25-26.
13. **Park, S.**, L. Kovanda, B. Wong, E. Wall, and Y. Liu. 2022. Dietary supplementation of botanical extracts on intestinal health and serum inflammatory biomarkers of weaned pigs experimentally infected with a pathogenic *Escherichia coli*. *J. Anim. Sci.* 100(Suppl_2):156.
14. Kovanda, L., **S. Park**, K. Kim, and Y. Liu. 2022. Dietary valerate glycerides: Effects on growth, diarrhea, and fecal culture of weanling piglets infected with *Escherichia coli* F18. *J. Anim. Sci.* 100(Suppl_2):58.
15. Kovanda, L., J. Park, Y. He, **S. Park**, R. Wu, B. Wong, K. Kim, and Y. Liu. 2021. Dietary butyrate and valerate glycerides: Effects on growth and systemic immunity of weanling piglets coinfecting with F4 and F18 *Escherichia coli*. *J. Anim. Sci.* 99(Suppl_3):211-212.
16. Kang, J., **S. Park**, J. J. Lee, H. Kyoung, S. Kim, D. Seo, K. Kim, and M. Song. 2020. Effects of temperature and humidity index on growth performance and immune responses of finishing pigs. Proceedings of 2020 Annual Congress of KSAST. OA20009.

17. Kyoung, H., H. Lee, J. Kang, **S. Park**, S. Kim, D. Seo, K. Kim, J. J. Lee, and M. Song. 2020. Effects of glutamic acid on intestinal morphology and gene expression of tight junction proteins of weaned pigs. Proceedings of 2020 Annual Congress of KSAST. OA20010.
18. Lee, J. J., J. Kang, **S. Park**, H. Kyoung, D. Seo, S. Kim, K. Kim, and M. Song. 2020. Effects of heat stress on gut microbiota of finishing pigs. Proceedings of 2020 Annual Congress of KSAST. PA20020.
19. Kang, J., **S. Park**, J. J. Lee, H. Kyoung, S. Kim, D. Seo, K. Kim, and M. Song. 2020. Effects of heat stress on gut microbiota of growing pigs. Proceedings of 2020 Annual Congress of KSAST. PA20021.
20. **Park, S.**, J. Kang, J. J. Lee, H. Kyoung, D. Seo, S. Kim, K. Kim, and M. Song. 2020. Effects of temperature and humidity index on growth performance and immune responses of growing pigs. Proceedings of 2020 Annual Congress of KSAST. PA20024.
21. Kyoung, H., H. Lee, J. Kang, **S. Park**, S. Kim, D. Seo, K. Kim, J. J. Lee, and M. Song. 2020. Effects of dietary yeast cell wall on intestinal morphology and gut microbiota of weaned pigs. Proceedings of 2020 Annual Congress of KSAST. PA20025.
22. Seo, D., H. Lee, H. Kyoung, J. Kang, **S. Park**, S. Kim, K. Kim, J. J. Lee, and M. Song. 2020. Effects of dietary glutamic acid on frequency of diarrhea, blood profiles, and immune responses of weaned pigs. Proceedings of 2020 Annual Congress of KSAST. PA20026.
23. Kim, K., H. Lee, J. Kang, **S. Park**, H. Kyoung, S. Kim, D. Seo, J. J. Lee, and M. Song. 2020. Effects of glutamic acid on growth performance and nutrient digestibility of weaned pigs. Proceedings of 2020 Annual Congress of KSAST. PA20027.
24. Kim, S., H. Lee, H. Kyoung, J. Kang, **S. Park**, D. Seo, K. Kim, J. J. Lee, and M. Song. 2020. Effects of glutamic acid on gut microbiota of weaned pigs. Proceedings of 2020 Annual Congress of KSAST. PA20043.
25. **Park, S.**, J. W. Lee, A. J. Cowieson, G. Pappenberger, and T. A. Woyengo. 2019. Alleviation of piglet allergic reaction to soybean meal via supplementation with protease. J. Anim. Sci. 97(Suppl_3):113. 2019 ASAS-CSAS Annual Meeting. Oral Scientific Program. 131.
26. **Park, S.**, J. S. Hong, D. Francis, J. C. González-Vega, J. K. Htoo and T. A. Woyengo. 2019. Growth performance, gut health, and immune responses of *Escherichia coli*-challenged weaned pigs fed probiotic-supplemented diets. J. Anim. Sci. 97(suppl_3):359-360.
27. **Park, S.**, J. Kang, D. Mun, S. Kim, H. Kyoung, D. Seo, J. J. Lee, J. Cheo, Y. Kim, J. Park, and M. Song. 2019. Comparison of growth performance of weaned pigs based on Korea Swine Feeding Standard (3rd revision) and nutrient requirements of swine (NRC, 2012). Proceedings of 2019 Annual Congress of KSAST. PA19026.
28. Kim, S., J. J. Lee, S. Kim, B. Kim, J. Kang, D. Mun, J. Baek, H. Kyoung, J. Choe, **S. Park**, D. Seo, Alex Hung, J. M. Lee, and M. Song. 2019. Effects of dietary flavor in experimental and commercial nursery diets on growth performance of weaned pigs. J. Anim. Sci. 97(suppl_3):352-353.
29. Kim, S., Alex Hung, J. M. Lee, J. Kang, D. Mun, H. Kyoung, **S. Park**, D. Seo, J. J. Lee, J. Choe, M. Song, and H. Chang. 2019. Effects of dietary flavor in the commercial nursery diet on nutrient digestibility, packed cell volume, and frequency of diarrhea of weaned pigs. Proceedings of 2019 Annual Congress of KSAST. PA19011.
30. Kim, S., Alex Hung, J. M. Lee, J. J. Lee, S. Kim, B. Kim, J. Kang, D. Mun, J. Baek, H. Kyoung, **S. Park**, D. Seo, J. Choe, Y. Kim, and M. Song. 2019. Effects of dietary flavor in the commercial nursery diet on immune responses and gut microbiota of weaned pigs. J. Anim. Sci. 97(suppl_3):328.
31. Seo, D., Alex Hung, J. M. Lee, J. Kang, D. Mun, S. Kim, H. Kyoung, **S. Park**, J. J. Lee1, J. Choe, M. Song, and H. Chang. 2019. Effects of dietary flavor in the experimental nursery diet on nutrient digestibility, packed cell volume, and frequency of diarrhea of weaned pigs. Proceedings of 2019 Annual Congress of KSAST. PA19028.
32. Kang, J., J. Chae, S. Kim, J. Kim, **S. Park**, D. Mun, B. Kim, S. Kim, J. J. Lee, S. Kim, H. Kyoung, J. Choe, and M. Song. 2019. Effects of dietary inactivated probiotics on growth performance, nutrient digestibility, and immune responses of weaned pigs. J. Anim. Sci. 97(suppl_3):327-328.
33. Lee, J. J., Alex Hung, J. M. Lee, J. Kang, D. Mun, S. Kim, H. Kyoung, **S. Park**, D. Seo, J. Choe, Y. Kim, and M. Song. 2019. Effects of dietary flavor in the experimental nursery diet on gut microbiota of

- weaned pigs. Proceedings of 2019 Annual Congress of KSAST. PA19033.
34. Kang, J., Alex Hung, J. M. Lee, D. Mun, S. Kim, H. Kyoung, D. Seo, **S. Park**, J. J. Lee, J. Choe, and M. Song. 2019. Effects of dietary flavor in the experimental nursery diet on immune responses of weaned pigs. Proceedings of 2019 Annual Congress of KSAST. PA19003.
 35. Kyoung, H., M. Cho, H. Lee, **S. Park**, J. Kang, D. Mun, S. Kim, D. Seo, J. J. Lee, J. Choe, and M. Song. Effects of yeast cell wall product on growth performance, immune responses, and gene expression of tight junction proteins of weaned pigs. *J. Anim. Sci.* 97(suppl_3):333-334.
 36. Kyoung, H., M. Cho, H. Lee, **S. Park**, J. Kang, D. Mun, S. Kim, D. Seo, J. J. Lee, J. Choe, and M. Song. 2019. Effects of yeast cell wall product on nutrient digestibility, packed cell volume, and frequency of diarrhea of weaned pigs. Proceedings of 2019 Annual Congress of KSAST. PA19005.
 37. **Park, S.**, W. Li, and T. A. Woyengo. 2018. Growth performance and nutrient digestibility of weaned pigs fed multi-enzyme supplemented corn-barley-soybean meal-based diets. *J. Anim. Sci.* 96(suppl_3):328-329.
 38. Kang, J., J. Choe, **S. Park**, J. Kim, B. Kim, S. Kim, J. J. Lee, K. Jang, D. Mun, J. Baek, I. H. Park, J. Y. Cho, S. H. Cho, and M. Song. 2017. Effects of protease on growth performance and carcass characteristics of finishing pigs. *J. Anim. Sci.* 95(suppl_4):212-213.
 39. Park, I. H., J. Kang, J. Kim, S. Kim, J. J. Lee, K. Jang, B. Kim, **S. Park**, D. Mun, J. Baek, J. Choe, J. Y. Cho, S. H. Cho, and M. Song. 2017. Effects of dietary protease on growth performance and intestinal morphology of weaned pigs. *J. Anim. Sci.* 95(Suppl_4):198.
 40. Jang, K., K. Kim, S. Kim, J. Kim, B. Kim, **S. Park**, J. J. Lee, J. H. Lee, S. W. Kim, and M. Song. 2017. Effects of dietary supplementation of β -mannanase on immune responses in nursery pigs. *J. Anim. Sci.* 95(Suppl_4):32.
 41. Mun, M., I. H. Park, J. Kim, S. Kim, J. J. Lee, K. Jang, B. Kim, **S. Park**, J. Kang, J. Baek, J. Choe, J. Y. Cho, S. H. Cho, S. H. Cho, and M. Song. 2017. Effects of dietary protease on nutrient digestibility of weaned pigs. *J. Anim. Sci.* 95(Suppl_4):208.
 42. Baek, J., **S. Park**, J. J. Lee, J. Kim, S. Kim, K. Jang, B. Kim, J. Kang, D. Mun, J. Choe, I. H. Park, J. Y. Cho, S. H. Cho, M. Song. 2017. Effects of protease on growth performance and nutrient digestibility of growing pigs. *J. Anim. Sci.* 95(Suppl_4):208.
 43. Kim, S., K. Jang, J. Kang, D. Mun, B. Kim, J. Kim, **S. Park**, J. J. Lee, J. Choe, Y. Kim, J. Park, and M. Song. 2017. Effects of substitution of corn with brown rice on growth performance, nutrient digestibility, and blood profiles of weaned pigs. *J. Anim. Sci.* 95(Suppl_4):50-51.
 44. Kim, J., I. H. Park, S. Kim, J. J. Lee, K. Jang, B. Kim, **S. Park**, D. Mun, J. Choe, J. Kang, J. Baek, J. Y. Cho, S. H. Cho, and M. Song. 2017. Effects of dietary protease on immune responses of weaned pigs. *J. Anim. Sci.* 95(Suppl_4):50.
 45. Kim, J., S. Kim, Lee Jeong Jae, J. J. Lee, K. Jang, B. Kim, **S. Park**, Y. Kim, J. Park, Y. Kim, and M. Song. 2016. Productive performance, nutrient digestibility, and white blood cells of lactating sows fed palm kernel expellers. 17th AAAP animal science congress. 1598.
 46. Jang, K., S. Kim, Y. Jang, J. Kim, B. Kim, **S. Park**, J. J. Lee, J. H. Lee, and M. Song. 2016. Effects of β -mannanase on growth performance and health of weaned pigs. 17th AAAP animal science congress. 1578.
 47. Kim, S., J. Kim, J. J. Lee, Y. Jang, K. Jang, B. Kim, **S. Park**, Y. Kim, J. Park, Y. Kim, and M. Song. 2016. Growth Performance, nutrient digestibility, and blood profiles of weaned pigs from lactating sows fed palm kernel expellers. 17th AAAP animal science congress. 1623.
 48. **Park, S.**, J. Kim, S. Kim, J. J. Lee, Y. Jang, K. Jang, B. Kim, Y. Kim, J. Park, Y. Kim, and M. Song. 2016. Effects of palm kernel expellers on colostrum and raw milk microRNA of lactating sows. Proceedings of 2016 Annual Congress of KSAST. PG16039.
 49. Kim, J., S. Kim, J. J. Lee, Y. Jang, K. Jang, B. Kim, **S. Park**, Y. Kim, J. Park, Y. Kim, and M. Song. 2016. Effects of palm kernel expellers on microbiota of lactating sows and their litter. Proceedings of 2016 Annual Congress of KSAST. PG16032.
 50. Kang, J., K. Jang, S. Kim, Y. Jang, J. Kim, B. Kim, **S. Park**, J. J. Lee, J. H. Lee, and M. Song. 2016. Effects of β -mannanase on nutrient digestibility of weaned pigs. Proceedings of 2016 Annual Congress

of KSAST. PG16038.

51. Kim, B., J. Kim, Y. Jang, S. Kim, K. Jang, **S. Park**, J. J. Lee, Y. Kim, J. Park, Y. Kim and M. Song. 2016. Effects of spray dried plasma on productive performance of lactating sows. Proceedings of 2016 Annual Congress of KSAST. PG16033.
52. Jang, K., S. Kim, Y. Jang, J. Kim, B. Kim, **S. Park**, J. J. Lee, J. H. Lee, and M. Song. 2016. Effects of β -mannanase on intestinal morphology and goblet cells of weaned pigs. Proceedings of 2016 Annual Congress of KSAST. PG16046.
53. Kim, J., Y. Jang, S. Kim, W. Kim, K. Jang, K. Kim, B. Kim, **S. Park**, I. Park, Y. H. Kim, J. Seo, Y. Kim, S. Seo, and M. Song. 2015. Effects of palm kernel expellers on productive performance, nutrient digestibility, and white blood cells of lactating sows. J. Anim. Sci. 93(Suppl_1):415.
54. Jang, Y., J. Kim, S. Kim, W. Kim, K. Jang, K. Kim, B. Kim, S. Park, I. Park, Y. H. Kim, J. Seo, Y. Kim, S. Seo, and M. Song. 2015. Effects of palm kernel expellers on growth performance, nutrient digestibility, and blood profiles of weaned pigs. J. Anim. Sci. 93(Suppl_1):416.
55. Kim, S., Y. Jang, J. Kim, K. Jang, K. Kim, B. Kim, **S. Park**, I. Park, W. Kim, Y. H. Kim, J. C. Park, Y. Kim, S. Seo, and M. Song. 2015. Effects of palm kernel expellers on growth performance, nutrient digestibility, carcass characteristics, and loin muscle quality of growing-finishing pigs. Proceedings of 2015 Annual Congress of KASAT. Page 59.
56. Bae, K., J. Goo, J. Kim, Y. Jang, **S. Park**, K. Jang, B. Kim, K. Kim and M. Song. 2014. Effects of pathogenic *Escherichia coli* on diarrhea, growth performance, and blood profile of weaned pigs. Proceedings of 2014 Annual Congress of KSAST. Page 246.

AWARDS AND HONORS

American Society of Animal Science Young Scholar Award (Invited speaker)

- ▶ 2024 ASAS-CSAS-WSASAS Annual Meeting, Alberta, Canada, July 21-25, 2024

2024-2025 Gary B. Anderson Food Animal Graduate Fellowship

Department of Animal Science, University of California, Davis, May 29, 2024

Graduate Studies Travel Award

Graduate Studies, University of California, Davis,

- ▶ 2024 ASAS-CSAS-WSASAS Annual Meeting, July 21-25, 2024, Alberta, Canada

Animal Biology Graduate Group, University of California, Davis,

- ▶ 2022 ASAS Midwest meeting, March 14-16, 2022, Omaha, Nebraska

Humphries Fellowship

Department of Animal Science, University of California, Davis, August – October 2022, 2023

Animal Biology Graduate Program Fellowship

Graduate Group in Animal Biology, University of California, Davis, Summer 2022, 2023, 2024

Ursula Knight Abbott Animal Science Graduate Student Travel Award

Animal Biology Graduate Group, University of California, Davis,

- ▶ 2024 ASAS Midwest Meeting, March 10-13, 2024, Madison, Wisconsin
- ▶ 2023 ASAS-CSAS-WSASAS Annual Meeting, July 16-20, 2023, Albuquerque, New Mexico
- ▶ 2023 ASAS Midwest Meeting, March 14-16, 2023, Madison, Wisconsin
- ▶ 2022 ASAS Midwest Meeting, March 14-16, 2022, Omaha, Nebraska

Animal Science Young Scholar Award (Invited speaker)

- ▶ 2023 ASAS Annual Midwest Meeting, Madison, Wisconsin, March 12-15, 2023

Henry A. Jastro Graduate Research Award

Animal Biology Graduate Group, University of California, Davis, Fall 2021, 2022, and 2023

Hart, Cole, Goss Fellowship

Animal Biology Graduate Group, University of California, Davis, August – October 2021

Excellence in Research Award in Graduate Program

Chungnam National University Graduate School, Chungnam National University, Daejeon, Republic of Korea, August 21, 2020

The Honor Student (Half Scholarship of Tuition Fees) in Graduate Program

Division of Animal and Dairy Science, Chungnam National University,
Daejeon, Republic of Korea, 2015 and 2016 Academic Year

The Honor Student (Full Remission of Tuition Fees) in Undergraduate Program

Department of Animal Science & Biotechnology, Chungnam National University,
Daejeon, Republic of Korea, 2012, 2013, and 2014 Academic Year

PROFESSIONAL MEMBERSHIPS

Member, The American Society of Animal Sciences

Member, The Korean Society of Animal Science & Technology

Member, Korean-American Scientists and Engineers Association (KSEA)

Member, Korean Life Scientists in The Bay Area (KOLIS)

Member, Clarity and Leadership for Environmental Awareness and Research at UC Davis

Member, PIG-PARADIGM (Preventing Infection in the Gut of developing Piglets – and thus Antimicrobial Resistance – by disentangling the interface of Diet, the host and the Gastrointestinal Microbiome)

COURSES TAKEN (Graduate Period)

Ph.D. Courses

- ▶ Teaching Assistant Training Practicum
- ▶ Lipids: Chemistry and Nutrition
- ▶ Nutrition & Development
- ▶ Applied Multivariate Modeling
- ▶ Group Study for microbiome
- ▶ Grant Writing
- ▶ Ethics Animal Biology
- ▶ Animal Biology Seminar II
- ▶ Integrated Animal Bio II
- ▶ Experimental Design and Analysis
- ▶ Animal Biology Seminar I
- ▶ Integrated Animal Bio I
- ▶ Applied Statistics in Agricultural Science

Master Courses

- ▶ Advanced Animal Biochemistry
- ▶ Advanced Swine Nutrition
- ▶ Ruminant Microbiology
- ▶ Energy Metabolism
- ▶ Advanced Ruminants Nutrition
- ▶ Research ethics
- ▶ Advanced Poultry Nutrition
- ▶ Environmental Physiology of Domestic Animals
- ▶ Feed Manufacturing Technology
- ▶ Mineral Nutrition

REFERENCES

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Chungnam National University, Daejeon 34134, Republic of Korea
(82)42-821-5776, mhsong@cnu.ac.kr
3. Jung Min Heo, Professor of Animal Science & Biotechnology
Chungnam National University, Daejeon 34134, Republic of Korea
(82)42-821-5777, jmheo@cnu.ac.kr