

Wenxuan Dong

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Education

- M.S. (2023)** Animal Microbiome Purdue University, IN, USA
Advisor: Dr. Tim Johnson (President, Indiana Branch of American Society for Microbes, IBASM)
Thesis: Swine gut microbial community succession: from birth to market
- M.S. (2020)** Animal Nutrition China Agricultural University, Beijing, China
Advisor: Dr. Defa Li (Academician, Chinese Academy of Engineering)
Thesis: Comparison of the nutritional value of ingredients between sows and growing pigs
- B.S. (2017)** Agronomy China Agricultural University, Beijing, China

Research Experiences

- 2021-present: Effects of birth weight and antibiotic use on microbiome maturation in suckling and weaning pigs
Meta-analysis of swine gut microbial community succession: from birth to market
- 2017-2021: Evaluation of different antibiotic alternatives fed to weaning pigs
Nutritional evaluation of feed ingredients in swine diets
- 2016: Effects of storage time on the concentration of biogenic amines of Tilapia fish

Areas of Interest

Microbial ecology, Gut microbiome, Machine learning, Swine Nutrition, Data analysis, Systems & Synthetic biology

Publications

- **Wenxuan Dong**, Devin B. Holman, Nicole Ricker, Timothy A. Johnson* (2022). Meta-analysis reveals the dynamic development of the gut microbiome in commercial pigs. *In preparation*.
- Ruth E. Centeno-Martinez, **Wenxuan Dong**, Rebecca N. Klopp, Ilkyu Yoon, Jacquelyn P. Boerman, Timothy A. Johnson* (2022). Effects of feeding *Saccharomyces cerevisiae* fermentation postbiotic on the fecal microbial community of Holstein dairy calves. *Submitted to Animal Microbiome. (under review)*
- Zhang, N., Song, X., **Dong, W.**, Liu, L., Cui, Z., & Ma, Y. (2021). Nutritional evaluation of fish protein hydrolysate and its application in piglet production. *Journal of Animal Science*, 100(3) 1-8. <https://doi.org/10.1093/jas/skab369>
- **Dong, W.**, Li, J., Li, Z., Zhang, S., Li, X., ... & Zhang, S. (2020). Physicochemical properties and energy content of yellow dent corn from different climatic origins fed to growing pigs. *Asian-Australasian Journal of Animal Sciences*, 33(11), 1787-1796. <https://doi.org/10.5713%2Fajas.19.0715>
- **Dong, W.**, Zhang, G., Li, Z., Liu, L., Zhang, S., & Li, D. (2020). Effects of different crude protein and dietary fiber levels on the comparative energy and nutrient utilization in sows and growing pigs. *Animals*, 2020, 10(3):495. <https://doi.org/10.3390/ani10030495>
- **Dong, W.**, Wang, Q., Chen, J., Liu, L., & Zhang, S. (2019). Apparent total tract digestibility of nutrients and the digestible and metabolizable energy values of five unconventional feedstuffs fed to growing pigs. *Journal of Applied Animal Research*, 47(1), 273-279. <https://doi.org/10.1080/09712119.2019.1625778>
- **Dong, W.**[#], Huang, C.[#], Xie, F., Zhao, J., Li, Z., Li, Y., ... & Zhang, S. (2019). Comparative energy digestibility of protein feed ingredients in crossbred barrows in different growing stages. *Journal of Applied Animal Research*, 47(1),

176-182. (co-first author) <https://doi.org/10.1080/09712119.2019.1592752>

- Zhang, G., Zhao, J., **Dong, W.**, Song, X., Zang, J., Ni, S., ... & Li, D. (2021). Effects of tea tree oil supplementation on growth performance, antioxidant capacity, immune status and microbial community in weaned pigs. *Archives of Animal Nutrition*, 75(2), 121-136. <https://doi.org/10.1080/1745039X.2021.1877074>
- **Dong, W.**, Wang, Q., Bao, H., Xie, Z., Zhu Z., ... & Zhang, S. (2021). Determination and Prediction of the Digestible Energy and Metabolizable Energy of Liquor-making Distiller Grains Fed to Growing Pigs. *Chinese Journal of Animal Science*, 57(1), 133-137 (in Chinese) <https://doi.org/10.19556/j.0258-7033.20201130-08>
- **Dong, W.**, Zhang, G., Zhao, J., Chou, Y., ... & Liu, L. (2021). Evaluation of Available Energy and Amino Acid Digestibility of Wheat Stored in Different Years in Growing Pigs. *Chinese Journal of Animal Nutrition*, 33(84), 4384-4394. (in Chinese) <https://doi.org/11.5461.S.20210519.1055.094>
- Zhao, J., Zhang, G., **Dong, W.**, Zhang, Y., Wang, J., Liu, L., & Zhang, S. (2019). Effects of dietary particle size and fiber source on nutrient digestibility and short chain fatty acid production in cannulated growing pigs. *Animal Feed Science and Technology*, 114310. <https://doi.org/10.1016/j.anifeedsci.2019.114310>
- Li, E., Zhu, T., **Dong, W.**, & Huang, C. (2019). Effects of brown rice particle size on energy and nutrient digestibility in diets for young pigs and adult sows. *Animal Science Journal*, 90(1), 108-116. <https://doi.org/10.1111/asj.13127>
- Zhao, J., Tang, S., Zhou, X., **Dong, W.**, Zhang, S., & Huang, C. (2018). Determination of chemical composition, energy content, and amino acid digestibility in different wheat cultivars fed to growing pigs. *Journal of Animal Science*, 97(2), 714-726. <https://doi.org/10.1093/jas/sky431>

Conference

Jun 2022	ASM Microbe Conference 2022	Washington DC, US	Full Conference
May 2022	Purdue Microbiome Symposium	West Lafayette, IN, US	Poster Presentation
Mar 2022	IBASM meeting	West Lafayette, IN, US	Student volunteer for registration
Aug 2020	Feed Industry Innovation Forum	Beijing, China	Student volunteer for registration

Skills

- Traditional husbandry work and veterinary skills: sampling feed, blood, feces; slaughter; injection, etc.
- Wet Lab Analysis: DNA extraction, 16S rRNA gene sequencing library preparation
- Microbiome Analysis: QIIME2, kneaddata, HUMAnN3, fastQC, multiQC, cutadapt
- Others: R, Linux, Adobe Illustrator, SAS, Python

Honors & Awards

- Dean scholarship for Master Students, China Agricultural University, 2019 (Top 3 among 137 master students)
- National Scholarship for Master Students, Chinese Ministry of Education, 2019 (Top 5 among 137 master students)
- First Class Academic Scholarship, China Agricultural University, 2019 (Top 40 among 137 master students)

Additional

- 09/2020-06/2021: Research Assistant, China Agricultural University (CAU)
- 09/2018-09/2019: Graduate student liaison with faculty, Ministry of Agriculture Feed Industry Centre (MAFIC)
- 09/2015-09/2016: Captain of the men's school basketball team, China Agricultural University (CAU, Yantai Campus)