

Curriculum Vitae - Xiaohui Wu

Contact Information

School of Animal Sciences

Virginia Tech

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I am a Ph.D. student in Dr. Chun-Peng James Chen's lab, with a research focus on applying machine learning techniques to animal data for improving productivity, sustainability, and animal welfare in livestock systems. Such as developing acoustic-based models to detect cattle eructation as a cost-effective alternative for methane emission monitoring in ruminants, and exploring the potential of audio data to assess animal welfare conditions.

Education

Virginia Tech, Blacksburg, Virginia, USA

Ph.D., Animal Sciences, August 2023 – Present

- Advisor: Dr. Chun-Peng James Chen

Huazhong Agricultural University, Wuhan, Hubei, China

M.S., Poultry Genetic Breeding and Reproduction, September 2019 – June 2022

- Thesis: *Key parameters of physiological responses to acute heat stress in two commercial layers determined by Fisher discriminant analyses*
- Advisor: Dr. Yanzhang Gong

Zhejiang A&F University, Hangzhou, Zhejiang, China

B.S., Veterinary Medicine, September 2015 – June 2019

- Thesis: *Development of a Colloidal Gold Immunochromatographic Strip for the Detection of Aflatoxin B1*
 - Advisor: Dr. Xian Zhang
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Work Experience

Virginia Tech, Blacksburg, VA, USA

Graduate Research Assistant, School of Animal Sciences

August 2023 – Present

Zhejiang University, Hangzhou, China

Lab Research Assistant, College of Biosystems Engineering and Food Science

July 2022 – December 2022

Xiaoshan Dairy Farm, Hangzhou, China

Veterinary Intern

July 2017 – August 2017

Peer-Reviewed Journal Articles

1. **Wu X**, Zheng B, Mei Z, et al. Key parameters of physiological responses to acute heat stress in two commercial layers determined by Fisher discriminant analyses. *Journal of Thermal Biology*, 2023, 117: 103694. <https://doi.org/10.1016/j.jtherbio.2023.103694>
2. Cheng M, Song Z, Guo Y, et al. 1 α ,25-Dihydroxyvitamin D3 improves follicular development and steroid hormone biosynthesis. *Current Issues in Molecular Biology*, 2023, 45(5): 4017–4034. <https://doi.org/10.3390/cimb45050256>
3. Tang S, Li X, **Wu X**, et al. WT1 suppresses follicle-stimulating hormone-induced progesterone secretion by regulating ERK1/2 pathway in chicken preovulatory granulosa cells. *Gene*, 2022, 812: 146097. <https://doi.org/10.1016/j.gene.2021.146097>
4. Du H, Guo Y, **Wu X**, et al. FOXL2 regulates the expression of the Col4a1 collagen gene in chicken granulosa cells. *Molecular Reproduction and Development*, 2022, 89(2): 95–103. <https://doi.org/10.1002/mrd.23554>
5. Huang Y, Luo W, Luo X, **Wu X**, et al. Comparative analysis among different species reveals that the androgen receptor regulates chicken follicle selection through species-specific genes. *Frontiers in Genetics*, 2022, 12: 752976. <https://doi.org/10.3389/fgene.2021.752976>
6. Luo X, Guo Y, Huang Y, et al. Characterization and proteomics of chicken seminal plasma extracellular vesicles. *Reproduction in Domestic Animals*, 2022, 57(1): 98–110. <https://doi.org/10.1111/rda.14033>

Presentations & Posters

- **Wu X**, Limede A, Marques R, Ferreira G, Chen C.P. James. *Acoustic burp detection for scalable enteric methane monitoring in precision livestock farming*. ASAS-CSAS Annual Meeting, Hollywood, FL, July 6–10, 2025.
- **Wu X**, Ferreira G, Chen C.P. James. *Audio-Based Classification of Cattle Eructation Events for Methane Emission Monitoring Using Machine Learning*. The 3rd US Conference on Precision Livestock Farming, Lincoln, NE, June 2–5, 2025.
- **Wu X**, Limede A, Marques R, Ferreira G, Chen C.P. James. *Acoustic burp detection for scalable enteric methane monitoring in precision livestock farming*. The SAS Research Symposium, Blacksburg, VA, May 23, 2025.
- **Wu X**, Sheng Z, Gong Y. *A study on the evaluation method of heat stress in chickens*. The 21st National Conference on Animal Genetics and Breeding, Beijing, Oct 14–18, 2021.