Jiajia Xu

EDUCATION

Ph.D. in Animal and Veterinary Science
Aarhus University, Denmark (Mar 2021- Mar 2024)

Guest Ph.D. student - Veterinary Science
University of Parma, Italy (Oct 2023 – Nov 2023)

Master of Veterinary Medicine
China Agricultural University, Beijing (Sep 2018 - Jul 2020)

Bachelor of Veterinary Medicine
China Agricultural University, Beijing (Sep 2012 - Jun 2017)

RESEARCH EXPERIENCE

Postdoctoral Researcher – Department of Animal and Veterinary Science, Aarhus University (Mar 2024-Present)

- Designed and carried out a two-block piglet trial investigating UV light impact on barn hygiene, microbiota, and vitamin D-related immunity
- Performed 16S rRNA sequencing and immunological data analyses, creating structured and reproducible R workflows
- Coordinated sampling and reporting across technical teams and industry collaborators

Ph.D. Project: Strategies to improve piglet weaning (probiotics, fermented feed, targeted nanobodies)

- Designed, managed, and analyzed four animal trials evaluating probiotic-fermented feed and nanobody applications
- Conducted extensive microbiome analysis (16S rRNA), immune-marker assays (Fluidigm, qPCR), and performance data analysis in R
- Ensured smooth project management and clear data interpretation in collaboration with industry and academic partners

M.Sc. Thesis: Antimicrobial peptides and probiotic mechanisms

- Mapped sow mastitis disease regions in China; isolated and serotyped *E. coli* strains
- Participated in WGS-based strain characterization; interpreted report findings on virulence and AMR profiles
- Built a mouse mastitis model to evaluate anti-inflammatory effects of beetle-derived peptides
- Contributed to in vitro studies on *Lactobacillus johnsonii* L531 and its role in regulating epithelial cell inflammation

RESEARCH OUTPUT

Peer-reviewed publications

- **Xu, J. et al.** (2025) In-feed provision of binding proteins sustains piglet gut health and mitigates ETEC-induced post-weaning diarrhea. *Journal of Animal Science and Biotechnology*. doi:10.1186/s40104-025-01209-6
- **Xu, J., et al.** (2023) Liquid fermented cereals added probiotics did not reduce post-weaning diarrhea in pigs - an *E. coli* challenge study. *Frontiers in Veterinary Science*. doi: 10.3389/fvets.2023.1147165
- **Zou Y, Wang X, Xu J., et al.** (2022) *Z. morio* Hemolymph Relieves *E. coli*-Induced Mastitis by Inhibiting Inflammatory Response and Repairing the Blood-Milk Barrier. *International Journal of Molecular Sciences*. 23(21):13279. doi: 10.3390/ijms232113279
- **Xu, J., et al.** (2022) Impact of oral administration of single-domain antibodies on post-weaning diarrhoea - a challenge study with *E. coli* F4. *Animal - science proceedings*. 13, 2, p. 220. doi: 10.1016/j.anscip.2022.03.404
- **Zou Y, Xu J, et al.** (2020) *Lactobacillus johnsonii* L531 Ameliorates *Escherichia coli*-Induced Cell Damage via Inhibiting NLRP3 Inflammasome Activity and Promoting ATG5/ATG16L1-Mediated Autophagy in Porcine Mammary Epithelial Cells. *Veterinary Sciences*. 7(3):112. doi: 10.3390/vetsci7030112.
- **Du M, Liu X, Xu J, et al.** (2020) Antimicrobial Effect of *Zophobas morio* Hemolymph against Bovine Mastitis Pathogens. *Microorganisms*. 8(10):1488. doi: 10.3390/microorganisms8101488.