

Jinji Pang

EDUCATION

Ph.D., Veterinary Microbiology and Preventive Medicine

Aug 2018 – Dec 2023

Iowa State University (ISU), Ames, IA

Major: Veterinary Microbiology (GPA: 3.95/4.0)

Dissertation: Microbiota-based intervention for preharvest control of *Campylobacter* in poultry

Major Professors: Dr. Qijing Zhang & Dr.Orhan Sahin, Department of Veterinary Microbiology and Preventive Medicine

M.S., Statistics

Aug 2020 - Dec 2022

Iowa State University (ISU), Ames, IA

Major: Statistics (GPA: 3.97/4.0)

Thesis: Nonparametric bootstrap methods for interval estimation of the area under the ROC curve for correlated diagnostic test data

Major Professor: Dr. Chong Wang, Department of Statistics, Department of Veterinary Diagnostic and Production Animal Medicine

Doctor of Veterinary Medicine (DVM)

Aug 2013 - June 2018

China Agricultural University (CAU), Beijing, China

Major: Veterinary Medicine

Thesis: Effect of polymyxin resistance genes *mcr-1~5* on drug resistance and in vitro growth ability of *Escherichia coli*

INTERNSHIPS

Alltech intern at Clonakilty Agricultural University, Ireland

Undergraduate Intern

Jan 2017- Mar 2017

Research focus: Milking parlor management in Ireland

- Studied the dairy industry on the farm of Clonakilty Agricultural University for three weeks
- Conducted field research about “Milking Parlor Management” in dairy and beef farms in Ireland

Elite Cattlemen Program, Delaval Inc, China

Undergraduate Intern

Jun 2016 - Sep 2016

Research focus: Dairy farm management in China

- Translated manufacturing material lists from Chinese into English
- Worked as an interpreter for foreign after-market business managers and native trainees

SKILLS

Biological and Bioinformatics: Aseptic technique, animal study, PCR, ELISA, MIC, SDS-PAGE, cell culture, IHC, growth assay, MALDI-TOF, experiment design, protocol writing, proposal writing, teaching, training, oral presentation, 16S rRNA sequencing, DNA sequencing, microbiota analysis, bacteria culture under aerobic, anaerobic, microaerophilic conditions, metabolomics, protein expression, freeze-dry processes. QIIME 2, R, and Linux

Statistical Analysis: Generalized Linear Model, ANOVA, Time Series, Bayesian, Statistical Inference, Parametric & Non-Parametric & Correlation & Differential Abundant Analyses

Programming Language and Simulation: R, SAS, CPP

Miscellaneous: Word, Excel, PowerPoint, Outlook, LaTeX, GitHub

PUBLICATIONS

1. **Pang, J.**; Ju, W.; Welch, M.; Gauger, P.; Liu, P.; Zhang, Q.; Wang, C. (2023) Nonparametric bootstrap methods for interval estimation of the area under the ROC curve with correlated diagnostic test data: application to whole-virus ELISA testing in swine. *Front. Vet. Sci.* 10:1274786. doi: 10.3389/fvets.2023.1274786.
2. **Pang, J.**; Beyi, A.F.; Looft, T.; Zhang, Q.; Sahin, O. Fecal Microbiota Transplantation Reduces *Campylobacter jejuni* Colonization in Young Broiler Chickens Challenged by Oral Gavage but Not by Seeder Birds. *Antibiotics* 2023, 12, 1503. <https://doi.org/10.3390/antibiotics12101503>
3. **Pang, J.**; Looft, T.; Zhang, Q.; Sahin, O. Deciphering the association between *Campylobacter* colonization and microbiota composition in the intestine of commercial broilers. *Microorganisms* 2023,11,1724. <https://doi.org/10.3390/microorganisms11071724>
4. Sahin, O.; **Pang, J.**; Tang, Y.; Adiguzel, M.C.; Wang, C.; Zhang, Q. A longitudinal study on *Campylobacter* in conventional commercial broiler flocks in the United States: prevalence and genetic diversity. *Avian Dis.* 2023.
5. Xia, J., **Pang, J. (co-first author)**; Tang, Y., Wu, Z., Dai, L., Singh, K., . . . Zhang, Q. (2019). High prevalence of fluoroquinolone-resistant *Campylobacter* bacteria in sheep and increased *Campylobacter* counts in the bile and gallbladders of sheep medicated with tetracycline in feed. *Applied and Environmental Microbiology*, 85(11). <https://doi.org/10.1128/AEM.00008-19>
6. Goulart, D.B.; Beyi, A.F.; Wu, Z.; Adiguzel, M.C.; Wilson, S.; Xu, C.; **Pang, J.**; Dewell, R.; Dewell, G.A.; Plummer, P.J.; Zhang, Q.; Sahin, O. Influence of Single Dose Enrofloxacin Injection on Development of Fluoroquinolone Resistance in *Campylobacter jejuni* in Calves. *Antibiotics* 2022, 11, 1407. <https://doi.org/10.3390/antibiotics11101407>
7. Monshat, H., Wu, Z., **Pang, J.**, Zhang, Q., & Lu, M. (2020). Integration of Plasmonic Heating and on-chip temperature sensor for nucleic acid amplification assays. *Journal of Biophotonics*, 13(7). doi:10.1002/jbio.202000060
8. Adiguzel, M. C., Goulart, D. B., Wu, Z., **Pang, J.**, Cengiz, S., Zhang, Q., & Sahin, O. (2021). Distribution of CRISPR types in fluoroquinolone-resistant *Campylobacter jejuni* isolates. *Pathogens*,10(3), 345. doi:10.3390/pathogens10030345
9. Monshat, H., Qian, J., **Pang, J.**, Parvin, S., Zhang, Q., Wu, Z., & Lu, M. (2022). Integration of nucleic acid amplification, detection, and melting curve analysis for rapid genotyping of antimicrobial resistance. *IEEE Sensors Journal*, 22(8), 7534-7541. doi:10.1109/jsen.2022.3156378
10. **Pang, J.**, and Bai, X., and Chen, S., and Jiang, W., and Wang, Z., and Cao, J., and Dong, Y., & Chen, Y. (2017). The effect of monochromatic green light on melatonin synthesis in chick embryo. *Chinese Journal of Animal and Veterinary Sciences*. 2017 Vol.48 No.5 pp.938-944 ref.32

CONFERENCE PRESENTATIONS

1. **Pang, J.**, Sahin, O., Zhang, Q. In vitro and in vivo activity of *Lactobacillus* strains against *Campylobacter jejuni*. Poster presentation at American Society for Microbiology (ASM 2023), Houston, USA.
2. **Pang, J.**, Sahin, O., Zhang, Q. Effect of enrofloxacin on cecal microbial diversity and composition of broiler chickens challenged with *Campylobacter jejuni*. Oral presentation at Conference of Research Workers in Animal Diseases (CRWAD 2023), Chicago, USA.

3. **Pang, J.**, Looft, T., Sahin, O., Zhang, Q. Deciphering the association of cecal microbiota with *Campylobacter* colonization status in broiler chickens. Oral presentation at *Campylobacter, Helicobacter* and Related Organisms Conference (CHRO 2022), Yangzhou, China.
4. **Pang, J.**, Sahin, O., Zhang, Q. Effect of enrofloxacin on cecal microbial diversity and composition of broiler chickens challenged with *Campylobacter jejuni*. Poster presentation at American Society for Microbiology (ASM 2022), Washington D.C., USA.
5. **Pang, J.**, Sahin, O., Zhang, Q. The effect of fecal microbiota transplantation on *Campylobacter jejuni* colonization in young broiler chicks using a seeder-bird infection model. Oral presentation at Conference of Research Workers in Animal Diseases (CRWAD 2021), Chicago, USA.
6. **Pang, J.**, Sahin, O., Zhang, Q. Evaluation of microbiota-based interventions as a preharvest control strategy for *Campylobacter* in poultry. Online oral presentation at American Society for Microbiology (ASM 2020), Chicago, USA.
7. **Pang, J.**, Sahin, O., Zhang, Q. Protection against *Campylobacter* by fecal microbiota transplantation in newly hatched broiler chickens. Online oral presentation at Conference of Research Workers in Animal Diseases (CRWAD 2020), Chicago, USA.

HONORS & AWARD & GRANTS

- Iowa State University Research Excellence Award, 2023.
- Lora and Russ Talbot Graduate Fellowship in Veterinary Medicine (the most outstanding Ph.D. candidate in the College of Veterinary Medicine, Iowa State University), 2023.
- Travel Award, College of Veterinary Medicine Research Office, 2022,2023.
- Professional Advancement Grants, Graduate and Professional Student Senate, 2022.
- Travel Award, College of Veterinary Medicine Research Office, 2021.
- Professional Advancement Grants, Graduate and Professional Student Senate, 2021.
- 2nd Place Graduate Student Poster Award. Awarded by ISU College of Vet Med, 2021.
- Freese Scholarship in Veterinary Microbiology, Awarded by ISU College of Vet Med, 2021.
- Finalist of 3MT Thesis Competition. Awarded by ISU Graduate College, 2019.
- Excellent graduate of Beijing. Awarded by Beijing's Ministry of Education, 2018.
- National Scholarship. Awarded by China's Ministry of Education, 2017.
- 1st Class Scholarship for Outstanding Students. China Agricultural University, 2017.
- 2017 Dubai Equine Scholarship. Darley Company, 2017.
- Merit Students, China Agricultural University, 2014,2015,2016.
- Outstanding Student Leaders, China Agricultural University, 2014,2015,2016.
- 2nd Class Scholarship for Outstanding Students, China Agricultural University, 2014,2015.

SERVICES & LEADERSHIPS

❖ College of Veterinary Medicine Association of Graduate Students

Aug 2021 - Jun 2022

Position: Vice President

- Communicated relevant information, including financial aids, mental health services, internship opportunities, from the department to graduate students

- Organized monthly events, such as graduate student networking, internship application workshops, career services

❖ **Martial Arts Club, ISU, Ames, IA**

Aug 2020 - May 2021

Position: Secretary

- Organized weekly practice and club events during Covid pandemic and ensured safety and healthy exercise of martial arts club members
- Organized club fundraising activities

PROFESSIONAL MEMBERSHIPS

Member of American Society for Microbiology (ASM)

2020 - Present

LANGUAGES

English – Full professional proficiency

Chinese – Native

Korean – Elementary proficiency