

# Ji Wang — Curriculum Vitae

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## RESEARCH INTEREST

Gene expression regulation,  
Molecular quantitative trait loci,  
Application of deep learning in genomics,  
Functional annotation of the livestock and poultry genome

## EDUCATION

**China Agricultural University (Sponsored by Project 985)**

**Beijing, CHN**

*M.Agr. in Animal Genetics, Breeding and Reproduction*

*September 2021 - June 2024 (expected)*

– GPA: 3.40/4.0

– Centesimal grade average: 84.4

**South China Agricultural University (The Double First Class University Plan)**

**Guangzhou, CHN**

*B.Agr. in Animal Science*

*September 2017 - June 2021*

## AWARDS & HONORS

**The Second Price Scholarship**, China Agricultural University, 2022

**Outstanding Thesis**, South China Agricultural University, 2021

**Outstanding Student Leader Award**, South China Agricultural University, 2020

**The Third Price Scholarship**, South China Agricultural University, 2020

## RESEARCH EXPERIENCE

**Pig Enhancer Predict**

*2022 - 2023*

- Collecting multiple enhancer datasets to obtain a high-quality and reliable set.
- Focused on predicting enhancer sequences in the pig genome using convolutional neural networks.
- Assist us in achieving reliable functional annotation and identifying the effects of variations in diverse pig genomes, while reducing the labor costs.

**Comparison of software for expression quantitative trait loci association analysis.**

*2022 – Now*

- Simulation of various scenarios for eQTL genotype and gene expression data.
- Application of multiple eQTL mapping software on simulated data and comparison of their performance.
- Provide us with suggestions for using different eQTL mapping software under various scenarios, and offer the necessary support for building a better pipeline.

**Imprinting patterns of the porcine PWS imprinting domain**

*2022 - Now*

- Collected tissue samples from different porcine developmental stages and performed RNA extraction and sequencing.
- Processed and analyzed the RNA sequencing data using bioinformatics tools. Identified and characterized differentially expressed genes and determined their imprinting status.
- Identified and characterized the imprinting patterns of the porcine PWS imprinting domain. Revealed differentially expressed genes and their imprinting status during porcine development.

## SKILLS

**Programming**

Bash, Python, R, LaTeX, Nextflow

**Languages**

Chinese, English

**Relevant skills**

WGS, WGBS, (sc)RNA-seq, CNN, Transformer

## EXTRACURRICULAR ACTIVITIES

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**DBN China-Israel Agritech Innovation Talent Training Program**  
**Comprehensive Training Program for Graduate Students in Smart**  
**Agriculture (Artificial Intelligence +)**  
**Datawhale's Team Learning in Artificial Intelligence**

Hebrew University of Jerusalem  
China Agriculture University  
  
Datawhale

## PUBLICATIONS

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**PorcineAI-enhancer: Prediction of Pig Enhancer Sequences Using Convolutional Neural Networks (Under Review)**

**Ji Wang**, Nanzhu Chen, Zhang Han, Tong Zeng, Xiaohua Ai and Liangke Wu\*  
*Animals*, 2023. **IF: 3, Rank: Q1.**

**A unique 15-bp InDel in the first intron of BMPR1B regulates its expression in Taihu pigs**

Zhexi Liu, Ran Xu, Han Zhang, Depeng Wang, **Ji Wang** and Liangke Wu\*  
*BMC Genomics*, 2022. **IF: 4.4, Rank: Q1.**

**Relationships between gilt development and herd production efficiency are revealed by simulation**

Han Zhang, Zhexi Liu, Yijun Liu, Depeng Wang, **Ji Wang** and Liangke Wu\*  
*Czech Journal of Animal Science*, 2023. **IF: 1.2, Rank: Q2.**

## SELECTED COURSES (PARTIAL LIST)

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### Postgraduate:

Comparative Animal Breeding (92), Statistical Genetics (82), Animal Genomic Data Analysis (80), Livestock Genomics (83), Molecular Genetics in Animal (82), Farm Animal Genetic Resource (90), Literature retrieval and paper writing in animal science (87)

### Graduate:

Experiment of Animal Anatomy and Tissue Embryology (88), Biostatistics and Experiment Design Experiment (90), Experiment of Animal Husbandry Microbiology (91), Principles of Genetic Engineering (86), Animal Reproduction (89), Animal Production (87.6), Cattle Science (95.4), Environmental Hygiene of Domestic Animal (90), Domestic Animal Behavior (95.1)

## REFERENCES

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### Prof. Kelian Wu

Professor, College of Animal Science and Technology  
China Agriculture University, Beijing, CHN  
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### Dr. Lingzhao Fang

Assistant Professor, Center for Quantitative Genetics and Genomics  
AARHUS University, Xiamen, CHN  
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### Prof. Jianfeng Liu

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