

## Hao Jin

Master Student

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### EDUCATION BACKGROUND

**Sep. 2022-Present Master Student**, Animal Genetic Breeding and Reproduction Science, Laboratory of Mammalian Molecular Embryology, College of Animal Sciences, Zhejiang University, Hangzhou, Zhejiang Province, PRC (Mentor: Kun Zhang)

❖ GPA: 90.27/100

**Sep. 2018-Jul. 2022 Bachelor of Agriculture**, Animal Science, Zhejiang University, Hangzhou, PRC

❖ GPA: 3.79/4

### RESEARCH INTERESTS

- ❖ Epigenetic regulation of pluripotency & totipotency maintain and stem cell differentiation.
- ❖ Epigenetic and chromatin reprogramming in embryonic development and cell fate determination.
- ❖ Epigenetics and epigenome editing in aging & disease.
- ❖ High-throughput single-cell omics technology

### RESEARCH EXPERIENCE

**Master Student**, College of Animal Sciences, Zhejiang University, 09/2022-present

**Advisor: Dr. Kun Zhang**

we focus on transcription regulation in the mammalian genome that governs early mouse and bovine embryonic development. For this purpose, we utilize techniques such as RNAi, gene editing and inhibitor interference, combining high-throughput omics analysis, like RNA-seq and ChIP-seq, to decipher the mechanisms underlying the key biological processes (especially Zygotic genome activation and first lineage specification).

**Responsibility:**

- ❖ Project 1: Principles of the earliest lineage specification and X chromosome dosage compensation in bovine early embryos. (published, Co-first author)

- ❖ Project 2: Dynamic change and functions of p300/CBP (one histone modifying writer) during zygotic genome activation in mice and bovine (submitted, Co-first author).
- ❖ Project 3: Function of general transcription factor A in bovine ZGA. (in progress, first author)
- ❖ Project 4: Functions of B (one histone modifying reader) during preimplantation embryo development in mice and bovine (in progress, Co-first author).

**Undergraduate Student**, College of Animal Sciences, Zhejiang University, 09/2021-06/2022

**Advisor: Dr. Kun Zhang**

**Responsibility:**

- ❖ Function of SOX2 in bovine early embryo development.

**Undergraduate Student**, College of Animal Sciences, Zhejiang University, 09/2020-06/2021

**Advisor: Dr. Jinrong Peng**

**Responsibility:**

- ❖ Cloning of ribosomal small subunit assembly complex protein gene and preliminary study on its entry mechanism into nucleolus.

## **RELEVANT SKILLS**

- ❖ **Embryology**: Micromanipulation of oocytes and embryos in mice and cattle; In vitro maturation, in vitro fertilization and in vitro culture; Microinjection for oocytes, zygotes and 2-cell embryos.
- ❖ **Cell Biology**: Immunofluorescence; Confocal and epifluorescence microscopy; Cell culture.
- ❖ **Molecular biology**: Molecular cloning; mRNA in vitro synthesis; Low-input library construction (e.g. scRNA-Seq, ChIP-Seq and CUT&Tag).
- ❖ **Bioinformatics analysis**: Proficient in using R and Linux; Integrated analysis of multi-omics data, including RNA-seq, ChIP-seq, ATAC-seq et al.
- ❖ **Language**: TOFEL: 101 (R: 30; L: 28; S: 20; W: 23)

## **HONORS AND AWARDS**

- ❖ Excellent College Students of Zhejiang University, 2022
- ❖ The Second Prize of Zhejiang University scholarship, 2020
- ❖ The Third Prize of Zhejiang University scholarship, 2019, 2021

**PUBLICATIONS, ABSTRACTS and PRESENTATIONS****Peer-reviewed Articles (chronological)**

# These authors contributed equally

1. Xiao L#, **Jin H**#, Dang Y, Zhao P, Li S, Shi Y, Wang S, Zhang K. p300/CBP-catalyzed acetylation safeguards minor zygotic genome activation via activating DUX. *Nature Genetic*(submitted). 2024
2. Hu B#, **Jin H**#, Shi Y, Yu H, Wu X, Wang S, Zhang K. Single-cell RNA-Seq reveals the earliest lineage specification and X chromosome dosage compensation in bovine preimplantation embryos. *FASEB J*. 2024 Feb 29;38(4): e23492.

**Abstracts**

1. **Hao Jin**, Lei Luo, Yan Shi, Bingjie Hu, Kun Zhang. SOX2 is Essential for Inner Cell Mass Lineage Commitment in Bovine blastocysts. Society for the Study of Reproduction, 2023

**Oral Presentation**

1. **Hao Jin**, Bingjie Hu, Yan Shi, Haotian Yu, Xiaotong Wu, Shaohua Wang, Kun Zhang. Single-Cell RNA-Seq Reveals the Earliest Lineage Specification and X Chromosome Dosage Compensation in Bovine Preimplantation Embryos. Society for the Study of Reproduction, 2024

**REFERENCES****Kun Zhang, Ph.D.**

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