

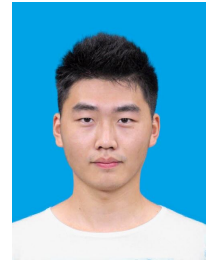
Haoyu Chao

🎓 Ph.D. in Bioinformatics

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🔍 Research Interests: Plant genome assembly and evolution; Functional genomics;
Development of computational biology methods and computational platforms



Education

- Zhejiang University** College of Life Sciences Hangzhou, Zhejiang, China
Ph.D.: Bioinformatics (Plant genomics and evolution) Sep 2021 – Jun 2026
Supervisor: Prof. Ming Chen
- Southwest University** Hanhong College, Shennong Program Chongqing, China
B.Sc.: Agriculture (Multi-omics analysis of *Brassica napus*) Sep 2017 – Jun 2021
Supervisor: Prof. Kun Lu

Selected Publications

1. **Chao H[#]**, Ruan Z[#], Li Z[#] *et al.*, Chen M*. *Molecular Plant*, 2026, **Under Review**
Unlocking telomere-to-telomere genome architecture and evolution across hundreds of plant species.
2. **Chao H[#]**, Ruan Z[#], Li Z[#], Zhou X, Zhang S, *et al.*, Chen M*. *Nucleic Acids Research*, 2026
T2T-Hub: A central platform for analyzing plant and animal T2T genomes.
3. **Chao H[#]**, Li Z[#], Chen D*, Chen M*. *Bioinformatics*, 2024
iSeq: An integrated tool to fetch public sequencing data.
4. **Chao H[#]**, Zhang S[#], Hu Y[#], *et al.*, Chen M*. *Journal of Integrative Bioinformatics*, 2024
Integrating omics databases for enhanced crop breeding.
5. **Chao H[#]**, Li T[#], Luo C[#], *et al.*, Lu K*. *International Journal of Molecular Sciences*, 2020
BrassicaEDB: A Gene Expression Database for *Brassica* Crops
6. He Z[#], **Chao H[#]**, Zhou X[#], *et al.*, Chen M*, Chen D*. *Horticulture Research*, 2023
A chromosome-level genome assembly provides insights into *Cornus wilsoniana* evolution.
7. Tong X[#], **Chao H[#]**, Zhang C[#], Li Z[#], *et al.*, Chen M*, Zhao H*, Wang L*, Chen D*. *Research*, 2026
A single-cell atlas of pan-cancer liver metastasis reveals dynamic cellular programs driving metastatic progression and immune modulation.
8. Cao G, **Chao H**, *et al.*, Chen M, Zhang H*, Chen D*. *Genomics, Proteomics & Bioinformatics*, 2025
scPlantLLM: A Foundation Model for Exploring Single-cell Expression Atlases in Plants.
9. Mei F, Yang T, **Chao H**, *et al.*, Chen M, *et al.* Wu S*. *The Plant Journal*, 2025
Genomic insights into drought adaptation of *Caragana korshinskii*.
10. Xu J, Zhu C, Su M, Li S, **Chao H***, Chen M*. *Database*, 2023
CropGF: a comprehensive visual platform for crop gene family mining and analysis.

Ph.D. Thesis

- Unlocking Telomere-to-Telomere Genome Architecture and Evolutionary Dynamics across Hundreds of Plant Species (PDF) Supervisor: Prof. Ming Chen

Conference Participation

- **PlantGen2025: Plant Genome Structure and Evolution** Novosibirsk, Russia (RU)
Haoyu Chao, Zixuan Wang, Ming Chen Oral Presentation, Jul 2–5, 2025
Advancing Plant Telomere-to-Telomere Genome Research with PlanT2T.
- **2025 Summer Workshop on Plant Genomics and Bioinformatics** Almaty, Kazakhstan (KZ)
Haoyu Chao, Zixuan Wang, Luoyao Xie, Yifan Chen, Ming Chen Oral Presentation, Jul 7–9, 2025
Unlocking Plant Genetics with Telomere-to-Telomere Genome Assemblies.
- **BGRS/SB-2024: Genetics, Bioinformatics and Systems Biology of Plants** Novosibirsk, Russia (RU)
Haoyu Chao, Yi Shen, Yanyan Zhu, Ming Chen Oral Presentation, Aug 5–10, 2024
An Integrated Tool for Fetching and Analyzing Public Sequencing Data.
- **BioHabana 2024: Science for a Healthy Life** Havana, Cuba (CU)
Haoyu Chao, Yueming Hu, Shilong Zhang, Feng Cong, Ming Chen Oral Presentation, Apr 1–5, 2024
Single-Cell Transcriptomic Analysis of lncRNA Expression Patterns and Regulatory Networks in Liver Metastasis of Pancreatic Ductal Adenocarcinoma.
- **World Congress: Systems Biology, Logic and Artificial Intelligence** Novosibirsk, Russia (RU)
Haoyu Chao, Yuhao Chen, Xianyuan Chang, Ming Chen Oral Presentation, Jun 26–29, 2023
Multi-omics Integration Analysis, Algorithm Design, and Visualization Platform Construction for Rice.

Honors and Awards

- 2021–2026 (Ph.D.): National Scholarship; Outstanding Graduate Student; Top 10 University Students; Outstanding Graduate of Zhejiang University.
- 2017–2021 (Undergraduate): Yuan Longping Scholarship; Hou Guangjiong Scholarship; First Prize of Hanhong Cup; First Prize of Challenge Cup.

Personal Summary

- **Research skills:**
 - (1) Strong plant genomics background; T2T assembly and cross-species evolutionary analysis;
 - (2) Extensive experience in multi-omics data analysis including epigenomics and single-cell transcriptomics;
 - (3) Proficient in R and Python for data analysis and visualization;
 - (4) Experience in bioinformatics tool and platform development using Python;
 - (5) Strong grant writing experience, contributing to RSF–NSFC projects.
- **Personal qualities:** Strong focus, resilience, teamwork spirit, and passion for research.