TIANFENG LU

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EDUCATION

Zhejiang University, *Chu Kochen* Honors College **August 2019-June 2023**
4th Year, BS in Biology Science (Qiushi Class)(major) *Major GPA: 3.97/4.00, 90.05/100,1st in the major*
Information and Computing Science(minor) *Overall GPA: 3.91/4.00, 88.78/100,1st in the major*

MAJOR COURSEWORK

- Molecular Biology(99)
- Cell Biology(94)
- Neurobiology(88)
- Genetics(92)

MINOR COURSEWORK

- Data Structures and Algorithms(98)
- Point Set Topology/Algebraic Topology(93/94)
- Ordinary Differential Equations(89)
- Probability Theory/Mathematical Statistics(95/97)
- Algebra II/Algebra III(85/78)
- Numerical Algebra(92)

RESEARCH INTERESTS

Computational Neuroscience, Computational Geometry & Topology, Neural Circuits, Multi-Omics Analysis

TECHNICAL SKILLS

Programming: R, C++(OOP & Data Structures), Python, matlab (Scientific Computation)
Technologies: scRNA-seq, ChIP-seq, smart-seq

RESEARCH EXPERIENCE

Scientific research training I **May 2020-July 2020**
Mentored by Dr.Cunqi Ye *Life Sciences Institute, Zhejiang University*
I constructed plasmids, cloned PCR products and transformed *S. cerevisiae* to express fusion proteins (NLS-GST-GFP). The location change of this enzyme had a significant influence to survival in adversity.

Metabolic transition of Drosophila tracheal stem cell **August 2020-January 2022**
Mentored by Dr.Hai Huang *School of Medicine, Zhejiang University*
I performed the most of upstream data processing and downstream bioinformatics analysis in this project such as bulk RNA-seq and ChIP-seq. Our finding indicates metabolic control via transcription cofactor Yki of progenitor cells is essential during Drosophila tracheal remodeling.

Single cell atlas of fly trachea **June 2021-Now**
Mentored by Dr.Hai Huang *School of Medicine, Zhejiang University*
Since previous result implies a complicated metabolic network during trachea development, It is intriguing to explore molecular features of fly trachea in single cell resolution, in order to further resolve development landmarks in trachea remodeling.

PUBLICATIONS

Li Y, Dong P, Yang Y, Guo T, Zhao Q, Miao D, Li H, **Lu TF**, Xia F, Lyu J, Ma J, Kornberg TB, Zhang Q, Huang H. Metabolic control of progenitor cell propagation during *Drosophila* tracheal remodeling. *Nat Commun* **13**, 2817 (2022). https://doi.org/10.1038/s41467-022-30492-4

SELECTED AWARDS AND HONORS

Second Prize in China High School Biology Olympiad *2018*
Academic Excellence Award & Zhejiang University Scholarship *2020, 2021, 2022*
First Class Scholarship for Top talents in Basic Sciences *2021, 2022*
Yongping Scholarship *2022*