

ZHAO Wenxue

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EDUCATIONAL BACKGROUND

Bachelor of Science in Biology Science	Shandong University	2016 - 2020
GPA: 90.85/100 Ranking: top 3%		
PhD in bioinformatics	Peking University	2020 - Present

ACADEMIC EXPERIENCE

Functions of architectural proteins on the formation and maintenance of 3D genome

- Completed the experiment design, data analysis and organized the manuscript.
- Revealed the functions and mechanisms of architectural proteins in 3D genome organization by multi-omics data.

Chromatin epigenetics and cell type transition in response to matrix stiffness

- Completed the experiment design, sequencing data analysis and organized the manuscript.
- Illustrated the disease development in the perspective of chromatin accessibility using bioinformatics analysis and to find new targets for clinical treatment.

Unraveling the Effects of Microenvironmental Stiffness on Cellular Responses by Integrating Spatial Transcriptomics and Nanoindentation

- Developed spatial experiment methods to reveal the tissue stiffness of tumor microenvironment in liver cirrhosis.
- Combined spatial transcriptome analysis with nanoindentation to profile the cell atlas and investigate clinical treatment target.

INTERNSHIP

Illumina, <i>Bioinformatics-intern</i>, Service & Support department	Jul.-Sep. 2022
<ul style="list-style-type: none">• Analyzed NGS datasets to support existing workflows and computational pipelines.• Provided clear documentation of tools, workflows and analyses.• Engaged in collaborative research with internal and external teams and department.	

BioGeometry, <i>Computational biology researcher-intern</i>	Jul.-Nov. 2023
<ul style="list-style-type: none">• Responsible for the analysis and mining of multi-omics data.• Collaborated with the AI team on large language models (Geneformer, scGPT) to find disease targets.• Tracked the latest articles and algorithm implementation on multi-omics data analysis and AI drug design.	

PUBLICATIONS

Yua Sun*, Xin Xu*, **Wenxue Zhao***, Yu Zhang, Keyang Chen, Yongzheng Li, Xiaotian Wang, Mengling Zhang, Boxin Xue, Wanting Yu, Yingping Hou, Chaobin Wang, Wei Xie, Cheng Li, Daochun Kong, Shu Wang, Yujie Sun#. "Rad21 is the core subunit of the cohesin complex involved in directing genome organization". Genome Biol 24, 155 (2023). <https://doi.org/10.1186/s13059-023-02982-1>

Wenxue Zhao*, Weihong Yuan*, Tian Dong*, Wei Qi, Zhijie Feng#, Cheng Li#, Yujie Sun#. "Increased matrix stiffness promotes fibrogenesis of hepatic stellate cells through AP-1-induced chromatin

priming”. **In revision.**

Jiahao Niu*, Xiaotian Wang*, **Wenxue Zhao***, Yao Wang, Yizhi Qin, Xiaoshuai Huang, Boxin Xue, Cheng Li, Yujie Sun[#]. “Perinuclear force regulates SUN2 dynamics and distribution on the nuclear envelope for proper nuclear mechanotransduction”. **Under review.**

Yao Wang*, **Wenxue Zhao***, Cheng Li, Yujie Sun. “The nucleoskeleton protein NuMA maintains local chromatin architecture partially through promoting linker histone H1 binding to chromatin and nucleosome stacking”. **Under manuscript.**

HONORS & AWARDS

National scholarship, Ministry of Education of the P. R. China	Nov. 2017
The First Prize Scholarship and Excellent Student, Shandong University	Sep. 2017
Bronze award, International genetically engineered machine competition (iGEM)	Oct. 2018
Outstanding Graduates of Shandong province	Jun. 2020
Honours Degrees, Shandong University	Jun. 2020
Excellent Research Award, Peking University	Sep. 2023
Gu Wenyu Life Sciences Scholarship, Peking University	Sep. 2023

SKILLS

- Programming Languages: Shell script, R, Python
- SCI graph drawing: Adobe Illustrator, Adobe Photoshop
- My GitHub: <https://github.com/Wenxue-PKU>