石黔川 Shi Qianchuan

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Blog: sqccqs.cc | CV Profile: cqs.bio

Education

M.S. in Biology —School of Medicine, Southern University of Science and Technology (SUSTech), Shenzhen, China 2024–Present
GPA: 3.84/4.00 | Rank: 2/49
Selected Graduate Coursework (Cancer, Genomics & Epigenetics): Genomics & Data Analysis (A+); Cancer Biology (A+); Frontiers in Plant Transcriptomics & Genomics (A+); Medical Epigenetics Frontiers (A); Advanced Biological Sciences (A-); Principles & Advances in Tumor Biology (A-).

B.S. in Plant Science and Technology —College of Agronomy & Biotechnology, Southwest University, Chongqing, China 2020.09–2024.06
Weighted average: 84.69 | Graduate recommendation rank: 7/89
Selected Coursework: Biostatistics & Experimental Design (90); Cell Biology (92); Biochemistry & Health (98); Professional English (96); Plant Molecular Biology (92); Plant Physiology (92); Plant Biotechnology (91).

Research Experience

Graduate Researcher —Zhu Jiankang Lab, SUSTech School of Medicine Senior year (B.S.) – M.S. Year 1

- Conducted qMSP experiments for DNA methylation-based biomarkers; supported early screening/triage of cervical precancer using melt-curve temperature calibration.
- Performed DNA methylation data analysis, including WGBS data processing, quality control, downstream statistical analysis, and visualization in R.
- Developed DNA methylation-based aging clock models; contributed to study design, interpretation, and manuscript writing as co-first author on a submitted manuscript.

Publications

Published Review

- *As 5mC enters a programmable era: charted avenues for cancer understanding and intervention*. **First author**. *Oral Science and Homeostatic Medicine*, 2026, 2(1): 9610044.

Submitted / Under Review

- *Repurposing qMSP melt-curve temperature improves calibrated risk triage of cervical precancer*. Co-first author. **Submitted**.

Teaching Experience

Teaching Assistant —Principles & Advances in Tumor Biology M.S. Year 1 (Spring)

- Supported tutorials and grading; facilitated student discussions and Q&A sessions.

Teaching Assistant —Frontiers in Plant Transcriptomics & Genomics M.S. Year 2 (Spring)

- Delivered tutorial-style explanations on WGBS analysis and small RNA analysis; supported student Q&A and discussion of genomics topics.

Teaching Assistant —A Brief History of Western Music M.S. Year 1 (Fall)

- Assisted course preparation and in-class learning activities; supported student engagement during lectures.

Research Interests

I am interested in how DNA methylation and epigenetic regulation shape tumor initiation, progression, and aging-related biological changes. I am currently working on DNA methylation-based aging clock construction, and I am keen to apply machine learning and deep learning to integrative analysis of cancer and aging multi-omics data.

- DNA methylation and epigenetic regulation in disease
- Aging biology and DNA methylation-based aging clocks
- Tumor biology and cancer genomics

- Epigenome editing and translational applications
- Machine learning / deep learning for multi-omics analysis and biomarker discovery

Honors & Awards

- Outstanding Undergraduate Graduate, Southwest University (2024).
- First-class Scholarship, Academic Year 2022–2023.
- Third-class Scholarship, Academic Years 2020–2021 and 2021–2022 (2 times).
- College "Jinsui Cup" Basketball Tournament: Champion (2023), Third place (2022).
- Sports Activity Award, Academic Year 2021–2022; 10th Campus Basketball League (Men): 6th place.

Leadership & Activities

Class Representative —2020 Longping Honors Program 2021.10–2024.06

- Organized interdisciplinary academic exchange and English study activities; fostered a supportive learning environment.

Head, Academic & Technology Department —College Student Union 2021.09–2022.06

- Interviewed outstanding graduates and authored experience posts for the college's official media account.
- Co-organized academic competitions and related events within the college.

Skills

Programming & Analysis: Shell; R (tidyverse, Bioconductor); Python (basic data analysis, genomics scripting)
Bioinformatics Workflows: QC & preprocessing; omics data handling; basic statistical analysis; visualization