Xuanyi Chen

PhD Student, College of life sciences
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Education

PhD in Genetics (Plant Molecular Genetics), Sep 2021 – Dec 2025 (expected)
College of Life Sciences, Northwest A&F University, Yangling, China

BSc in Biotechnology, Sep 2017 – Jun 2021
Innovation Experimental College, Northwest A&F University, Yangling, China

Research Experience

Graduate Research Fellow, Jun 2021 – current
College of Life Sciences, Northwest A&F University | Advisor: Dr. Cun Wang
• Investigating molecular mechanisms of sulfur deficiency response in *Arabidopsis thaliana* via brassinosteroid signaling and calcium signaling.

Undergraduate Research Assistant – Epigenome Editing, Jun 2020 – Jun 2021
College of Life Sciences, Northwest A&F University | Advisor: Dr. Israel Ausin
• Designed zinc finger-tagged SWR1 chromatin remodeling complex subunits to profile protein-DNA interactions.

Undergraduate Research Assistant - Virome Analysis, Sep 2018 – Jun 2020
College of Life Sciences, Northwest A&F University | Advisor: Dr. Weimin Chen,
• Analyzed rhizosphere virome of *Robinia pseudoacacia* L. and isolated bacteriophage strains.

Undergraduate Research Assistant - Bioinformatics Training, Sep 2017 – Jun 2018
College of Life Sciences, Northwest A&F University | Advisor: Dr. Ruolin Yang
• Conducted TCGA data mining and foundational training in bioinformatics.

Funding

Undergraduate Training Program for Innovation and Entrepreneurship, 2019-2021
• Total Award: 3,500 CNY (~$485)

Publications

**equal contribution*

Xuanyi Chen, Zhenghao Yu, Wendi Guo, Yuting Zhou, Cun Wang#, Tian Wang#. (2025). Brassinosteroid signaling promotes sulfate uptake under sulfur deficiency in Arabidopsis. ***New Phytologist*** 248: 250-264. *Research article*

Min Jia, **Xuanyi Chen**, Xuetao Shi, Yiling Fang, Yangnan Gu#. (2023). Nuclear transport receptor KA120 regulates molecular condensation of MAC3 to coordinate plant immune activation. ***Cell Host & Microbe*** 31:1685-1699.e7. *Research article*

Tian Wang, **Xuanyi Chen**, Chuanfeng Ju#, Cun Wang#. (2023). Calcium signaling in plant mineral nutrition: From uptake to transport. ***Plant Communications*** 4: 100678. (Highly cited paper) *Review*

Yanjun Fang*, Chuanfeng Ju*, Laiba Javed, Chenyu Cao, Yuan Deng, Yaqi Gao, **Xuanyi Chen**, Lv Sun, Yusheng Zhao, Cun Wang#. (2025). Plasma membrane-associated calcium signaling modulates zinc homeostasis in Arabidopsis. ***Science Bulletin*** 13: S2095-9273(25)00169-0. *Research article*

Xuanyi Chen, Shaojun Li#, Weimin Chen, Quanke Meng. (2021). Characters of Light-sheet Fluorescence Microscope and its Application. ***Shengwujishu Jinzhan*** 11:126-147. (In Chinese) *Review*

Awards and Honors

First-Class Scholarship, 18,000 CNY (~$2,493)	2023
Second-Class Scholarship, 15,000 CNY (~$2,077)	2021, 2022, 2024
Advanced undergraduate of Technological Innovation	2021
Third-Class Scholarship, 1,000 CNY (~$138)	2019
Second-Class Scholarship, 1,500 CNY (~$207)	2018

Professional Services

Assistant Editor, *Stress Biology*, Jul 2023 – current
Yangling, China

Research Interests

Plant stress responses; integrative multi-omics analysis; combination of molecular biology and bioinformatics

Skills

Cell biology: Confocal microscopy, bimolecular fluorescence complementation (BiFC) assays

Molecular biology: Real-time PCR, Gel electrophoresis, Western blot analysis, EMSA, ChIP, Mutagenesis, Reporter assays (LUC), Immunoprecipitation, Molecular cloning, ^{32}P labeling of protein phosphorylation analysis, CRISPR-based gene editing

Plant biology: Transgenic line generation and screening (Arabidopsis and wheat), Hybridization (Arabidopsis), Element content analysis

Bioinformatics: Multi-sequence alignment and conservation analysis, RNA-seq analysis, ChIP-seq analysis, Proteomic data analysis, alternative splicing analysis, AlphaFold structure prediction and visualization