

Yunlin Zhou

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EDUCATION

College of Biological Sciences and Technology, Beijing Forestry University **Beijing, China**

Bachelor of Science in Biological Sciences 09/2017-07/2021

- Overall GPA: 86/100
- Core Courses: Linear Algebra, Calculus, Probability and Mathematical Statistics (in progress), Ecology (Bilingual), Cell Biology, Molecular Biology, Biotechnology, Animal Physiology A

UC Berkeley Summer Sessions 07/2019-08/2019

- Courses: Introduction to Probability and Statistics in Biology and Public Health (4 units), Introduction to Human Physiology Laboratory (2 units)

Columbia University **New York, US**

MS Biostatistics 09/2021 - Present

PUBLICATIONS

- Cheng W, **Zhou Y**, Miao X, et al. The putative smallest introns in the *Arabidopsis* genome. *Genome biology and evolution*, 2018.
- Liu X, **Zhou Y**, Xiao J, et al. Effects of chilling on the structure, function and development of chloroplasts. *Frontiers in Plant Science*, 2018.
- **Zhou Y**, Dou Y, Wang X, et al. Molecular mechanism of leaf development affecting chloroplast division in *Amygdalus persica L.* Submitted.

RESEARCH EXPERIENCES

College of Biological Sciences and Technology, Beijing Forestry University

Advisor: Prof. Hongbo Gao & Prof. Xiaomin Liu 10/2017-Present

The Putative Smallest Introns in The Arabidopsis Genome

- Analyzed small introns (predicted by TAIR) in the *Arabidopsis* genome through bioinformatics and experimental approaches to determine the smallest introns in *Arabidopsis* and understand the mechanism of intron retraction of small introns.
- Found no evidence for the existence of introns shorter than 30 bp, indicating a probable lower limit of the size of introns; verified two introns of 59 bp, which were the smallest introns found in this study.
- Contributed to carrying out experiments and data analysis, including reverse transcription-polymerase chain reaction (RT-PCR) and sequencing analysis for validation of introns, and statistical analysis of intron length and gene expression level.

Molecular Basis of The Effects of Leaf Development on Chloroplast Division in Xylophyta

- Observed chloroplast phenotypes, and established the relationships between the number of chloroplasts per cell, cell area and leaf development.
- Conducted isolation of RNA and protein, reverse transcription of the RNA to cDNA followed by quantitative PCR, and western blotting to analyze the expression levels of chloroplast division genes at different stages of leaf development.
- Working on detecting and quantifying expression of specific proteins via western blotting and MS.
- Will investigate the regulation of transcription and translation, and chloroplast FtsZ ring positioning to

elucidate the molecular mechanisms controlling chloroplast division during leaf development.

Effects of Chilling on The Structure, Function and Development of Chloroplasts

- Participated in writing a review paper on the responses of chloroplasts to low temperatures, focusing on photosynthesis, redox regulation, lipid homeostasis, and chloroplast development to elucidate the processes involved in plant responses and adaptation to chilling stress

SKILLS

- Lab skills: Proficiency in molecular biology techniques such as gene expression profiling and quantitation techniques.
- Computer Skills: R programming.
- Strong academic writing and presenting skills

HONORS & AWARDS

- Outstanding Academic Scholarship of Beijing Forestry University (for 2017-2018/2018-2019 academic years)
- Excellent Student Cadre (for 2017-2018/2018-2019/2019-2020 academic years)
- Outstanding Cadres of Student Association (for 2017-2018 academic year)
- Outstanding Individuals in Social Practice (for 2018-2019 academic year)
- Prize for The Best Organization (for 2018-2019 academic year)
- The fifth biology competition Beijing China Knowledge competition Second prize (2019)
- The sixth biology competition Beijing China Experimental skills competition Third prize (2020)