

# SEMINAR

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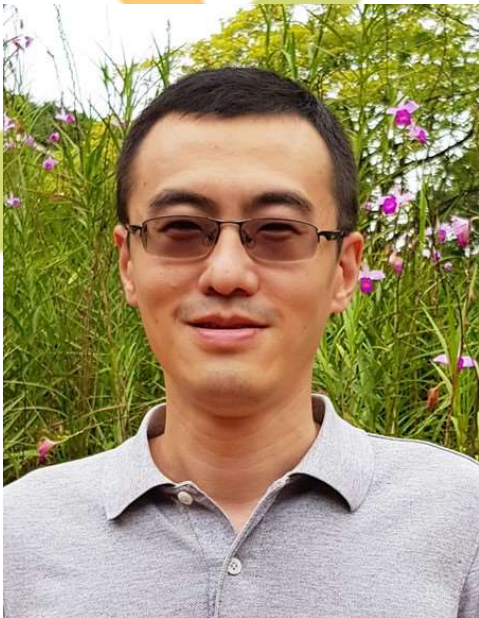
**13 Mar 2023 (Mon), 11am**

**The Auditorium (Level 1)**

## Epigenetic and transcriptional control of plant high temperature adaptation

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Dr Danhua Jiang earned his PhD from the National University of Singapore and performed postdoc research at Temasek Life Sciences Laboratory and Gregor Mendel Institute. He has been a Principal Investigator at the Institute of Genetics and Developmental Biology, Chinese Academy of Sciences since 2018. His research focuses on elucidating the genetic and epigenetic mechanisms involved in plant environmental responses and developing climate-resilient crops through molecular breeding.

Global warming is expected to threaten plant growth and crop production, making it essential to understand how plants respond and adapt to high temperatures. In many plants, a mild increase in temperature triggers a series of developmental and morphological adjustments termed thermomorphogenesis. Gaining insights into the mechanisms underlying this phenotypic plasticity will benefit the breeding of warm-adaptive crops for future climates. I will discuss our recent progress in understanding the molecular control of thermomorphogenesis in *Arabidopsis thaliana*, with a major focus on the roles of histone variants and transcription regulators in facilitating plant adaptation to high temperatures.

### Recent Publications:

1. Zhao F, Xue M, Zhang H, Li H, Zhao T, **Jiang D**. Coordinated histone variant H2A.Z eviction and H3.3 deposition control plant thermomorphogenesis. *New Phytologist*, 2023, published online ahead of print.
2. Zhao T, Lu J, Zhang H, Xue M, Pan J, Ma L, Berger F, **Jiang D**. Histone H3.3 deposition in seed is essential for the post-embryonic developmental competence in *Arabidopsis*. *Nature Communications*, 2022, 13: 7728.
3. Xue M, Zhang H, Zhao F, Zhao T, Li H, **Jiang D**. The INO80 chromatin remodeling complex promotes thermomorphogenesis by connecting H2A.Z eviction and active transcription in *Arabidopsis*. *Molecular Plant*, 2021, 14: 1799-1813.