



Endoplasmic Reticulum Stress Response in Plants under Changeable Environment

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Message from the Guest Editors

Higher plants are sessile in their habitats; they adapt their growth and development according to the changing environment. In elucidating various stress responses at the molecular level, the organellar homeostasis is revealed to be essential for organismic survival under adverse conditions. Among these organelles, endoplasmic reticulum (ER) plays a crucial role in regulating secretory protein synthesis and maturation, while accumulating un-/mis-folded proteins overwhelm the ER folding capacity and therefore cause cellular dysfunction and death.

Previous studies on protein quality control in plant ER reveals a systemized transcriptional program to reduce translating mRNA and increase the protein folding capacity in model plants. Recently, the field of stress biology of plant ER has shifted its focus on to how does ER stress response function under non-stress conditions to support plant growth and how ER stress response restores ER homeostasis under ambient environments.

This Special Issue aims to gather recent advances in the understanding of molecular mechanisms to cope with the accumulation of unfolded/misfolded proteins inside of ER in plant cells.





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Message from the Editor-in-Chief

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