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Thioredoxin-based redox regulatory network in chloroplasts

Redox regulation is a posttranslational protein modification that plays a key role in adjusting chloroplast functions under varying light conditions. Redox-sensitive target proteins are activated in the light by receiving reducing power derived from photosynthetic electron transport reactions. A redox cascade via thioredoxin (Trx) has been classically recognized as the key system for transmitting the light-induced reductive signal to target proteins. However, owing to recent identification of multiple Trx isoforms and their potential target enzymes, it has become increasingly apparent that the redox regulatory system in chloroplasts is organized as a more complicated network. My goal is to elucidate its whole organization and biological significance comprehensively. In this webinar, I briefly introduce recent advances of our group.

