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Xiuxin Zhang, Shunli Wang and Jingqi Xue
Chinese Academy of Agricultural Science, China

S. a. *Paeonia* & *P. b. *Tenuifolia (*Paeonia su rutticosa*)** is well known as a traditional Chinese medicine and its root tuber is a famous food product. The flower buds of *Paeonia* are also a delicacy in China. The flowering induction mechanism of *Paeonia* has been studied for many years.

M. *Arabidopsis* & *Oryza sativa* are two model plants widely used in plant biology research. The flowering induction mechanism of *Arabidopsis* and *Oryza sativa* has been studied in depth.

Flowering induction is a complex process involving various environmental factors and internal regulatory mechanisms. In *Arabidopsis*, flowering is mainly regulated by photoperiod, temperature, and vernalization. Photoperiod is controlled by phytochromes (phyA, phyB), cryptochromes (cry1, cry2), and light-regulated genes (LFRs). Temperature is controlled by FLOWERING LOCUS T (FT) and CONSTANS (CO). Vernalization is controlled by FLOWERING LOCUS K (FLK), SQUAMOSA PROMOTER BINDING PROTEIN-LIKE (SPL) genes, and other vernalization genes. In *Oryza sativa*, flowering is mainly controlled by photoperiod and vernalization. Photoperiod is controlled by phytochromes (phyA, phyB), cryptochromes (cry1, cry2), and light-regulated genes (LFRs). Vernalization is controlled by FLOWERING LOCUS T (FT), CONSTANS (CO), and other vernalization genes. In *Paeonia*, flowering is mainly controlled by photoperiod and vernalization. Photoperiod is controlled by phytochromes (phyA, phyB), cryptochromes (cry1, cry2), and light-regulated genes (LFRs). Vernalization is controlled by FLOWERING LOCUS T (FT), CONSTANS (CO), and other vernalization genes. The flowering induction pathways of *Paeonia* and *Arabidopsis* are similar, while the flowering induction pathways of *Paeonia* and *Oryza sativa* are different.

C. *Arabidopsis* & *S. cerevisiae* are two model organisms widely used in plant biology research. The flowering induction mechanism of *Arabidopsis* and *S. cerevisiae* has been studied in depth.

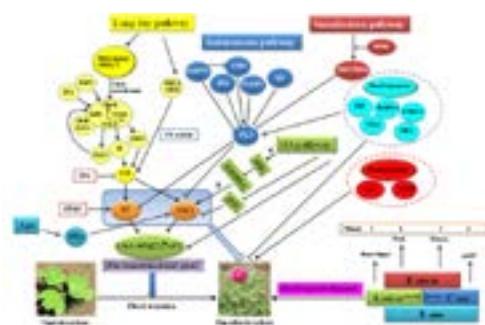


Figure 8: The primary schematic network of flowering induction pathways and their major components in three species. Arrows indicate positive regulation and bars indicate negative regulation.

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technology research of forcing culture and development. June 2014. (The second prize, Ranked first). She will do a poster at the conferences