

# Développement du bourgeon latent de vigne et levée de dormance

## Grapevine latent bud development and dormancy release

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Grapevine dormancy and bud burst, the potential role of ABA?

Dormancy release, loss of cold hardiness (deacclimation) & budbreak of latent buds located on winter canes (figure 1) are important aspects of the annual cycle of deciduous perennial plants such as *Vitis* species.

A recent study done by Alisson P. Kovaleski & Jason P. Londo, 2019, entitled “*Tempo of gene regulation in wild and cultivated Vitis species shows coordination between cold deacclimation and budbreak*” (doi: <http://dx.doi.org/10.1101/528828>) on single-node cuttings from wild (*Vitis amurensis*, *V. riparia*) & cultivated *Vitis* genotypes (*V. vinifera* ‘Cabernet Sauvignon’, ‘Riesling’) showed that:

1. Wild *Vitis* genotypes had faster deacclimation and budbreak than *V. vinifera*
2. Temperature-sensing related genes were quickly and synchronously differentially expressed in all genotypes
3. ABA synthesis was down regulated in all genotypes
4. Exogenous ABA prevented deacclimation

The authors suggested that ABA has the potential for mitigation of unseasonal or early deacclimation and budbreak in warmer winters.

The authors discovered differences in deacclimation rate and initial cold hardiness contribute to variation in budbreak phenology between genotypes through differential gene regulation.

(Photos from A. Deloire, 2019)



Figure 1: The different stages of grapevine latent bud development from burst to the first visible inflorescence primordium.

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