

# Photoperiod modifies the diurnal expression profile of VvPHYA and VvPHYB transcripts in field-grown grapevine leaves

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Despite the crucial role that phytochromes (Phys) play in light perception and in the entrainment of the circadian clock to local time, the photoperiodic regulation of PHYA and PHYB gene expression has been poorly studied, especially in woody perennials. Here the dynamic of *Vitis vinifera* PHYA (VvPHYA) and PHYB (VvPHYB) transcript accumulation was studied in field-grown grapevine leaves throughout daily cycles under decreasing natural photoperiods. Given that in grapevine the entrance of buds into endodormancy (ED) is a photoperiod-driven process, increases in BR50 values, a parameter that measures the depth of dormancy in single bud cuttings assays was used to determine the critical daylength at which grapevine discriminates between long day (LD) and short day (SD) photoperiod. Therefore, we monitored the daily expression profile of VvPHYA and VvPHYB transcripts before, during and after the defined critical daylength. Results showed that under LD photoperiod (21 December, daylength 14