

New *Phytologist* Supporting Information Figs S1–S6

Linking phytochrome to plant immunity: low red:far-red ratios increase *Arabidopsis* susceptibility to *Botrytis cinerea* by reducing the biosynthesis of indolic glucosinolates and camalexin

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The following Supporting Information is available for this article:

Fig. S1 Interactive effects of MeJA and R:FR on expression profiles of transcription factors involved in GS biosynthesis.

Fig. S2 Effects of supplemental FR, MeJA and *B. cinerea* on *CYP79B2* and *CYP79B3* expression.

Fig. S3 The *phyB* mutant has low levels of I3M.

Fig. S4 The effect of low R:FR repressing the effect of MeJA on I3M levels is conserved in the *sav3-2* mutant.

Fig. S5 Sinapates and flavonoids are not regulated by MeJA or supplemental FR radiation.

Fig. S6 The effect of *B. cinerea* reducing the I3M pool is conserved in the *jaz10-1* mutant.

Fig. S1 Interactive effects of MeJA and R:FR on expression profiles of transcription factors involved in GS biosynthesis (original microarray data in Cerrudo *et al.*, 2012; De Wit *et al.*, 2013). Amb, white light; FR, white light supplemented with FR radiation. Expression data are normalized to the expression level detected in the Control × Amb combination. Thin bars indicate 1 SE. The *P* values for significant terms in the factorial ANOVA are indicated in each panel.

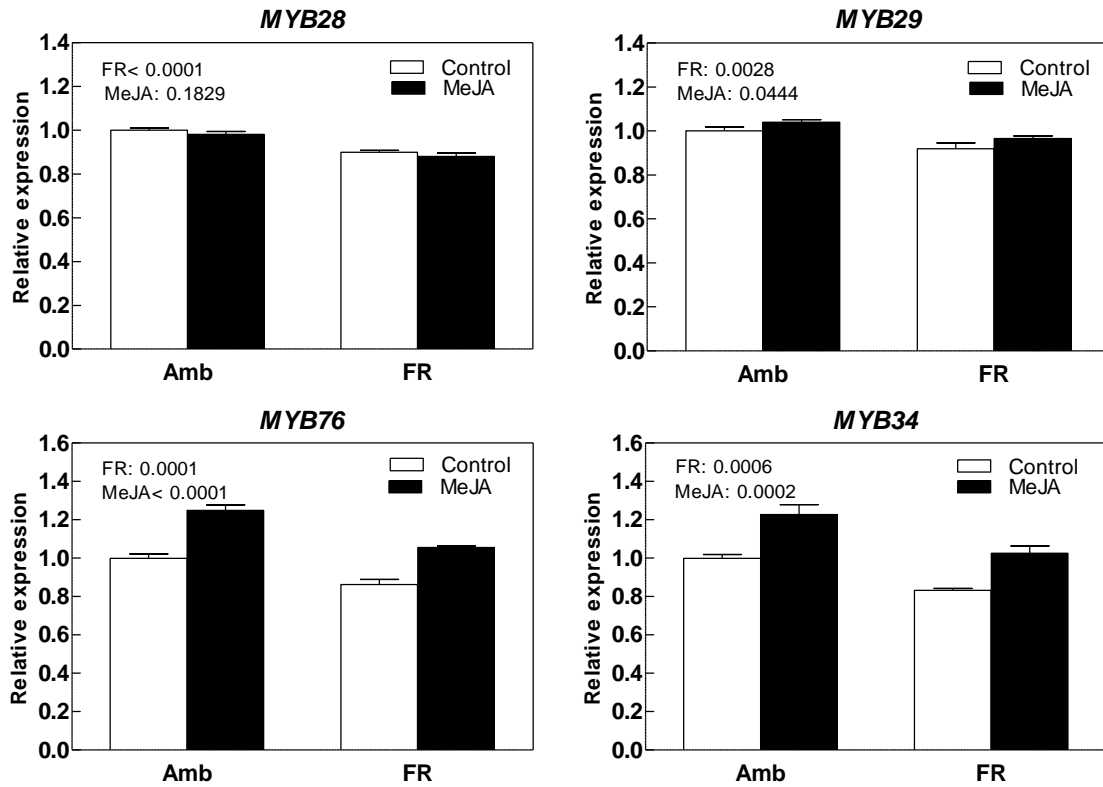


Fig. S2 Effects of supplemental FR, MeJA and *B. cinerea* on *CYP79B2* and *CYP79B3* expression. The experimental treatments resulted from a factorial combination of R:FR and MeJA levels or R:FR and *B. cinerea* (Bc) inoculation. Amb, white light; FR, white light supplemented with FR radiation (for details, see Materials and Methods). Samples for qPCR analysis were obtained 24 h after MeJA application or *B. cinerea* inoculation. Expression data are normalized to the expression level detected in the control × Amb combination. Thin bars indicate 1 SE ($n = 3$; each biological replicate is a pool of three individual plants). The P values for significant terms in the factorial ANOVA are indicated in each panel. When the interaction term was significant, different letters indicate significant differences between means ($P < 0.05$, Tukey test).

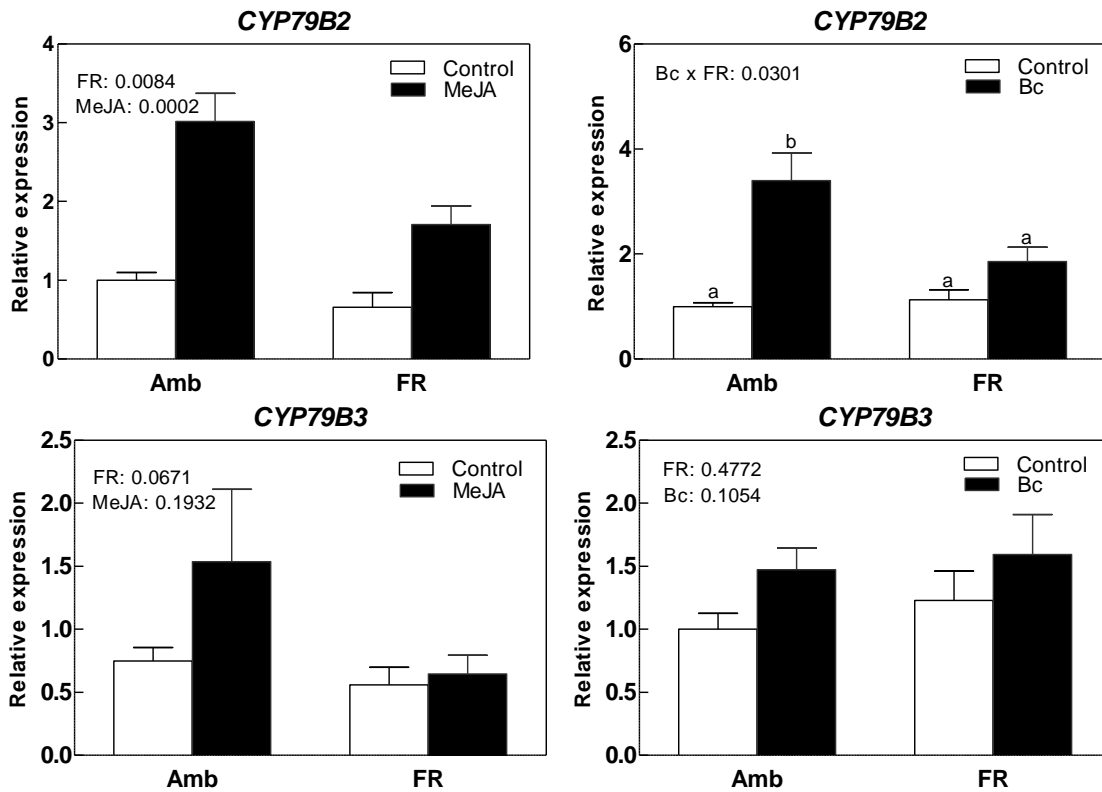


Fig. S3 The *phyB* mutant has low levels of I3M. Indol-3-ylmethyl GS was quantified from leaf tissue by HPLC 2 d after treatment with 200 μ M MeJA. Each bar represents the mean (+1 SE) of four biological replicates (each replicate is a pool of three individual plants). Amb, white light; FR, white light supplemented with FR radiation (for details, see Materials and Methods). The *P* values for the main effects in the factorial ANOVA are indicated. The dashed line parallel to the x-axis indicates the concentration of I3M in non-induced Col-0 control plants of the same experiment under Amb light conditions \pm 1SE.

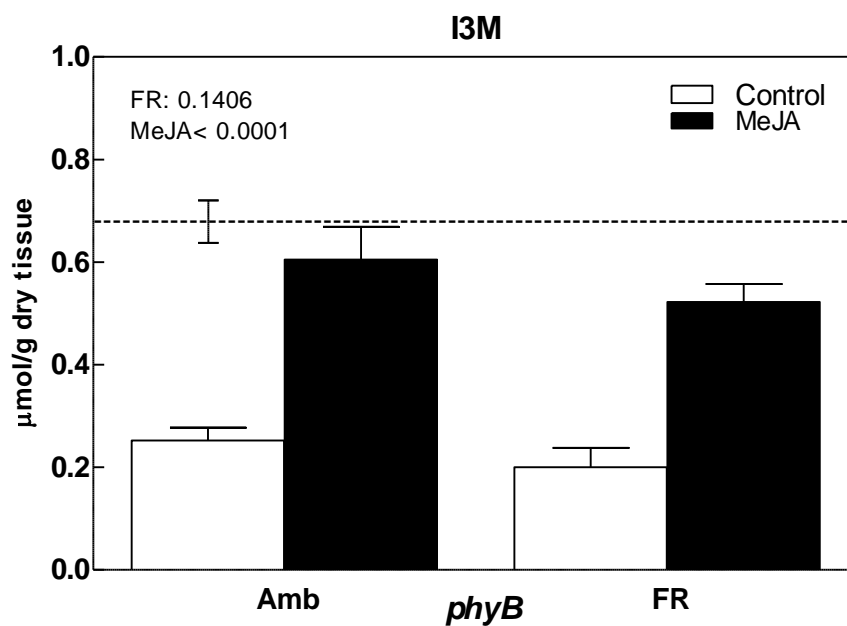


Fig. S4 The effect of low R:FR reducing I3M levels is conserved in the *sav3-2* mutant. Indol-3-ylmethyl GS was quantified from leaf tissue by HPLC 2 d after treatment with 200 μ M MeJA. Each bar represents the mean (+1 SE) of four biological replicates (each replicate is a pool of three individual plants). Amb, white light; FR, white light supplemented with FR radiation (for details, see Materials and Methods). The *P* values for the main effects in the factorial ANOVA are shown.

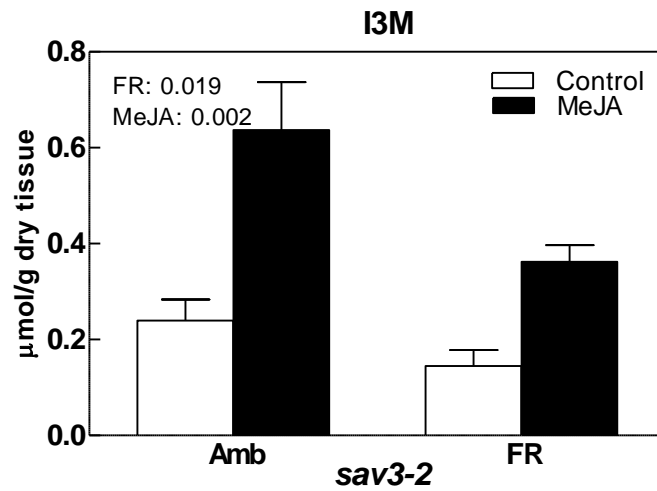


Fig. S5 Sinapates and flavonoids are not regulated by MeJA or supplemental FR radiation. Kaempferol glycosides and sinapoyl malate were determined from leaf tissue by HPLC 3 d after treatment with 200 μ M MeJA. Each bar represents the mean \pm 1 SE of four biological replicates (each replicate is a pool of three individual plants). Amb, white light; FR, white light supplemented with FR radiation (for details, see Materials and Methods). The *P* values for the main effects in the factorial ANOVA are shown.

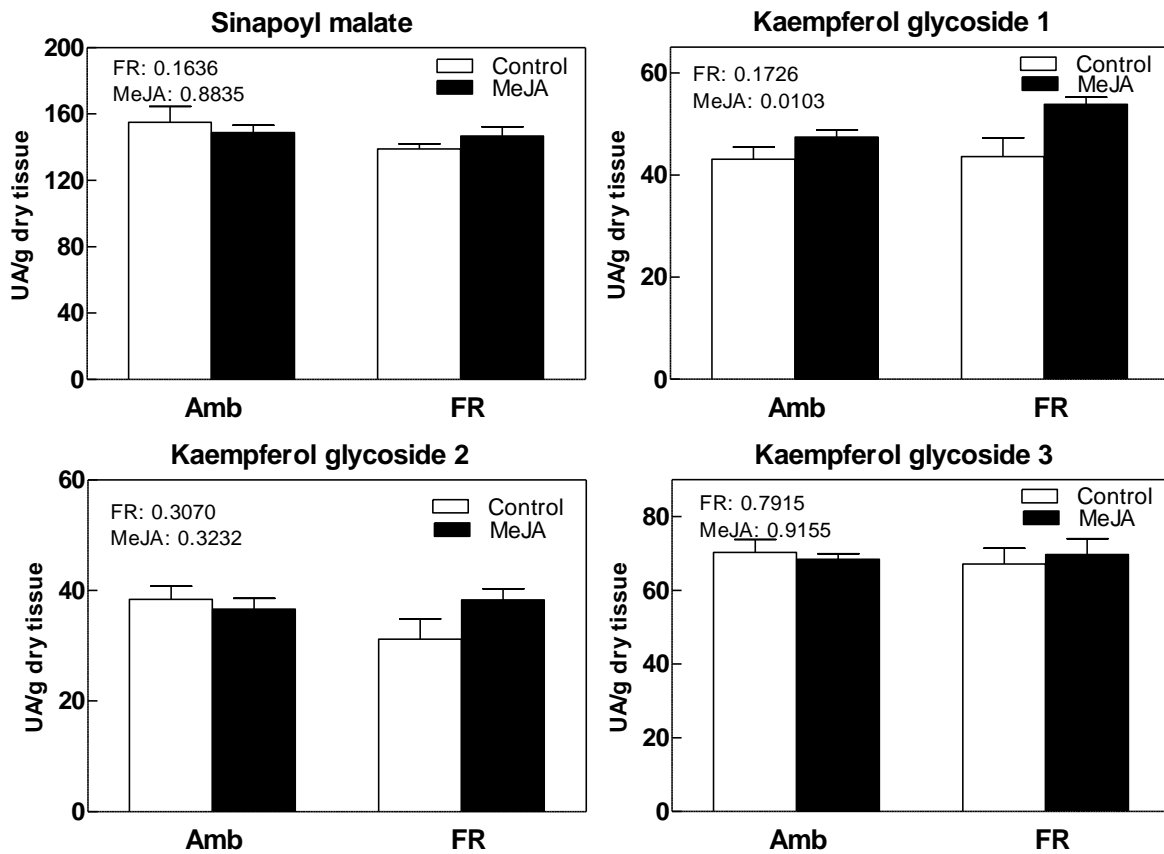
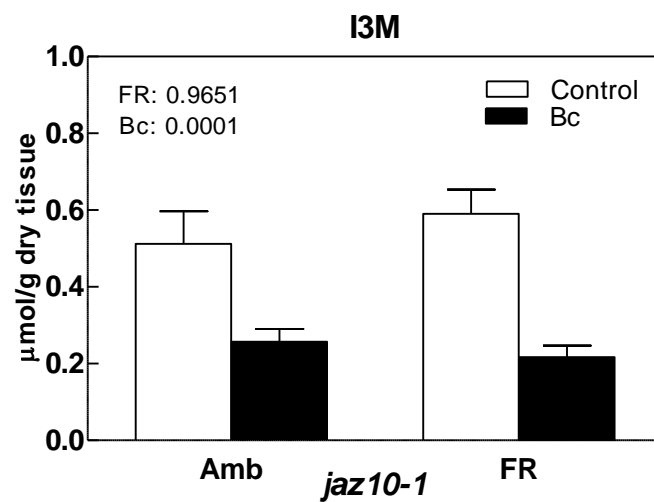


Fig. S6 The effect of *B. cinerea* reducing the I3M pool is conserved in the *jaz10-1* mutant. Indol-3-ylmethyl GS (I3M) was quantified from leaf tissue by HPLC 2 d after inoculation with *B. cinerea* (Bc). Each bar represents the mean +1 SE of four biological replicates (each replicate is a pool of three individual plants). Amb, white light; FR, white light supplemented with FR radiation (for details, see Materials and Methods). The *P* values for significant terms in the factorial ANOVA are indicated.



References

- Cerrudo I, Keller MM, Cargnel MD, Demkura PV, de Wit M, Patitucci MS, Pierik R, Pieterse CMJ, Ballaré CL. 2012.** Low red/far-red ratios reduce *Arabidopsis* resistance to *Botrytis cinerea* and jasmonate responses via a COI1-JAZ10-dependent, salicylic acid-independent mechanism. *Plant Physiology* **158**: 2042–2052.
- De Wit M, Spoel SH, Sanchez Perez GF, Gommers CMM, Pieterse CMJ, Voeselek LACJ, Pierik R. 2013.** Perception of low red:far-red ratio compromises both salicylic acid- and jasmonic acid- dependent pathogen defences in *Arabidopsis*. *The Plant Journal* **75**: 90–103.