



**FIGURE 6** (A) Response of steady-state transcript levels for phenylammonium lyase (*PAL*), the resveratrol synthase subpopulation of the stilbene synthase family (*RS*), and the canonical stilbene synthases (*STS*) to either 200  $\mu M$   $AlCl_3$  (2 h), 50  $\mu M$  PD98059 (2 h), or a combination of PD98059 (30 min) pretreatment followed by  $AlCl_3$  (2 h) treatment. Data represent mean values and standard errors from three independent experimental series with three technical replications for each biological replicate. Transcript levels are calibrated to *EF-1 $\alpha$*  as internal standard. Asterisks indicate significant differences with\*  $P < 0.05$  and \*\*  $P < 0.01$ . (B) and (C) are the responses of actin filaments to -/+aluminum (200  $\mu M$ , 2 h) in presence of PD98059 (50  $\mu M$ ). Representative images of grapevine cells expressing the actin marker fimbrin actin-binding domain 2 in fusion with GFP. (D) and (E) are the quantification of formation of actin foci. Due to the response is much weaker in absence of PD98059 in (D), values are replotted in (E) with a different scale. (F) Working hypothesis tested by this experiment.