MYC transcription factors: masters in the regulation of jasmonate biosynthesis in Arabidopsis thaliana

Zhang, K.

Stellingen

Behorende bij het proefschrift

MYC transcription factors: masters in the regulation of jasmonate biosynthesis in *Arabidopsis thaliana*

1. The bHLH transcription factors MYC2, MYC3 and MYC4 control the expression of the majority of the jasmonate biosynthesis genes in Arabidopsis.
   This thesis

2. The AP2/ERF-domain transcription factor ORA47 functions additively with MYC2, MYC3 and MYC4 in the regulation of jasmonate biosynthesis in Arabidopsis.
   This thesis

3. The jasmonate-responsive expression of *ORA47* is regulated by MYC2, MYC3 and MYC4 in Arabidopsis.
   This thesis

4. Gibberellins (GAs) have no effects on the expression of jasmonate biosynthesis genes in Arabidopsis seedlings.
   This thesis

5. The mechanism of down-regulation of the expression of jasmonate (JAs) biosynthesis genes by 12-OH-JA and 12-HSO_4-JA, assumed to be non-bioactive JAs derivatives, deserves more scientific attention.
   Miersch O et al. (2007). *New Phytol* 177: 114-127

6. The conclusion by Dombrecht et al. (2007) that *MYC2* is a secondary jasmonate response gene is not supported by their results.
   Dombrecht B et al. (2007). *Plant Cell* 19: 2225-2245

7. That the endophytic fungus *Fusarium solani*, isolated from *Camptotheca acuminata*, is capable of indigenously producing camptothecin (CPT) is unlikely, but that the nucleotide sequences of several allegedly fungal CPT biosynthesis genes are 100% identical to the corresponding genes from *Catharanthus roseus* is impossible.
   Kusari S et al. (2011). *J Nat Sci* 74: 764-775

8. The result that the transcriptional activity of MYC2 is not significantly affected by JAZ1ΔJas runs counter to the finding that JAZ1ΔJas retains the ability to interact with MYC2.
   Hou et al. (2010). *Dev Cell* 19: 884-894
   Withers J et al. (2012) *Proc Natl Acad Sci USA* 109: 20148-20153

9. Making mistakes is a learning experience in scientific experiments as well as in life.

10. Coffee and lunch breaks may result in great scientific ideas.

11. Optimistic attitude and positive action contribute more to reaching the goal, whereas complaints and frustrations never solve problems.

Kaixuan Zhang
July 6, 2016