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Jasmonate-responsive transcriptional regulation in *Catharanthus roseus* Zhang, H.

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Stellingen (propositions)

behorende bij het proefschrift

Jasmonate-responsive transcriptional regulation in *Catharanthus roseus*

1. The basic Helix-Loop-Helix (bHLH) transcription factor CrMYC2 is the major regulator of MeJA-responsive *ORCA3* gene expression.

This thesis

2. The activity of CrMYC2 is repressed by members of the Jasmonate ZIM (JAZ) family of proteins, and the N-terminal domain of CrJAZ1 is necessary and sufficient for this repression.

This thesis

3. The jasmonate signalling pathway is highly conserved in different plant species.

This thesis

Katsir et al. (2008) Curr. Opin. Plant Biol. 11, 428-435

4. A deletion derivative of a transcriptional repressor can act as a transcriptional activator, underscoring the more general observation that activities of full-length proteins cannot be deduced from activities displayed by partial versions.

This thesis.

Gill and Ptashne (1988) Nature 334, 721-724

Chini et al. (2007) Nature 448, 666-671

Thines et al. (2007) Nature 448, 661-665

5. The adage “quality is more important than quantity” applies to the activity of the jasmonate-responsive element (JRE) from the *ORCA3* promoter, as well as to daily experiments.

This thesis

Vom Endt et al. (2007) Plant Physiol. 144, 1680-1689

6. Arabidopsis protoplasts have been widely used to study plant hormone action; however, the possibility of using protoplasts for jasmonate studies still needs to be demonstrated.

Müller and Sheen (2008) Nature 453, 1094-1097

7. Although some scientists do not consider Arabidopsis as a real plant, others are so convinced of its importance that they find it unnecessary to mention the plant species studied in the title or the abstract of their publication.

Kondou et al. (2008) Plant Physiol. 147, 1924-19356

8. Following the concepts of intragenic crops and all-native DNA, the consequence is that foreign DNA and transgenic plants do not exist, since every DNA sequence can be broken down in smaller parts that can be found somewhere in the plant genome, and it can always be argued that there is a certain probability that such sequences are recombined via natural processes to form the gene of interest.

Rommens (2004) Trends Plant Sci. 9, 457-464

Rommens et al. (2007) Trends Plant Sci. 12, 397-403

9. In their Plant Journal publication Pandey and Baldwin (2007) concluded that silencing of RNA-directed RNA polymerase 1 (RdR1) had no effect on the expression of jasmonate-responsive genes, but in a following paper the same authors reported a negative effect of silencing of RdR1 on the expression of JA biosynthesis genes and on JA biosynthesis. The scientific literature becomes confusing when the same authors publish potentially conflicting results and draw seemingly opposite conclusions without noting and discussing such discrepancies.

Pandey and Baldwin (2007) Plant J. 50, 40-53

Pandey et al. (2008) Proc. Natl. Acad. Sci. USA 105, 4559-4564

10. Over a long time, you learn about the strength of your students; over a long distance, you learn about the character of your friends.

11. You will not help shoots grow by pulling them up higher as well you do not become fat with one big meal.

12. Family life for a PhD student is just like sugar for black coffee.