Functional analysis of genes involved in the regulation of development of reproductive organs in rice (Oryza sativa)

Chen, Y.

Stellingen

Behorende bij het proefschrift

Functional analysis of genes involved in the regulation of development of reproductive organs in rice (*Oryza sativa*)

1. OsGZF1 and OsGZF2 both act as repressors for *GluB-1* in seeds during filling stage, however their biological roles are apparently not overlapping.
   This thesis

2. OsJAR1 can catalyze the conjugation of specific amino acids to jasmonic acid.
   This thesis

3. Not all *in vitro* synthesized amido conjugates of jasmonic acid can be found in plants.
   This thesis
   Staswick and Tiryaki, (2004) Plant Cell 16: 2117-2127

4. OsCHX14 links programmed cell death, K^+ homeostasis and JA signaling.
   This thesis

5. Several transcriptional regulators were demonstrated to confer both activation and repression domains in transient assays. Whether this reflects their true endogenous functions still requires further careful experimentation as the results are based on artifactual or simulation systems.
   Edelman et al., (2000) J Biol Chem 275: 21737-21745
   Stepchenko and Nirenberg, (2004) Proc. Natl. Acad. Sci. USA. 101: 13180-13185
   Yet et al., (1998) J Biol Chem 273: 1026-1031

6. Though seed-specific *cis*-regulatory elements like the endosperm and GCN4 motifs are conserved in the promoter regions of seed-storage proteins in all monocot cereals, other species unique factors are also indispensible.
   Furtado et al., (2008) Plant Biotechnol J 6: 679-693
   Furtado et al., (2009) Plant Biotechnol J 7: 240-253

7. The surprising identification of (+)-JA-L-Ile instead of the long assumed (-)-JA-L-Ile as the real bioactive jasmonate presents a strong case for re-review of the methods used in the analyses of hormonal signaling pathways and especially of the methods used to determine the bioactive stereochemical isoform.
   Fonseca et al., (2009) Nat Chem Biol 5: 344-350
   Yi et al., (2009) Nat Chem Biol 5: 273-274

8. Complementation assays in yeast are sometimes misleading for analyzing the function of exogenous transporters as the localization of such transporters in yeast does not necessarily correspond with their localization in the native species.
   Bassham and Raikhel, (2000) Plant Physiol. 122: 999-1002
   Cellier et al., (2004) Plant J 39: 834-846
   Maresova and Sychrova, (2006) Yeast 23: 1167-1171

9. People chose to devote to science not because it is easy but because it is not.

10. Though science develops very fast, the modern techniques used are still far behind the imagination of scientists.

11. Science is not as simple as 1 + 1 = 2. Experiments are not always going as one designs and expects.

12. You have to trust your feeling and try to do the right thing, because it is our choices that make us who we are.
    Diary of a Wimpy Kid

Yi Chen
Leiden
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