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Evolution and development of orchid flowers and fruits

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Stellingen

Behorende bij het proefschrift getiteld

Evolution and development of orchid flowers and fruits

Anita Dirks-Mulder

1. Two MADS-box genes play an important role in the development of the petaloid median sepal of *Erycina pusilla* (this thesis, chapter 3).
2. Epidermal cells of the callus of *Erycina pusilla* have a petaloid appearance but the callus itself has a staminodal origin (this thesis, chapter 3).
3. Key players of the eudicot fruit regulatory network appear to be well conserved in monocots (this thesis, chapter 4).
4. Orchid fruits that dehisce have different strategies to open (this thesis, chapter 4 and 5).
5. *AGL6-like* genes are considered to be one of the most mysterious and elusive subfamilies of the MADS-box family (Ma, J. *et al.* 2019. *Tree Physiol* 39, 861-876).
6. Genome-wide identification and expression profiling of plant polygalacturonases involved in fruit ripening, cell separation and expansion will shed more light on different dehiscence strategies of orchid fruits.
7. MADS-box genes are the most studied floral developmental genes, not only in orchids but also in many other plant families; time to move on.
8. Gene manipulating in orchids is not the first priority with more than 28,000 species in this family.
9. If all RNAseq analyses were as simple as the flowcharts in many scientific publications suggest then nobody would do a PCR anymore.
10. Women with a naturally high testosterone level should not be excluded from female sports competitions.