



ANTHER DEVELOPMENT IN SWEET CHERRY



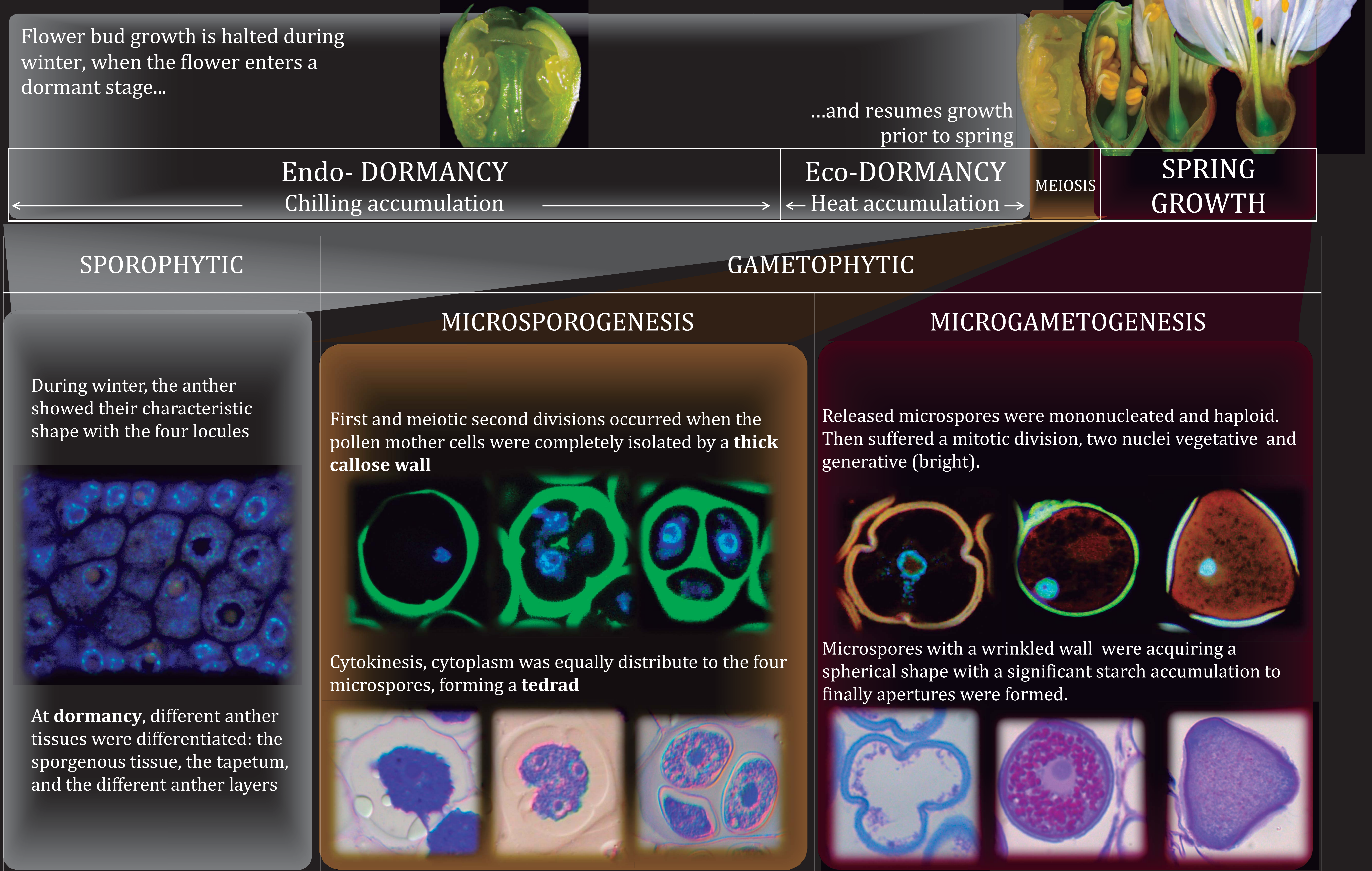
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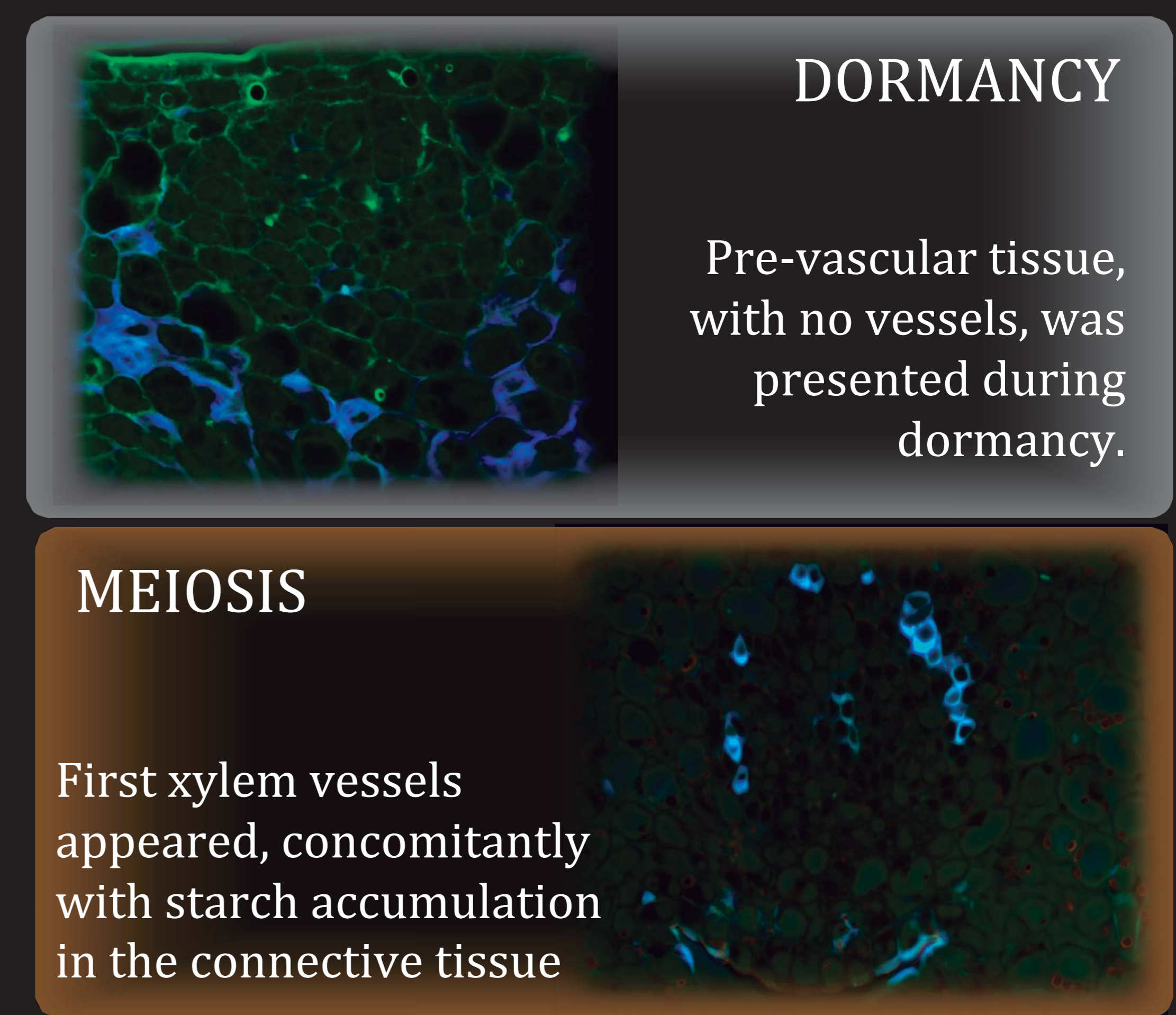
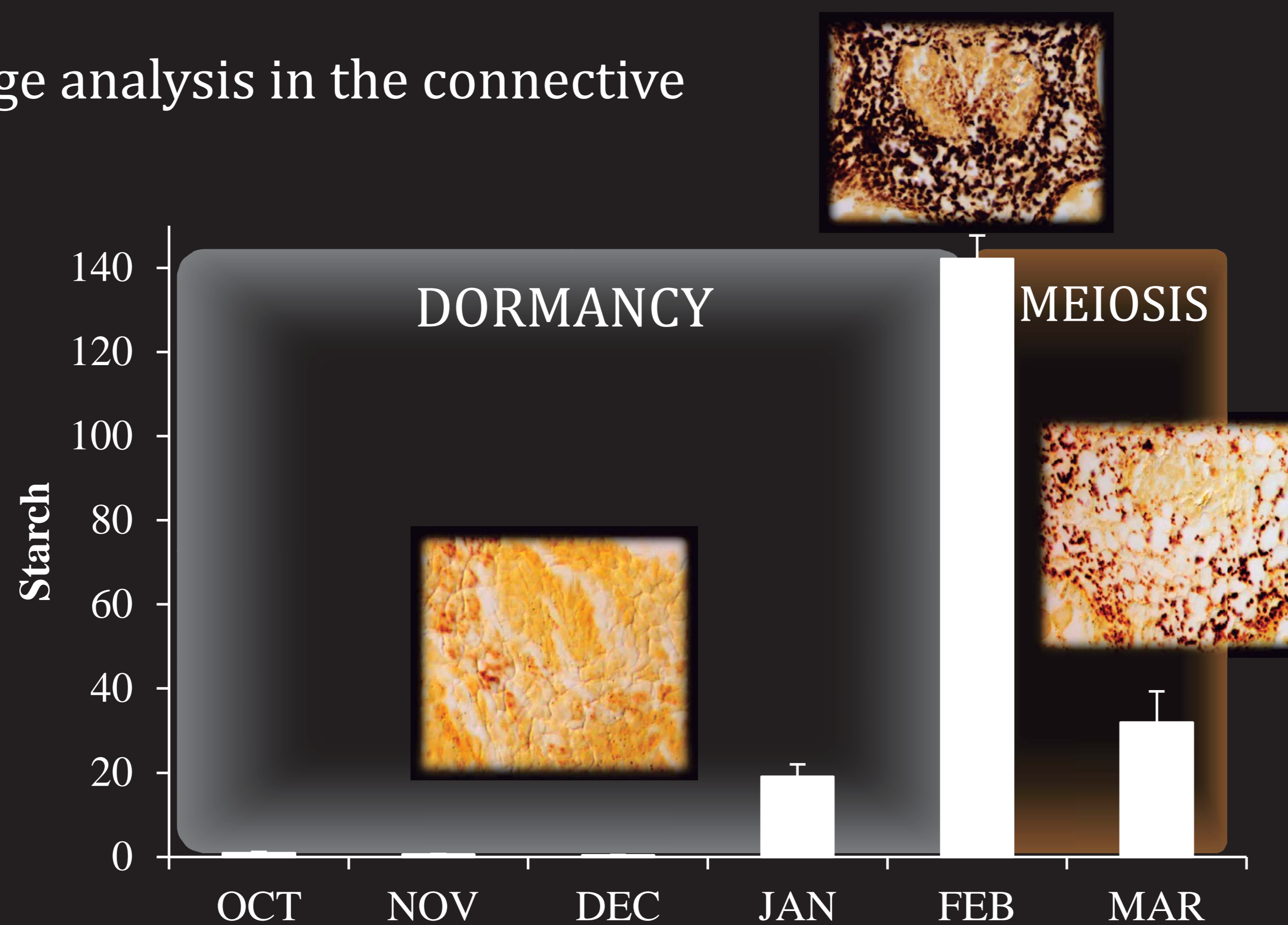
Dormancy is a strategy of woody perennials to survive to cold winter temperatures, but is also a requisite for proper flowering, with chilling requirements specific for each cultivar. However, the biology behind these requirements remains obscure. Anther and pollen development is synchronized with the seasons. The fact that clear developmental steps are conserved in this process suggests that this may be useful to frame these steps in a dormancy context. In this work, anther development and pollen formation are cytochemically characterized in relation to dormancy.



Intense changes also occurred in the connective and the pre-vascular tissue:

Starch was quantified by image analysis in the connective tissue of anthers.

No starch was detected during dormancy, but a significant peak of starch occurred after chilling fulfillment and before meiosis. Afterwards, by the time of microspore release, starch was vanished.



Anthers entered dormancy with the sporogenous tissue and the surrounded layers differentiated, as well as the vascular procambium. During dormancy no morphological changes were detected, but an intense activity took place at dormancy release: starch accumulation, vessel differentiation and meiosis, which occurred just before flower growth.

ACKNOWLEDGEMENTS

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