

The role of the Arabidopsis AHL15/REJUVENATOR gene in developmental phase transitions

Karami, O.; Karami O.

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Author: Karami, Omid

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Stellingen

Behorende bij het proefschrift

The role of *Arabidopsis AHL15/REJUVENATOR* gene in developmental phase transitions

- **1**. AHL15 and its paralogs are required for the maintenance of embryo identity in *Arabidopsis* (This thesis).
- **2**. AHL15 and its paralogs act as general suppressors of developmental phase transitions and ageing in flowering plants (This thesis).
- **3**. *AHL* genes may are key-molecular switches between the monocarpic (annual or biannual) and the polycarpic (mostly perennial) life strategy during plant evolution (This thesis).
- **4**. Reversal of developmental phase transitions requires extensive modulation of the chromatin configuration (This thesis).
- **5**. The finding that polycarpy induced in tobacco, in contrast to *Arabidopsis*, does not lead to viable seed production suggests that this trait has different requirements in different plant species (This thesis, Kahn 2017, Thesis, Leiden University)
- **6**. Despite the wealth of data from microarray or RNA seq experiments on co-regulated genes in plants, surprisingly the co-regulation of physically linked genes has not been analyzed in great detail.
- **7**. There is a striking similarity between the role of sugars in plant ageing and their detrimental effect on life expectancy and health in humans (This thesis, Matsoukas et al., 2013; Yang et al., 2013; Lee et al., 2015).
- **8**. Identification of genes that improve crop production offers an effective approach to enhance food security (Tester and Langridge, 2010; Kebrom et al., 2012).
- **9**. Ageing is a plastic process that can be slowed down or even reversed by expression changes of age-related genes (Wyss-Coray, 2016, Nature).
- 10. The observation and search for similarities and differences are the basis of human knowledge.
- **11**. Healthy competition is essential for acquiring knowledge and innovation.
- **12**. It does not matter what others think about you, it is important that what you think about yourself.