

## Conflict of Interest Disclosure

The author declares that there are no conflicts of interest regarding the publication of this review paper. The author confirms that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## References

- Alvarez-Buylla E.R., Pelaz S., Liljegren S.J., Gold S.E., Burgeff C., Ditta G.S., Ribas de Pouplana L., Martínez-Castilla L., and Yanofsky M.F., 2000, An ancestral MADS-box gene duplication occurred before the divergence of plants and animals, *Proceedings of the National Academy of Sciences*, 97(10): 5328-5333.  
<https://doi.org/10.1073/pnas.97.10.5328>
- Chen D., Yan W., Fu L.Y., and Kaufmann K., 2018, Architecture of gene regulatory networks controlling flower development in *Arabidopsis thaliana*, *Nature Communications*, 9(1): 4534.  
<https://doi.org/10.1038/s41467-018-06772-3>
- de Folter S., and Angenent G.C., 2006, Trans meets cis in MADS science, *Trends in Plant Science*, 11(5): 224-231.  
<https://doi.org/10.1016/j.tplants.2006.03.008>
- Egea-Cortines M., Saedler H., and Sommer H., 1999, Ternary complex formation between the MADS-box proteins SQUAMOSA, DEFICIENS and GLOBOSA is involved in the control of floral architecture in *Antirrhinum majus*, *The EMBO Journal*, 18(19): 5370-5379.  
<https://doi.org/10.1093/emboj/18.19.5370>
- Ferrario S., Immink R.G., and Angenent G.C., 2004, Conservation and diversity in flower land, *Current Opinion in Plant Biology*, 7(1): 84-91.  
<https://doi.org/10.1016/j.pbi.2003.11.003>
- Gómez-Mena C., de Folter S., Costa M.M.R., Angenent G.C., and Sablowski R., 2005, Transcriptional program controlled by the floral homeotic gene AGAMOUS during early organogenesis, *Development*, 132(3): 429-438.  
<https://doi.org/10.1242/dev.01600>
- Gramzow L., and Theissen G., 2015, Phylogenomics reveals surprising sets of essential and dispensable clades of MIKCC-group MADS-box genes in flowering plants, *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution*, 324(4): 353-362.  
<https://doi.org/10.1002/jez.b.22598>
- Honma T., and Goto K., 2001, Complexes of MADS-box proteins are sufficient to convert leaves into floral organs, *Nature*, 409(6819): 525-529.  
<https://doi.org/10.1038/35054083>
- Ito T., Wellmer F., Yu H., Das P., Ito N., Alves-Ferreira M., Riechmann J.L., and Meyerowitz E.M., 2004, The homeotic protein AGAMOUS controls microsporogenesis by regulation of SPOROCTELESS, *Nature*, 430(6997): 356-360.  
<https://doi.org/10.1038/nature02733>
- Jack T., 2001, Relearning our ABCs: new twists on an old model, *Trends in Plant Science*, 6(7): 310-316.  
[https://doi.org/10.1016/S1360-1385\(01\)01987-2](https://doi.org/10.1016/S1360-1385(01)01987-2)
- Kaufmann K., Melzer R., and Theissen G., 2005, MIKC-type MADS-domain proteins: structural modularity, protein interactions and network evolution in land plants, *Gene*, 347(2): 183-198.  
<https://doi.org/10.1016/j.gene.2004.12.014>
- Ng M., and Yanofsky M.F., 2001, Function and evolution of the plant MADS-box gene family, *Nature Reviews Genetics*, 2(3): 186-195.  
<https://doi.org/10.1038/35056041>
- Ó'Maoláidigh D.S., Wuest S.E., Rae L., Raganelli A., Ryan P.T., Kwaśniewska K., Das P., Lohan A.J., Loftus B., Graciet E., and Wellmer F., 2013, Control of reproductive floral organ identity specification in *Arabidopsis* by the C function regulator AGAMOUS, *The Plant Cell*, 25(7): 2482-2503.  
<https://doi.org/10.1105/tpc.113.113209>
- Parenicová L., De Folter S., Kieffer M., Horner D.S., Favalli C., Busscher J., Cook H.E., Ingram R.M., Kater M.M., Davies B., Angenent G.C., and Colombo L., 2003, Molecular and phylogenetic analyses of the complete MADS-box transcription factor family in *Arabidopsis*: new openings to the MADS world, *The Plant Cell*, 15(7): 1538-1551.  
<https://doi.org/10.1105/tpc.011544>
- Riechmann J.L., and Meyerowitz E.M., 1997, MADS domain proteins in plant development, *Biological Chemistry*, 378(10): 1079-1101.
- Ruelens P., Zhang Z., Van Mourik H., Maere S., Kaufmann K., and Geuten K., 2017, The origin of floral organ identity quartets, *The Plant Cell*, 29(2): 229-242.  
<https://doi.org/10.1105/tpc.16.00366>
- Shore P., and Sharrocks A.D., 1995, The MADS-box family of transcription factors, *European Journal of Biochemistry*, 229(1): 1-13.  
<https://doi.org/10.1111/j.1432-1033.1995.tb20430.x>
- Smaczniak C., Immink R.G., Angenent G.C., and Kaufmann K., 2012, Developmental and evolutionary diversity of plant MADS-domain factors: insights from recent studies, *Development*, 139(17): 3081-3098.  
<https://doi.org/10.1242/dev.074674>
- Taverner N.V., Smith J.C., and Wardle F.C., 2004, Identifying transcriptional targets, *Genome Biology*, 5(3): 210.  
<https://doi.org/10.1186/gb-2004-5-3-210>
- Theissen G., and Saedler H., 2001, Floral quartets, *Nature*, 409(6819): 469-471.  
<https://doi.org/10.1038/35054172>