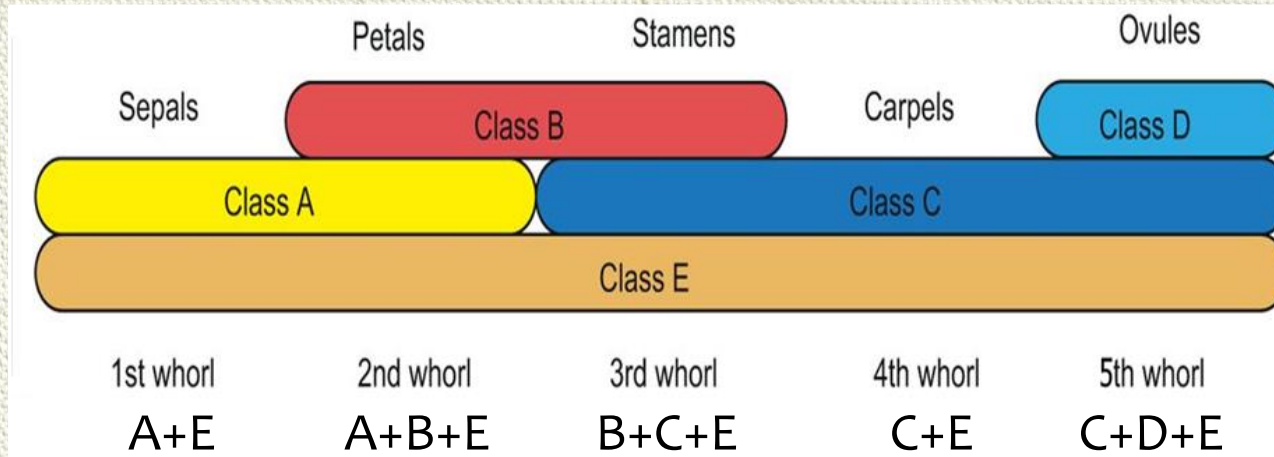


Functional analysis of *Solanum lycopersicum* L. MADS-box gene *SIMADS5*

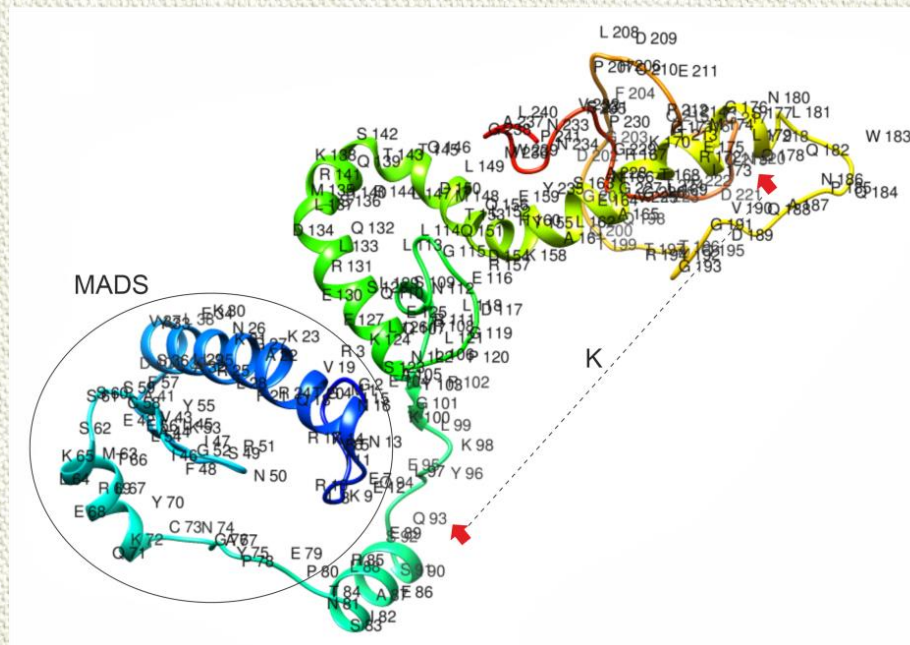
**Nezhdanova A.V.¹, Slugina M.A.¹, Dyachenko E.A.¹,
Kamionskaya A.M.¹, Kochieva E.Z.¹, Shchennikova A.V.¹**

¹Institute of Bioengineering, Federal Research Centre
“Fundamentals of Biotechnology” of the Russian Academy of
Sciences, Moscow, Russia

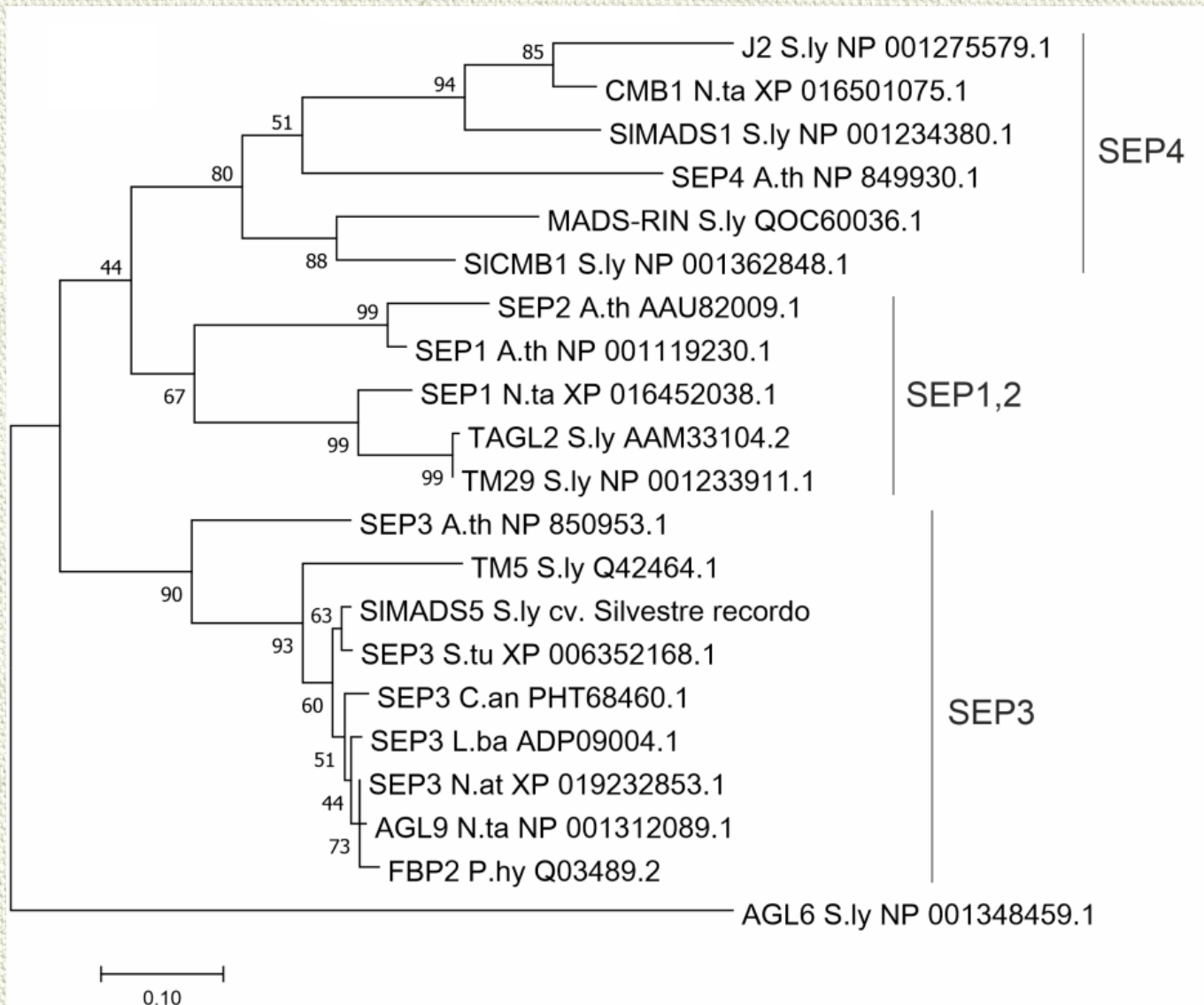
ABCDE model of flower development



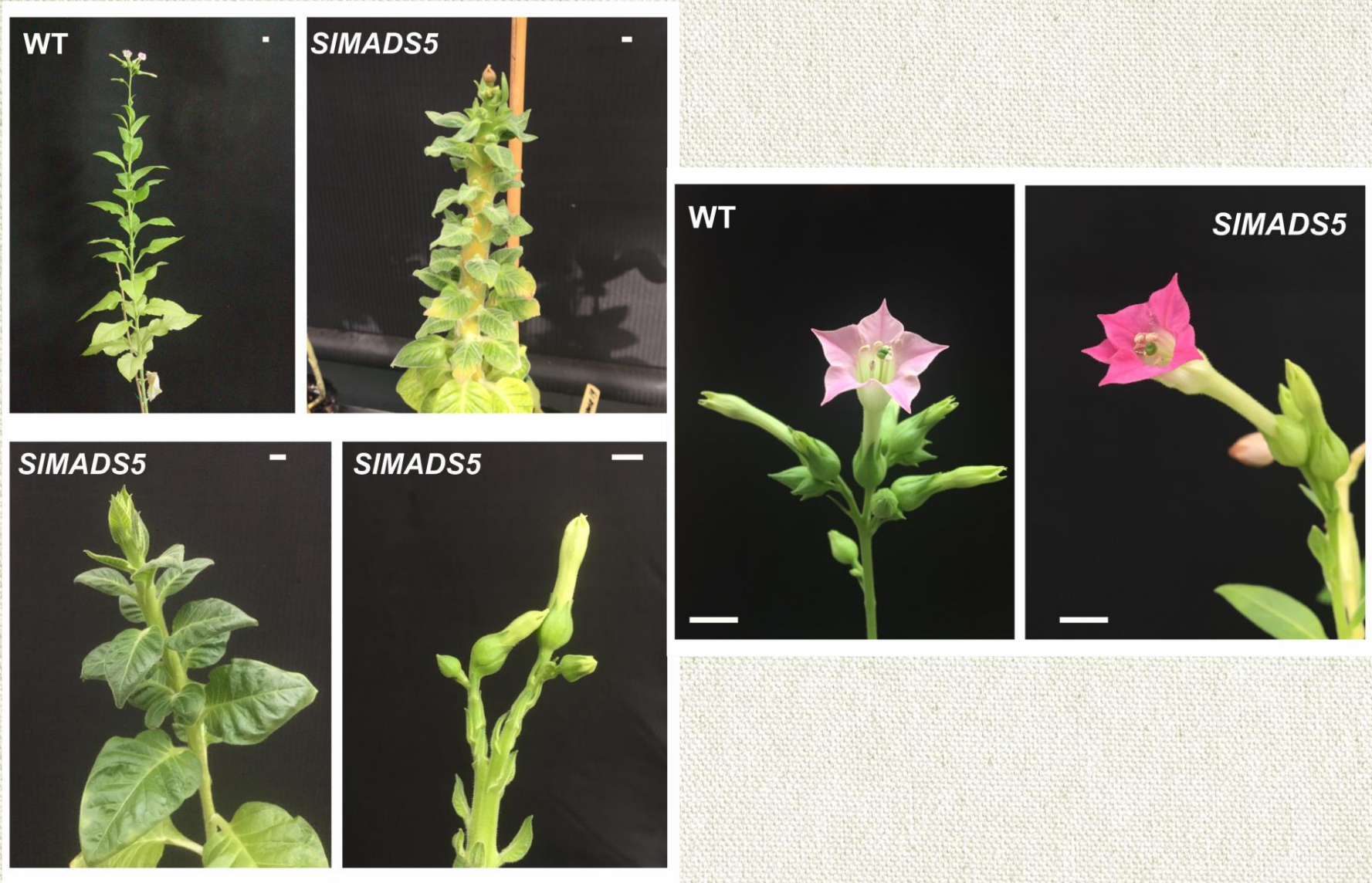
Tertiary structure of SIMADS5



Phylogeny of E-class MADS-domain TFs



Transgenic *Nicotiana tabacum* L. plants with *SIMADS5* overexpression in comparison with wild type control (WT)



Conclusions

The results obtained confirm the SIMADS5 participation in determining the petal, stamen, and carpel identity in tomato flower, suggest the SIMADS5 role in activation of anthocyanin biosynthesis, and show that ectopic expression of this single gene can lead to a long-term arrest of the plant reproductive development.

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Thank you for your attention