

Review of: "CLASS-II KNOX genes coordinate spatial and temporal patterns of the tomato ripening"

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This MS examined the combined role of all four tomato CLASS-II KNOX genes in the maturation and ripening of fleshy fruits using an artificial microRNA targeting them simultaneously. The knockdown plants (35S::amiR-TKN-CL-II) exhibited leaves with increased complexity, reminiscent of the leaf phenotype of plants overexpressing CLASS-I KNOX, which antagonize CLASS-II KNOX gene functions. Additionally, the pericarp of 35S::amiR-TKN-CL-II fruits remained significantly firmer than control even after three weeks of shelf storage. Strikingly, the 35S::amiR-TKN-CL-II fruits showed early ethylene release and respiration peak, but these were correlated only with liquefaction and pigmentation of the internal tissues, suggesting that CLASS-II KNOX genes are required to coordinate the spatial and temporal patterns of tomato fruit ripening.

I suggest to study the target genes of CLASS-II KNOX gene.

Besides, more physiological index may be done to show the role of CLASS-II KNOX in regulating fruit ripening.