Title: Effect of light quality on flavonoid biosynthesis in young berries of Cabernet Sauvignon grape

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Comments:

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Dear Editors:

Please find enclosed our manuscript titled “Effect of light quality on flavonoid biosynthesis in young berries of Cabernet Sauvignon grape,” which I would like to submit for publication in BMC Plant Biology. The manuscript was professionally edited by an English language editing service before submission. The importance of the study are as follows.

Importance of this study

Regulation of flavonoid composition in fruits is one of the most important subjects in horticulture. Although the biosynthesis of flavonoid compounds is known to be sensitive to light exposure, the details of the mechanism by which light affects the accumulation of each flavonoid compound remains to be elucidated. Extending our previous study examining the effect of light quantity on the biosynthesis of flavonoids in grape berries, and in particular, proanthocyanidin, we focused on light quality in this study. Detailed analysis of flavonoid composition and their gene expressions showed that visible light primarily induces the biosynthesis of proanthocyanidins and influences their compositions, whereas UV light specifically induces the biosynthesis of flavonol in young berry skins of wine grapes. We believe that our findings provide novel information worthy of publication in your papers on the regulation of flavonoid biosynthetic pathways in grape, representative of non-climacteric flavonoid-accumulating fruits.

Sincerely,

Kazuya Koyama (corresponding author)