Mechanism of the Change of Petal Color of morning glory (Times or Times-New-Roman bold-style 14 point)

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(12 point with single spaced) The sepal color of *Hydrangea macrophylla* is famous for its easy color changes under cultivating conditions. In the maturation period, 3-*O*-glucosyldelphinidin is contained as the only anthocyanin component in any-colored sepals, such as blue, purple and red. We are interested in the mechanism of color change and reported that sepal color is affected by several factors, such as the composition of the co-pigment, content of Al^{3+} and vacuolar pH (1, 2). In cultivars of hydrangea there is a cultivar so-called a chameleon hydrangea. *H. macrophylla* cv. Hovaria™ 'Homigo' changes in four stages from colorless, blue, green to red during maturation and the senescence period. To clarify the chemical mechanism of the color change, we analyzed the components of the sepals at each stage. Blue-colored

(1) Yoshida, K., et al., *Plant Cell Physiol.*, **44**, 262-268 (2003).

(2) Kondo, T. et al., *Tetrahedron Lett.*, **46**, -6649 (2005).

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