

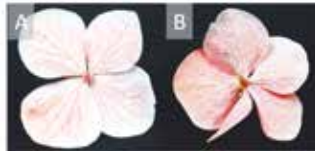


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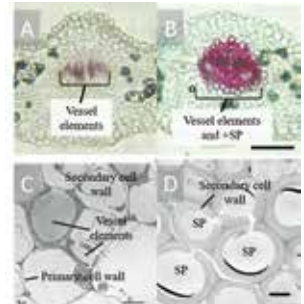


## Study on the vein structures that increase water transportation in plant decorative organs

Some plant species show characteristic vein structure in decorative floral organs, development of sclerified parenchyma cells. The sclerified parenchyma cells increase water transport in decorative organs and flowering longevity on plant or vase life. We are studying the mechanisms underlying sclerified parenchyma cell differentiation and trying to use them for increasing the flower longevity.



A: Flower before the sclerified parenchyma cell differentiation.  
B: Flower after the the sclerified parenchyma cell differentiation.

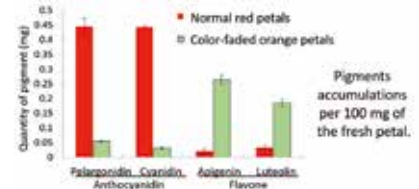


A, C: Vein cells before the sclerified parenchyma cell differentiation.  
B, D: Vein cells after the sclerified parenchyma cell (SP) differentiation.

## Research on flavone synthesis regulation in flower



Flower color of a dahlia cultivar, 'Nessho'.  
A: Normal red-colored flower.  
B: Orange colored flower of 'Nessho'.



Plants of a dahlia cultivar 'Nessho' produces solid red colored flower from spring to autumn. However, they produce orange colored flower in winter. The color change is owing to the increase in the flavone accumulation and decrease in the anthocyanidin accumulation.

We are studying the underlying mechanisms of seasonal change of the pigment accumulation.