LETTER TO THE EDITOR

that differentially expressed or active DNA binding proteins probably dictate the regional specificity of gene expression in the petal and further implies that these regulators can be identified as proteins that bind to the promoters of the limb-specific genes.

Although each approach has its limitations, genetic and molecular analysis are both likely to yield molecules that confer spatial asymmetry to gene expression in the petal. However, it is in the very early events of petal development that the initial asymmetries that dictate the pattern of the petal are formed. As Drews and coworkers show, the major cell differentiation events occur shortly after the petal primordia emerge from the floral meristem. The events that occur much later—the cell type- and region-specific expression of the genes identified by Drews and coworkers and the anthocyanin biosynthesis genes—are ultimately under the control of these early events. An exciting challenge for the future will be learning how early petal asymmetries are established and how these processes are integrated into the pattern elaboration that occurs later in petal development.

Rebecca Chasan

REFERENCES


Petunia Flowering Revisited

This letter is in response to the PLANT CELL issue of August 1992 in which a report on the Amsterdam meeting on Floral Development was presented (Plant Cell 4, 867–870). We would like to point out some unfortunate inaccuracies that were stated in the section on Flower Architecture.

First, the suggestion was raised that the petunia MADS box gene green petal (gp, cloned by Anil Kush at Rockefeller University, New York) and fbpl (cloned by Angenent et al. in Wageningen, Holland) are the same gene. This is not true; we did report the cloning of another MADS box gene, pGlo-like, which is very similar to fbpl. Both pGlo-like and fbpl share homology to the Antirrhinum MADS box gene globosa. The gp gene shares homology with the Antirrhinum MADS box gene delicius-A (within and outside the MADS box region).

Both the meeting report and the cover title of the August issue suggest that fbpl and fbp2 have a homeotic function during floral development. These genes are expressed in specific floral organs and are likely to play important roles during petunia floral development. However, a true homeotic function, e.g., that mutations in these genes cause a homeotic transformation of floral organ identity, has not been demonstrated. At this point it is premature to assign a homeotic function based solely on (partial) homology to a homeotic gene that has been identified in another plant species.

The meeting report also mentioned that the green petal mutant phenotype has been obtained by antisense-mediated suppression of the petunia gp gene. This was not reported at the meeting. We did present data that show that the green petal phenotype can be obtained by cosuppression of the gp gene.

We also have one comment that is related not to the meeting report but to Figure 1 of the paper by Angenent et al. (Plant Cell 4, 983–993). There is a discrepancy between the DNA and amino acid sequence from nucleotides 582 to 663 of the fbp2 gene.

We hope your readers will benefit from these corrections.

Alexander R. van der Krol
Alan Brunelle
Suguru Tsuchimoto
Nam-Hai Chua

Laboratory of Plant Molecular Biology
The Rockefeller University
1230 York Avenue
New York, NY 10021-6399
Petunia Flowering Revisited.
A. R. Van Der Krol, A. Brunelle, S. Tsuchimoto and N. H. Chua
*Plant Cell* 1992;4;1349
DOI 10.1105/tpc.4.11.1349

This information is current as of September 30, 2017

|-------------|-------------------------------------------------------------------------------------------------|
| eTOCs       | Sign up for eTOCs at:
|             | http://www.plantcell.org/cgi/alerts/ctmain                                                    |
| CiteTrack Alerts | Sign up for CiteTrack Alerts at:                          |
|             | http://www.plantcell.org/cgi/alerts/ctmain                                                    |
| Subscription Information | Subscription Information for *The Plant Cell* and *Plant Physiology* is available at: |
|             | http://www.aspb.org/publications/subscriptions.cfm                                              |

© American Society of Plant Biologists
ADVANCING THE SCIENCE OF PLANT BIOLOGY