



NUS
National University
of Singapore

Structural Biology & Functional Genomics Lecture Series

Seminar Announcement

(Department of Biological Sciences & Office of Life Sciences)

A new genetic model for **floral** meristem development

by

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The transition from vegetative to reproductive growth is a dramatic developmental change in the life of plants, in which newly formed meristems acquire floral rather than inflorescence identity. Floral meristem identity genes *LEAFY* (*LFY*) and *APETALA1* (*API*) promote establishment and maintenance of floral identity in newly formed floral primordia. Without their activity, the floral primordia develop with inflorescence characteristics. The underlying molecular-genetic mechanism remains unknown. Our studies show that these phenotypes are due in large part to the ectopic expression of *AGAMOUS-LIKE 24* (*AGL24*), a central regulator of floral meristem identity. We present evidence that *AGL24* is an early target of transcriptional repression by *LFY* and *API*. Without such repression, continued *AGL24* expression in floral meristems is sufficient to cause floral reversion regardless of the activation of floral organ identity genes. This reveals that *LFY* and *API* promote floral development not only by positively regulating genes activated in flower development, but also by repressing *AGL24*, a promoter of inflorescence fate.

Date: 30 Jan 2004, Fri
Time: 4 pm
Venue: LT 20
Host: A/P Prakash Kumar

All are welcome

