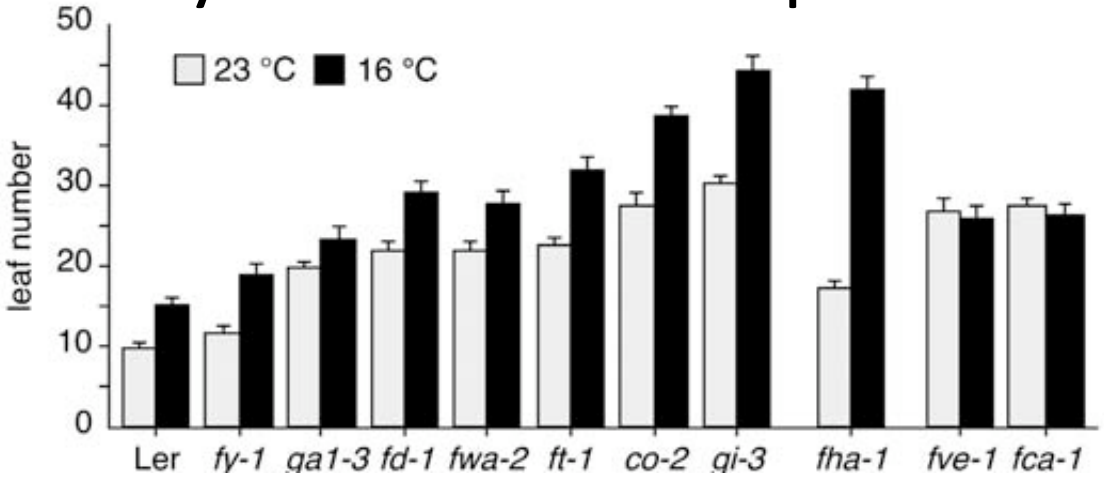
SVP, a thermosensory pathway gene

- Blázquez, M. A., Ahn, J. H. & Weigel, D. A thermosensory pathway controlling flowering time in Arabidopsis thaliana. *Nat Genet* **33**, 168–171 (2003).

The thermosensory pathway

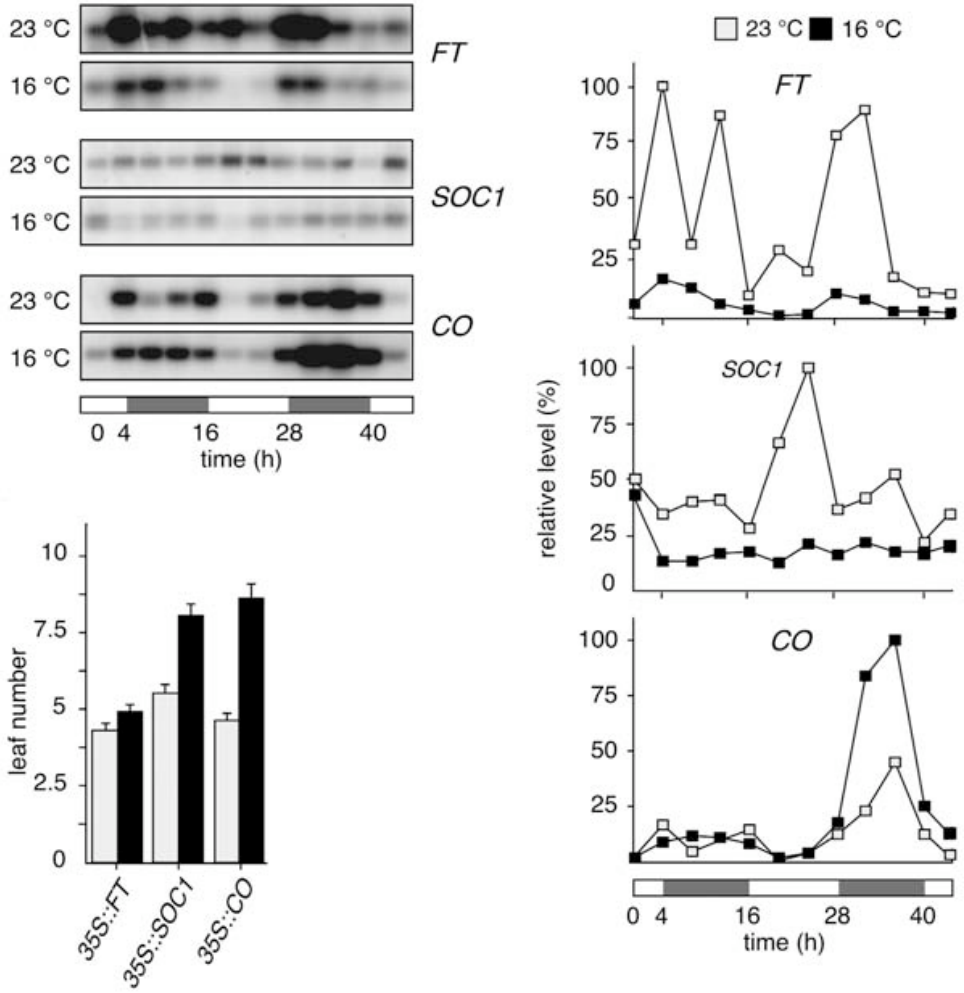
- We identified some mutants that showed insensitivity to ambient temperature changes



- FCA and FVE were originally grouped in the autonomous pathway

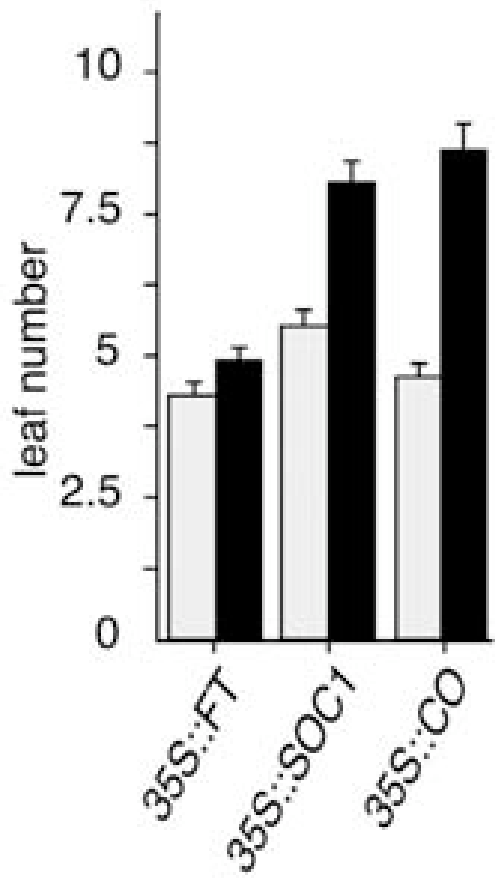
Blázquez, M. A., Ahn, J. H. & Weigel, D. A thermosensory pathway controlling flowering time in Arabidopsis thaliana. *Nat Genet* **33**, 168–171 (2003).

FT expression is dramatically reduced in lower temperature



Blázquez, M. A., Ahn, J. H. & Weigel, D. A thermosensory pathway controlling flowering time in Arabidopsis thaliana. *Nat Genet* **33**, 168–171 (2003).

FT overexpression showed insensitivity to ambient temperature changes



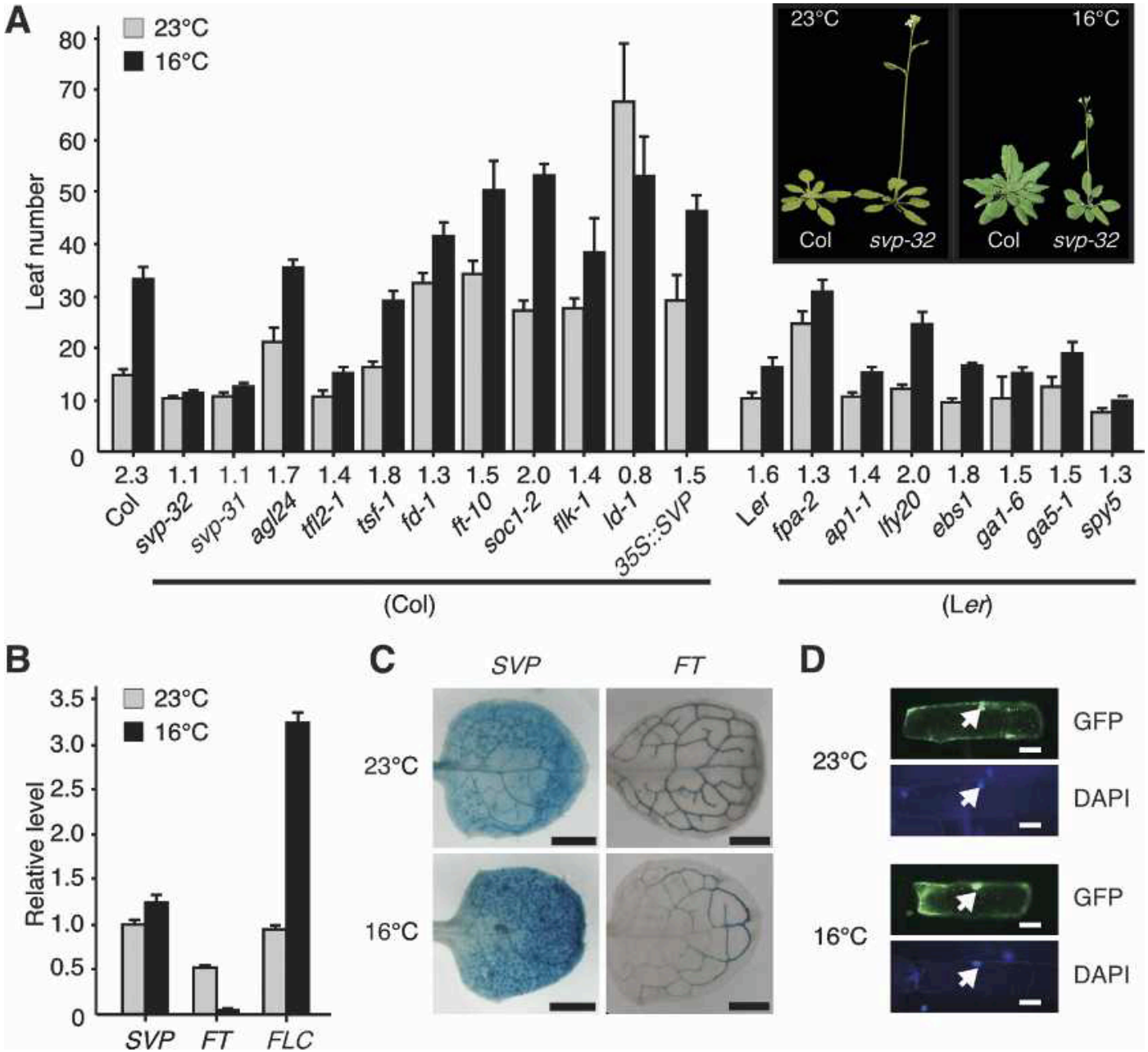
Blázquez, M. A., Ahn, J. H. & Weigel, D. A thermosensory pathway controlling flowering time in Arabidopsis thaliana. *Nat Genet* **33**, 168–171 (2003).

- Ambient temperature
  - FCA, FVE
    - FT
      - Flowering time

The thermosensory pathway

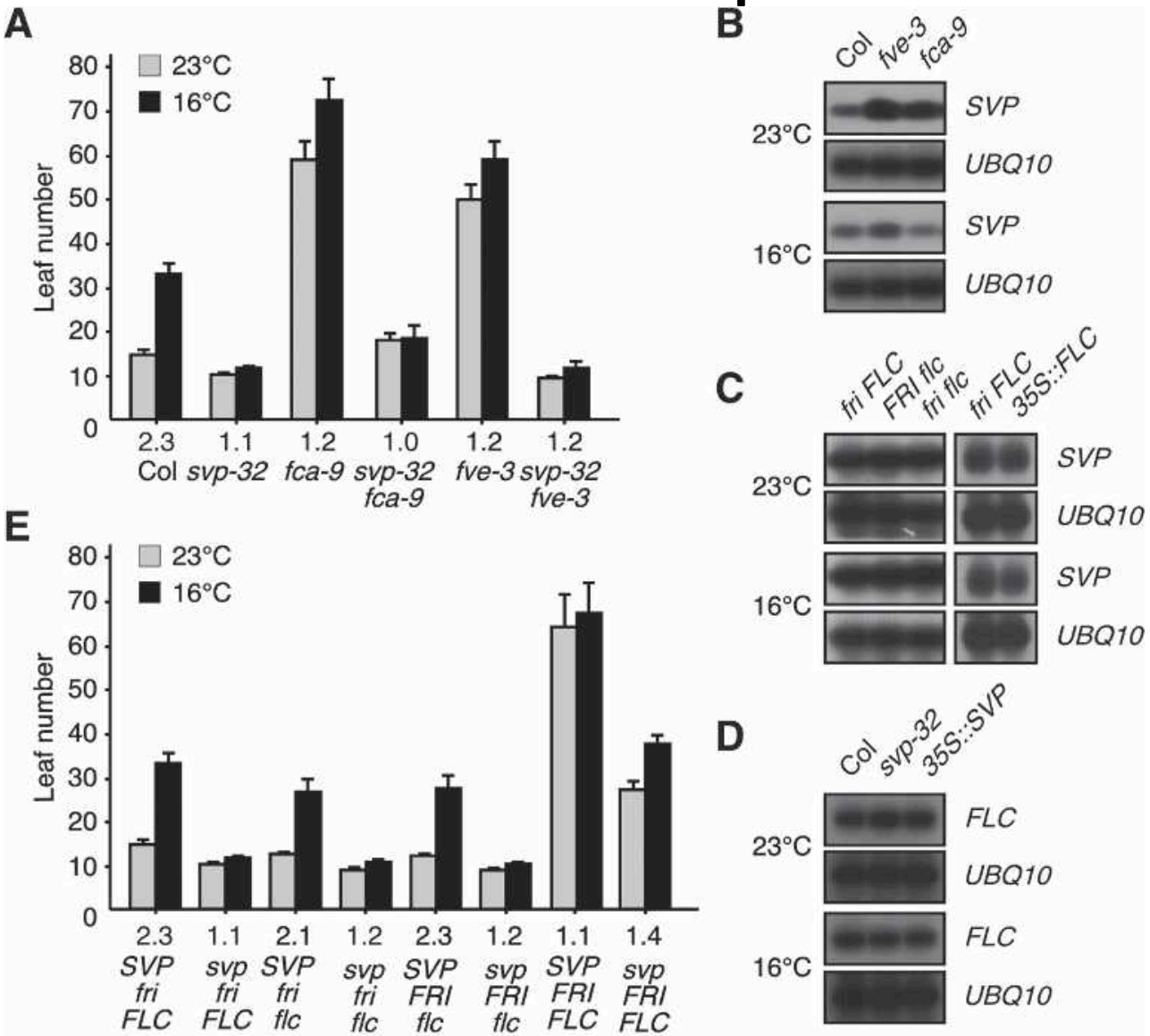
SVP, a mediator in the ambient temperature signaling

Lee, J. H. *et al.* Role of SVP in the control of flowering time by ambient temperature in Arabidopsis. *Genes Dev* **21**, 397–402 (2007).



Lee, J. H. *et al.* Role of SVP in the control of flowering time by ambient temperature in Arabidopsis. *Genes Dev* **21**, 397–402 (2007).

SVP function is independent of FLC



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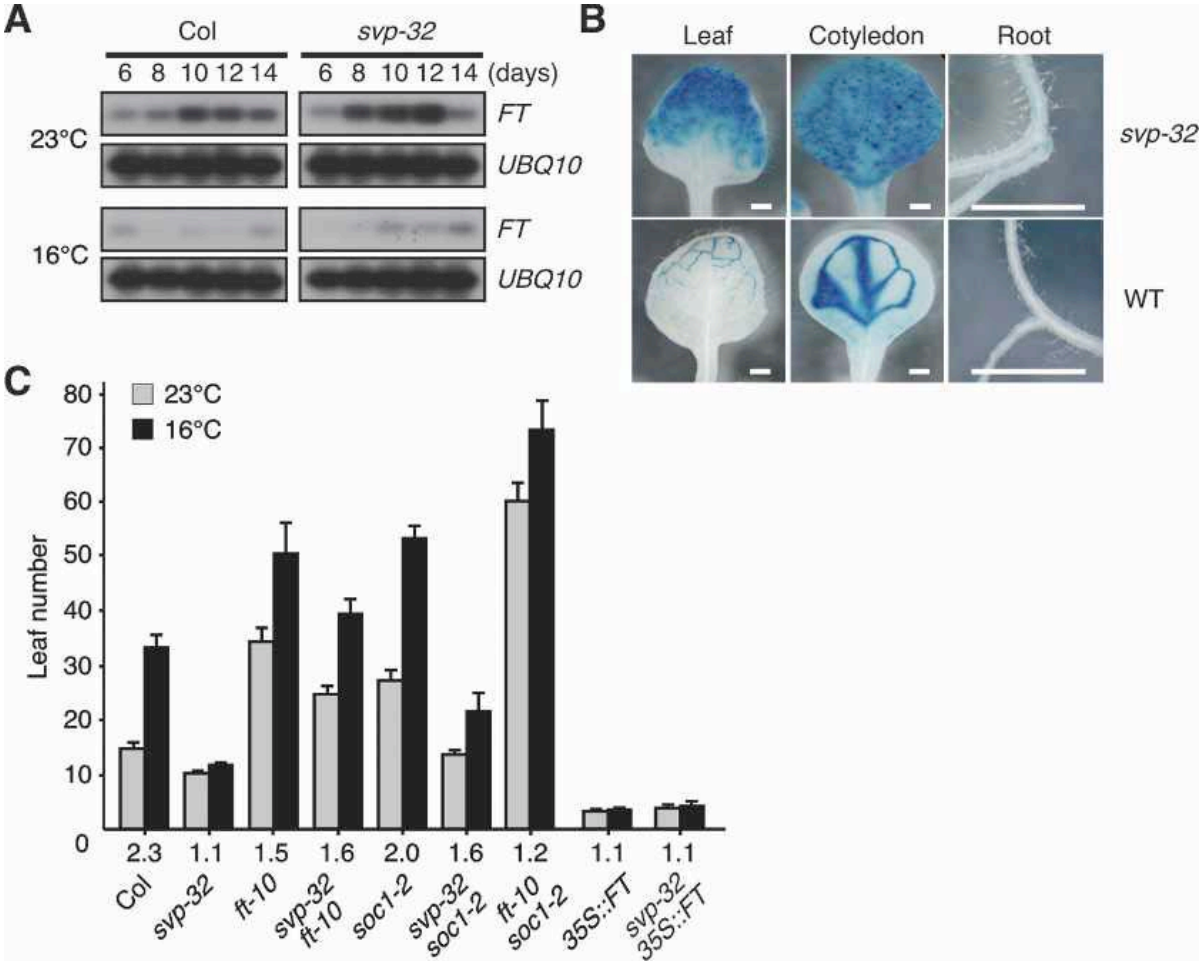
Early flowering of *svp* mutants is resulted from upregulation of *FT*



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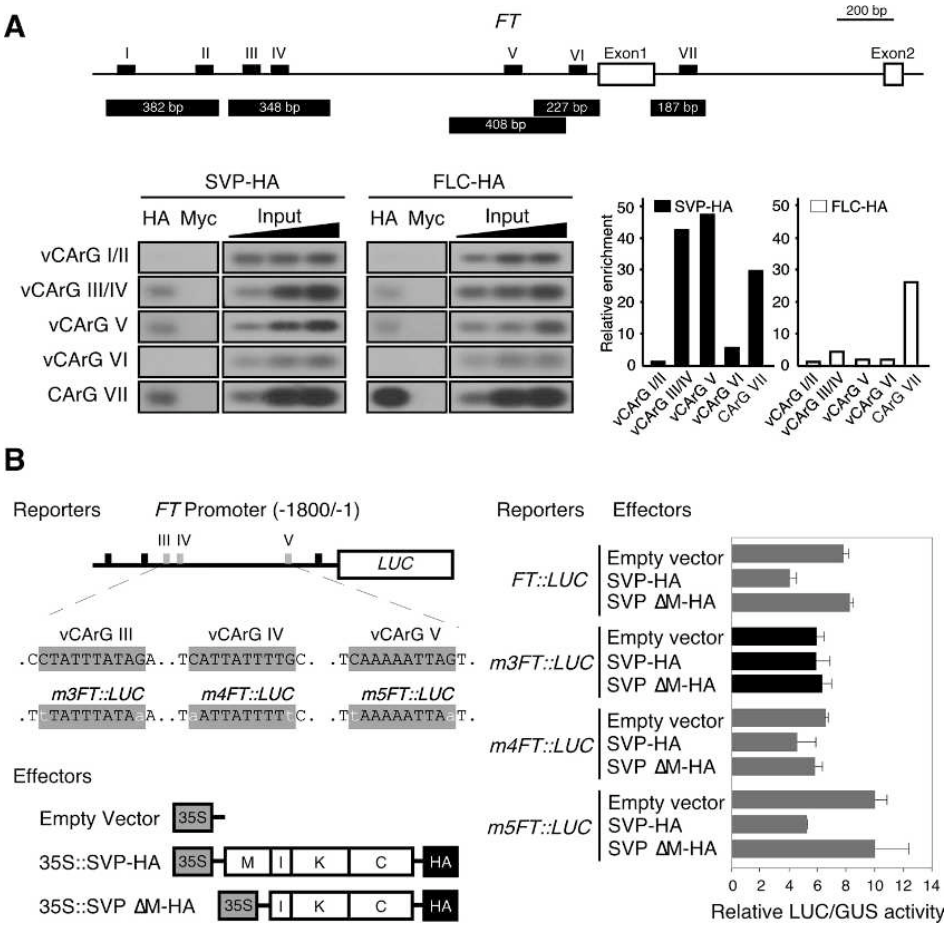
Direct binding of SVP protein to vCArG box in the *FT* promoter



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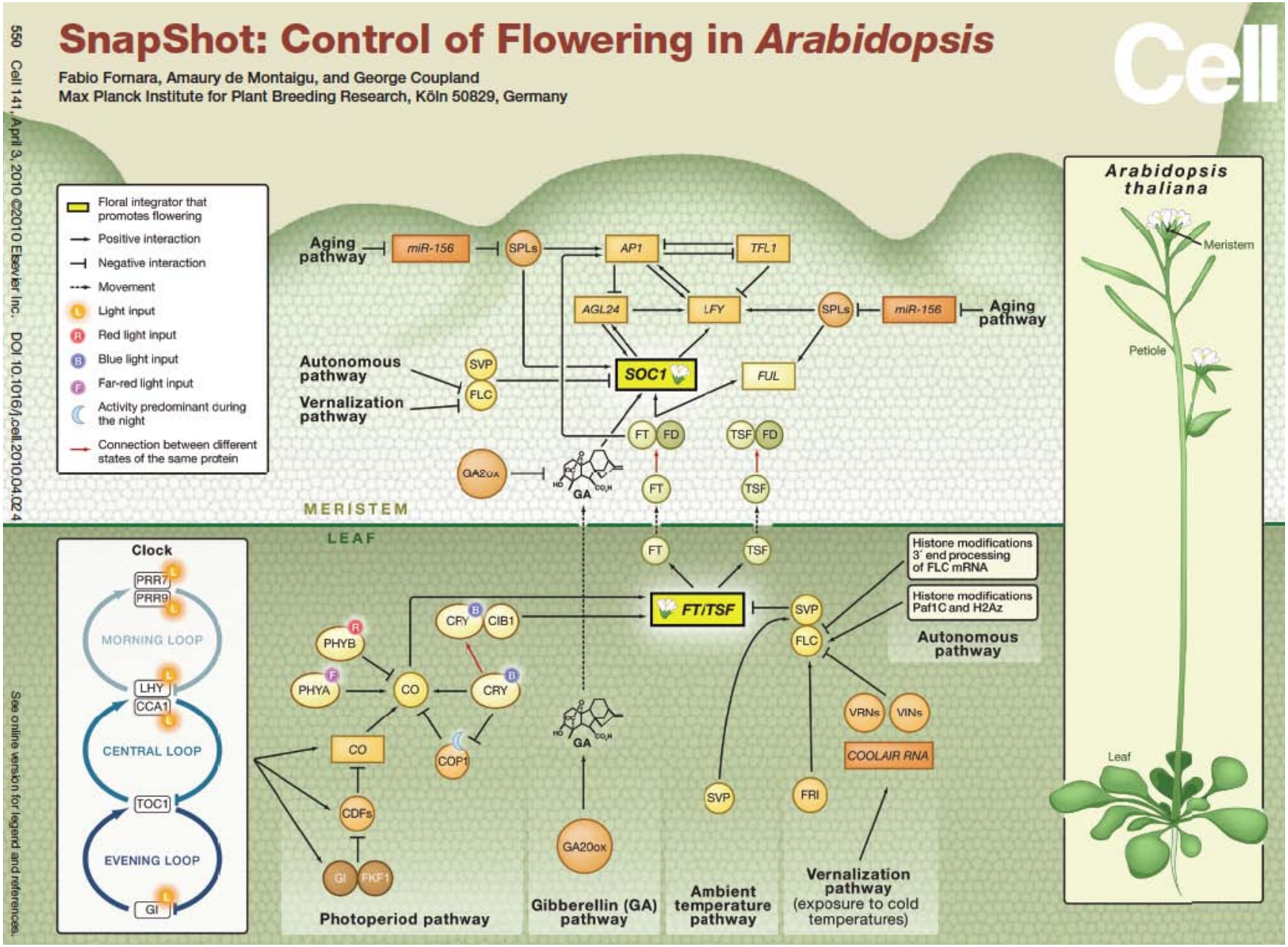
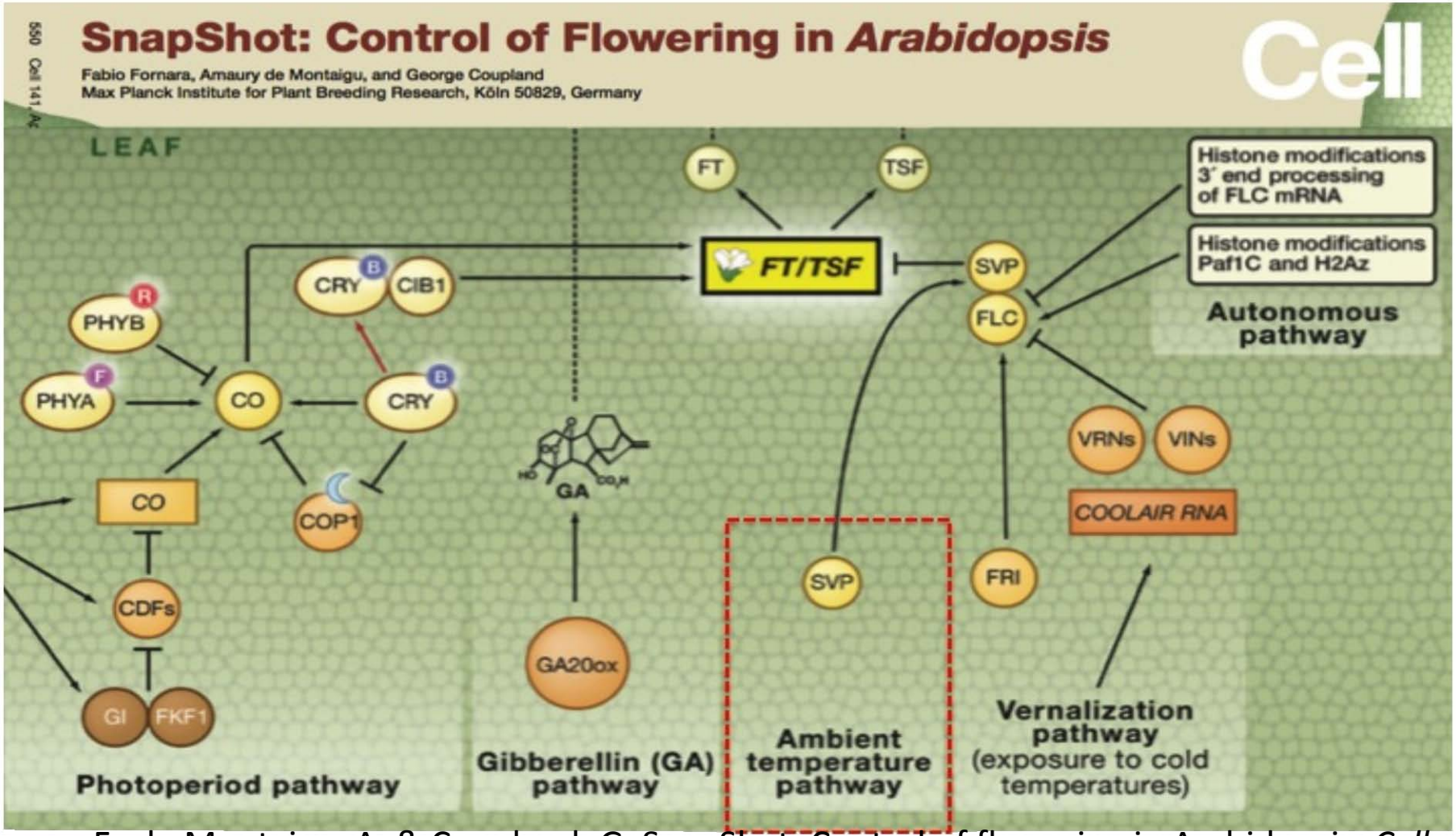


Fornara, F., de Montaigu, A. & Coupland, G. SnapShot: Control of flowering in Arabidopsis. *Cell* **141**, 550, 550.e1–2 (2010).



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