

# Abscisic Acid (ABA)

- Abiotic Stress (drought, salt, cold)
- Seed development and maturation  
(Storage protein synthesis, ripening)
- Seed germination and dormancy

# Signal Transduction

- 'Downstream' components known
- 'Upstream' components previously unidentified (To what does ABA bind? What happens immediately after it is bound?)

# Flowering Control

$FLC \rightarrow FLC \dashv$  Flowering  
T

$FCA + FY \rightarrow FCA-FY$

$ABA + FCA \rightarrow ABA-FCA$

$ABA-FCA + FY \not\rightarrow FCA-FY$

# FCA

***FCA* → FCA + other proteins (ABAP1)**  
**Alternative  
Splicing**

# ABAP1

- binds ABA with high specificity
- related to FCA
- found in seed tissue (aleurone, embryo)
- induced by ABA
- cytoplasmic protein
- WW domain
- binds to another protein AB45

# AB45

- Membrane-binding domain (Gram)
- Peptide motif that recognizes WW domain
- SH3 domain (protein kinases)

# Significance?

- Identification of the upstream components of ABA signal transduction?
- Explanation of events associated with ABA and dormancy?
- A method of looking at regulation of Brassica storage protein synthesis?
- A method for examining the relationship between ABA and seed ripening?
- ABA and stress tolerance?

