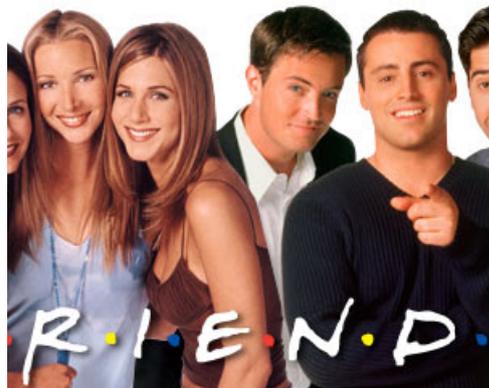


What do genes AT1G28300 and
AT233710 do?

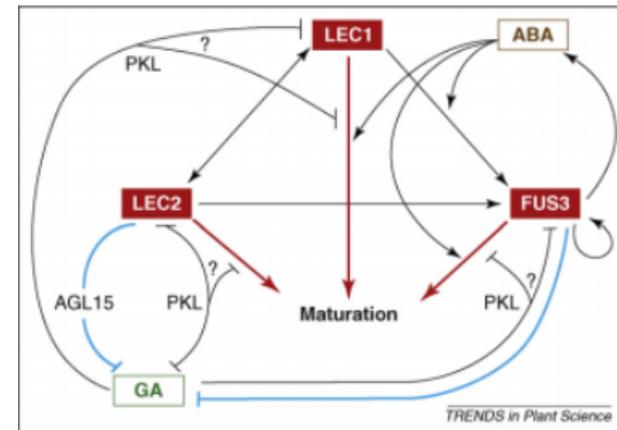
Harry Chung

AT1G28300

- Known as Leafy Cotyledon 2, or lec2
- Transcription factor that plays role in embryo development
 - Cotyledon identity, suppression of premature germination, etc. See arabidopsis.org
 - 363 amino acids long
- Works with ABI3, FUS3, Lec1, and Lec2 in regulating seed development

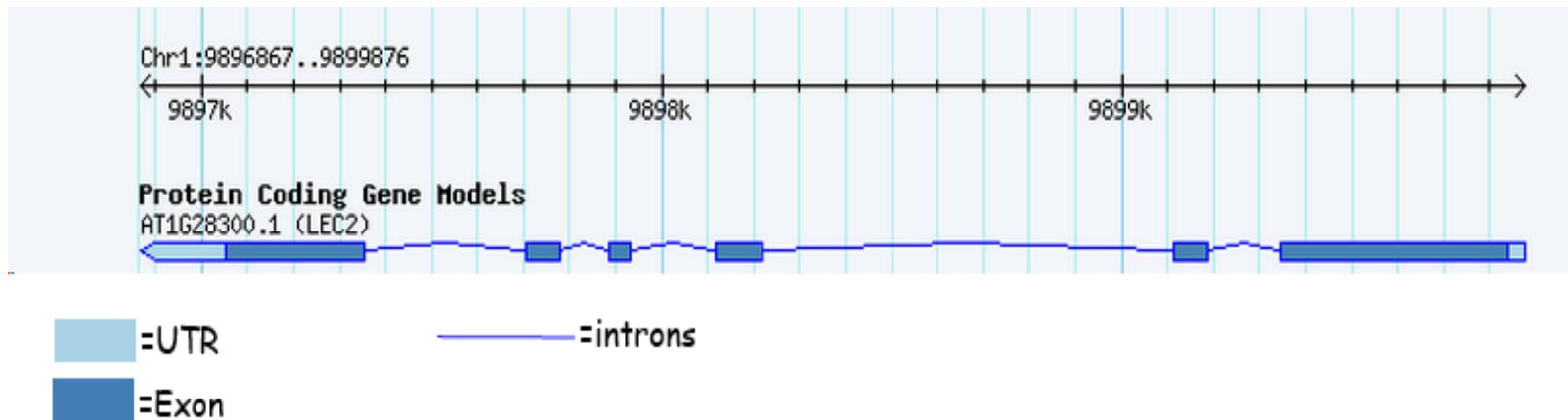


ABI3 FUS3 Lec1 Lec2

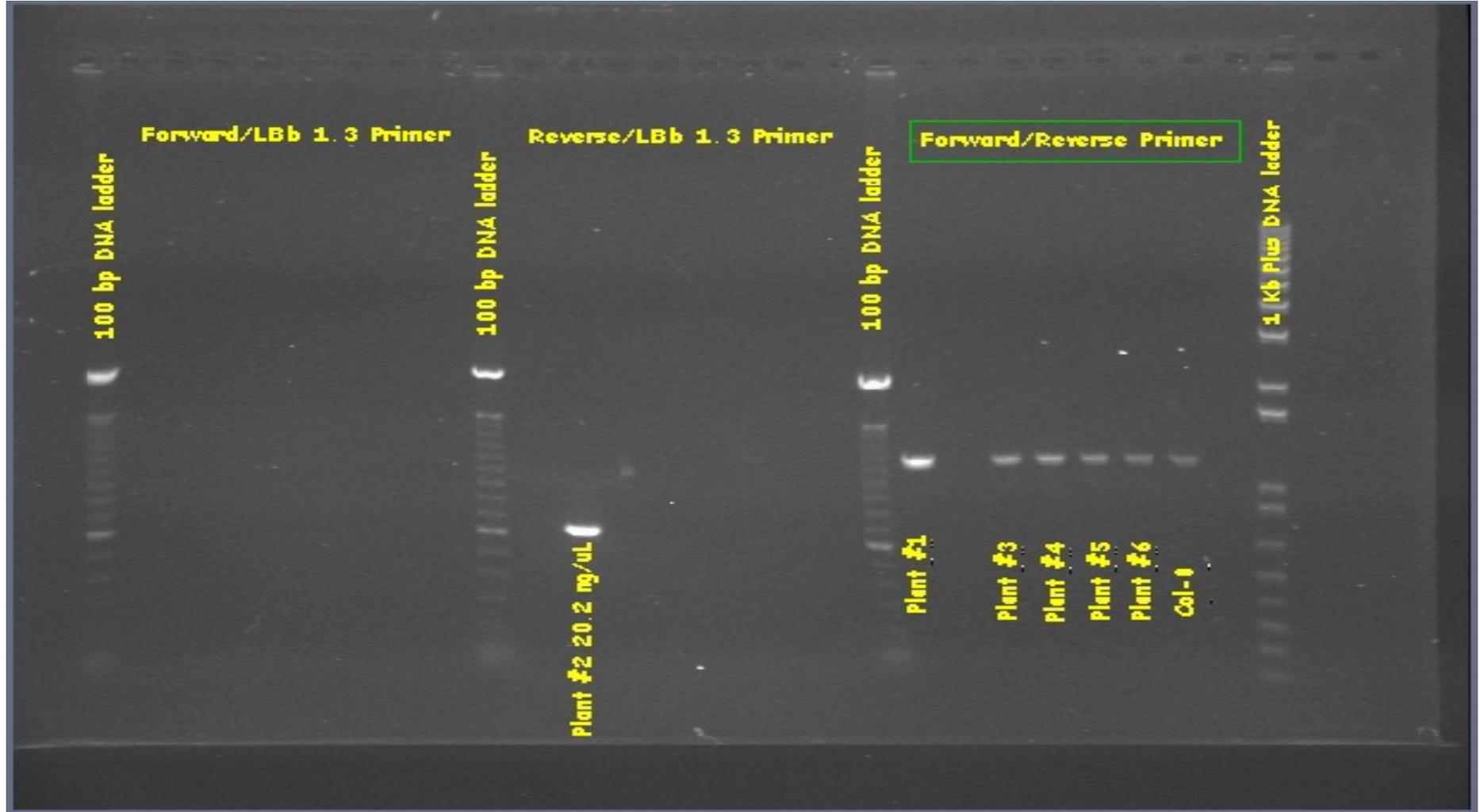


Structure

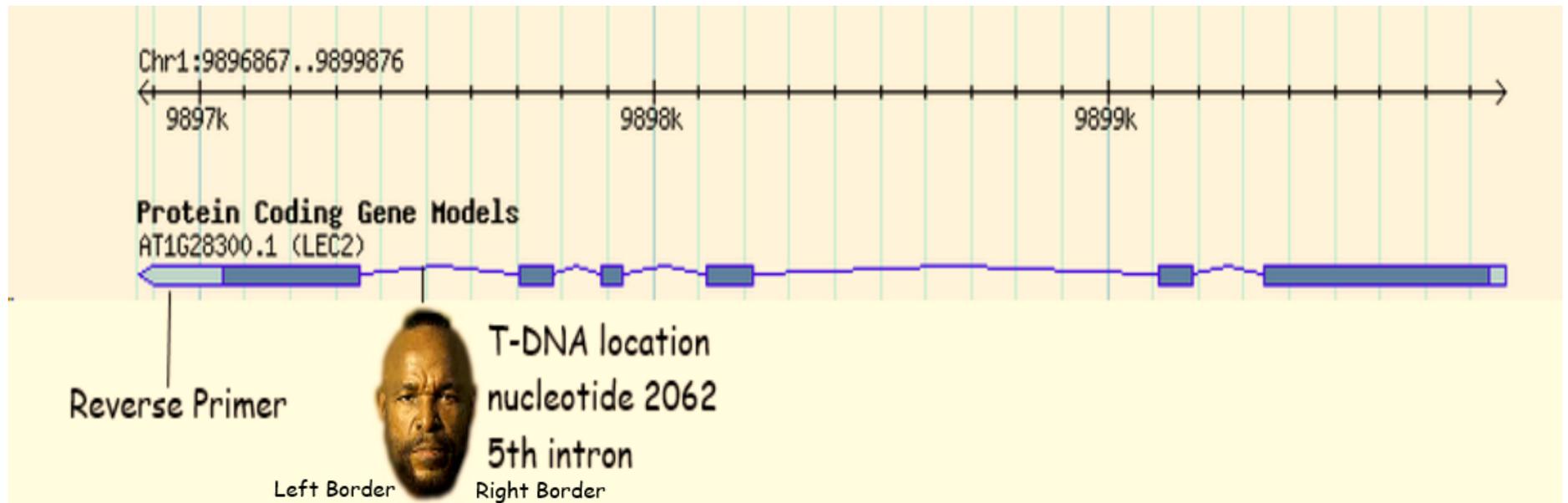
- Reverse orientation
- 3009 base pairs



Plant Genotype

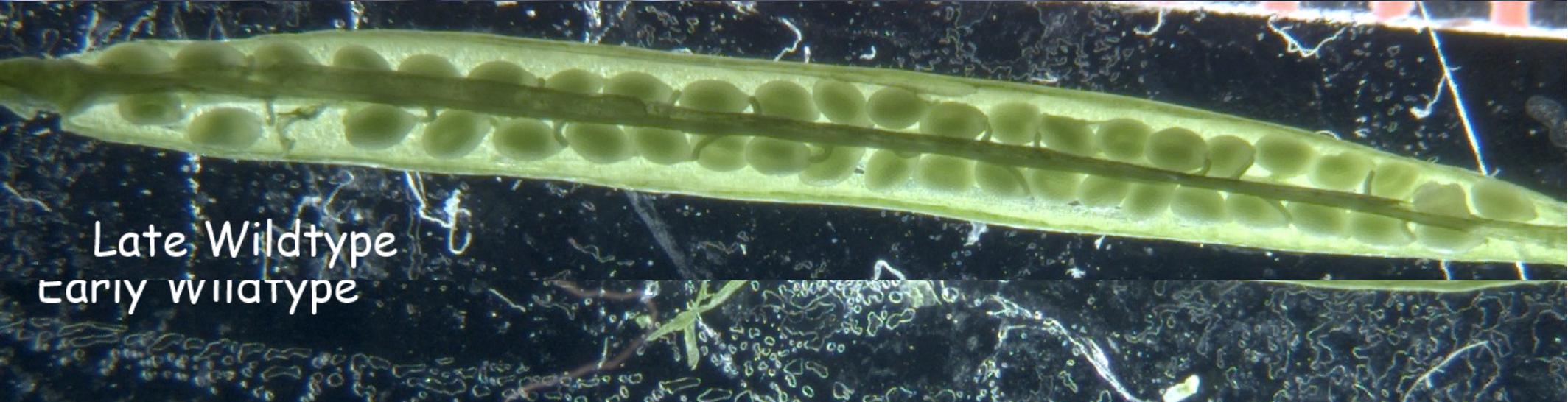
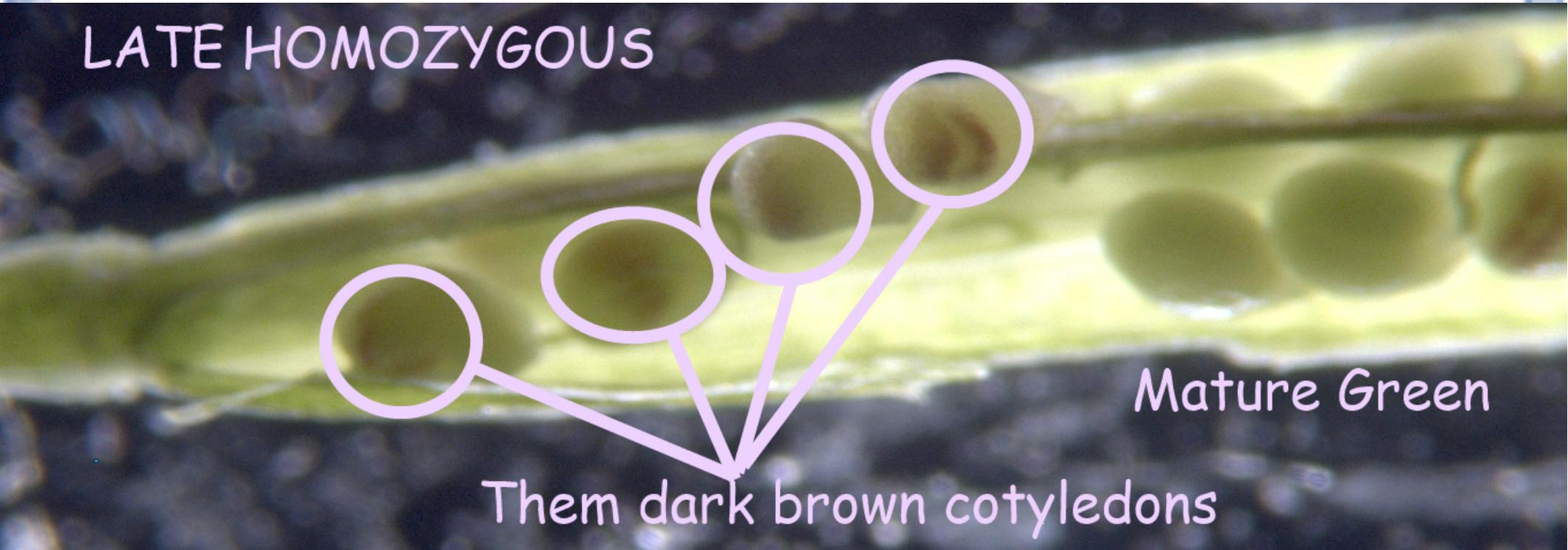


T-DNA Insertion Site



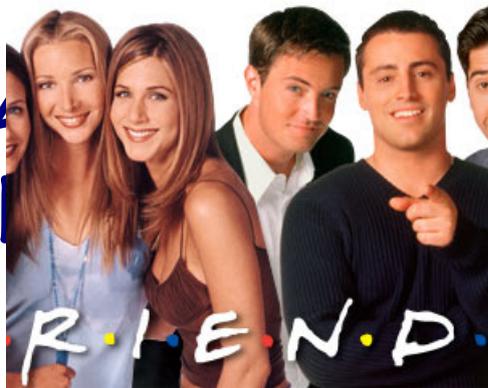
Light Microscopy

LATE HOMOZYGOUS



What the Homo?

- Hey Harry if this plant is homozygous shouldn't all the seeds have dark brown cotys?
- Work as a network of redundant gene regulation
- Expression of *ABI3* suppresses anti-*ABI3* expression and *FUS3* suppresses anti-*FUS3* expression



ABI3 *FUS3* *Lec1* *Lec2*

Mature Green Homozygous



Early Wildtype

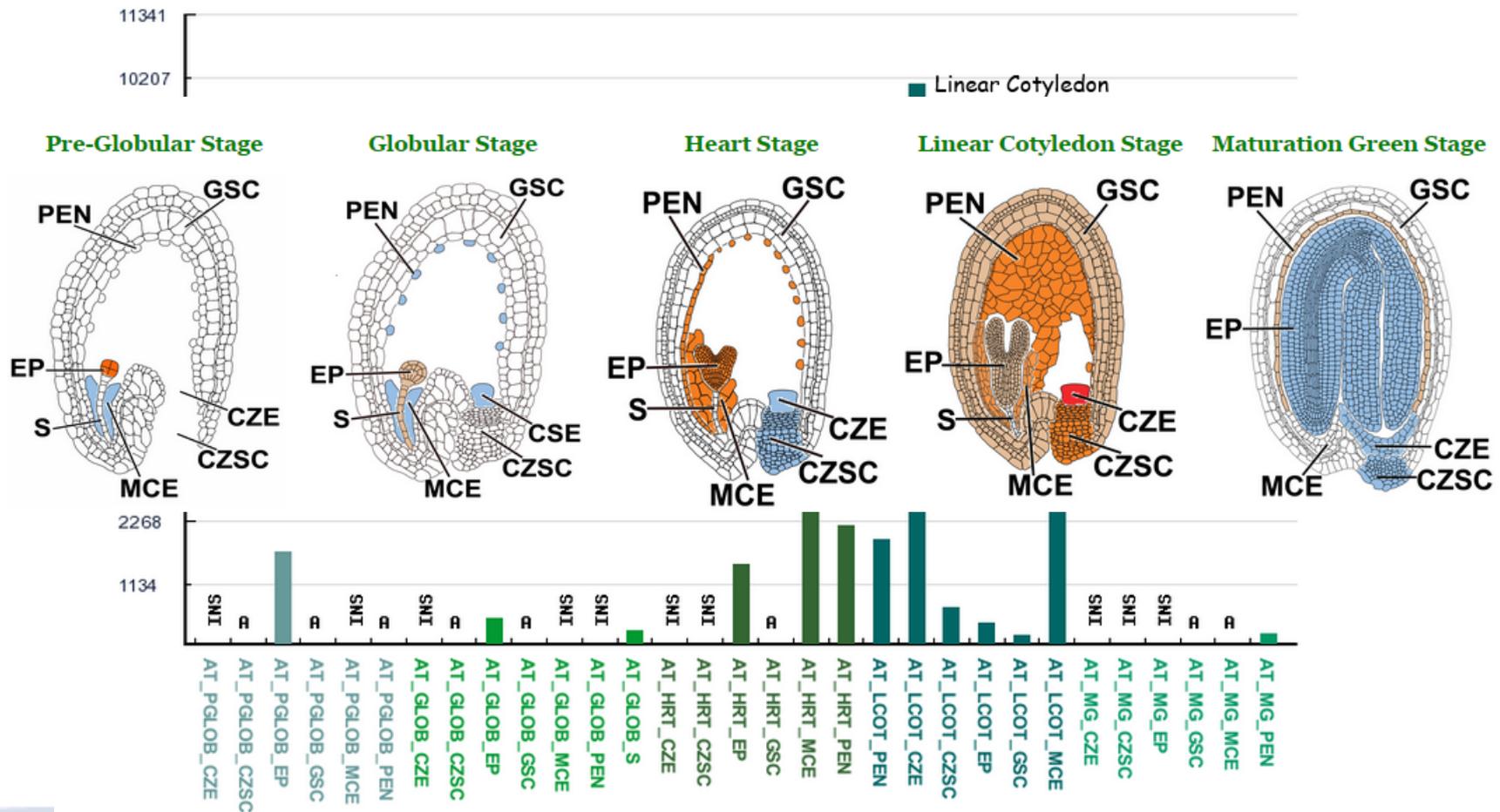


Stubby Cotyledons Homozygous



Where is gene active

- This is why we saw normal early stage pheno



AT2G33710

- Encodes member of ERF (ethylene response factor) subfamily of ERF/AF

ERF SUBFAMILY

- One of



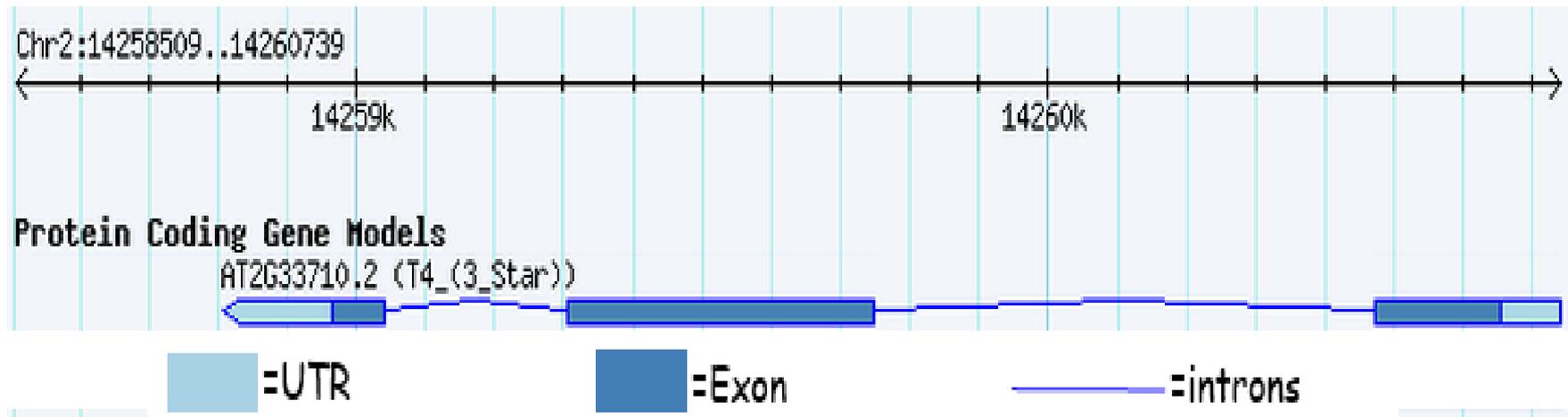
AT2G33710



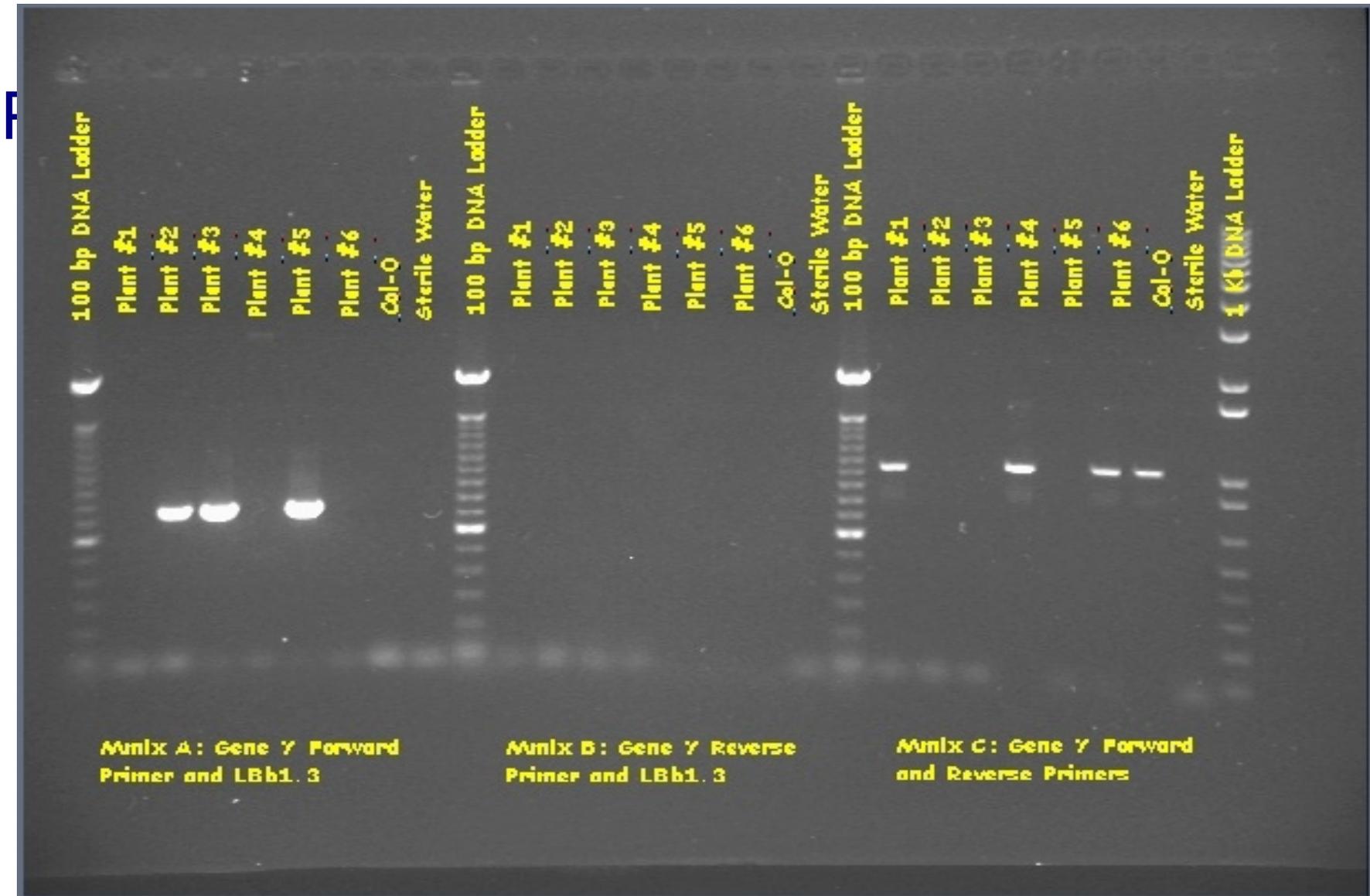
factors

Structure

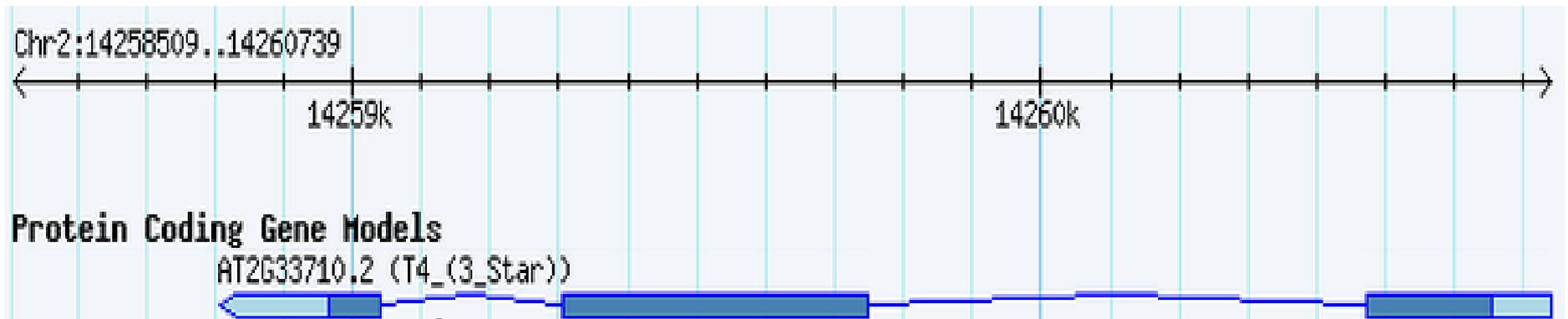
- Reverse orientation
- 1930 base pairs



Plant Genotype



T-DNA Insertion Site



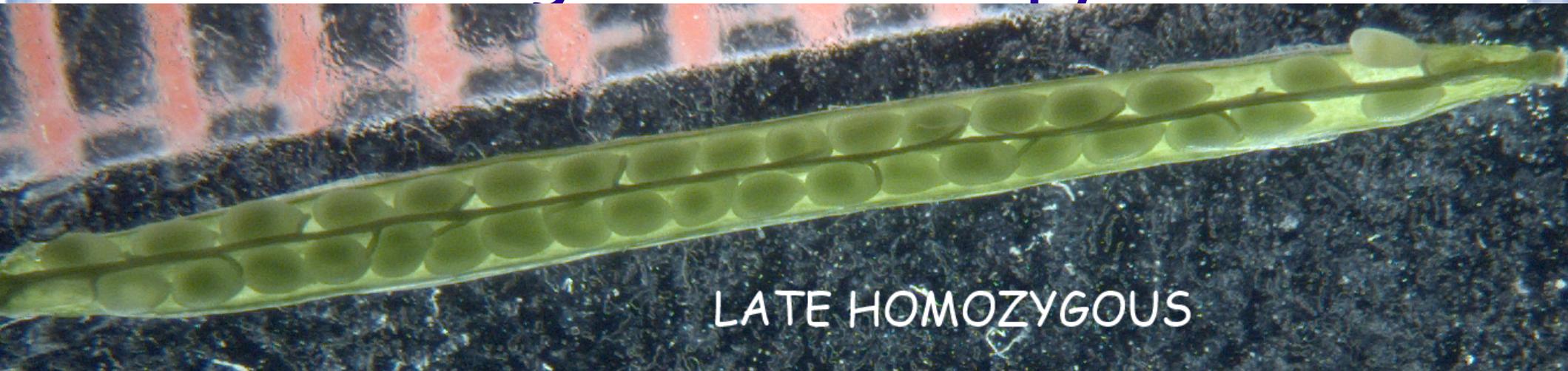
T-DNA location
nucleotide 1473
2nd intron



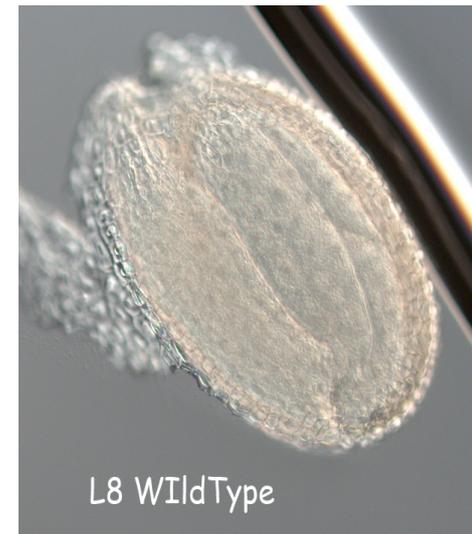
Left
border

Forward

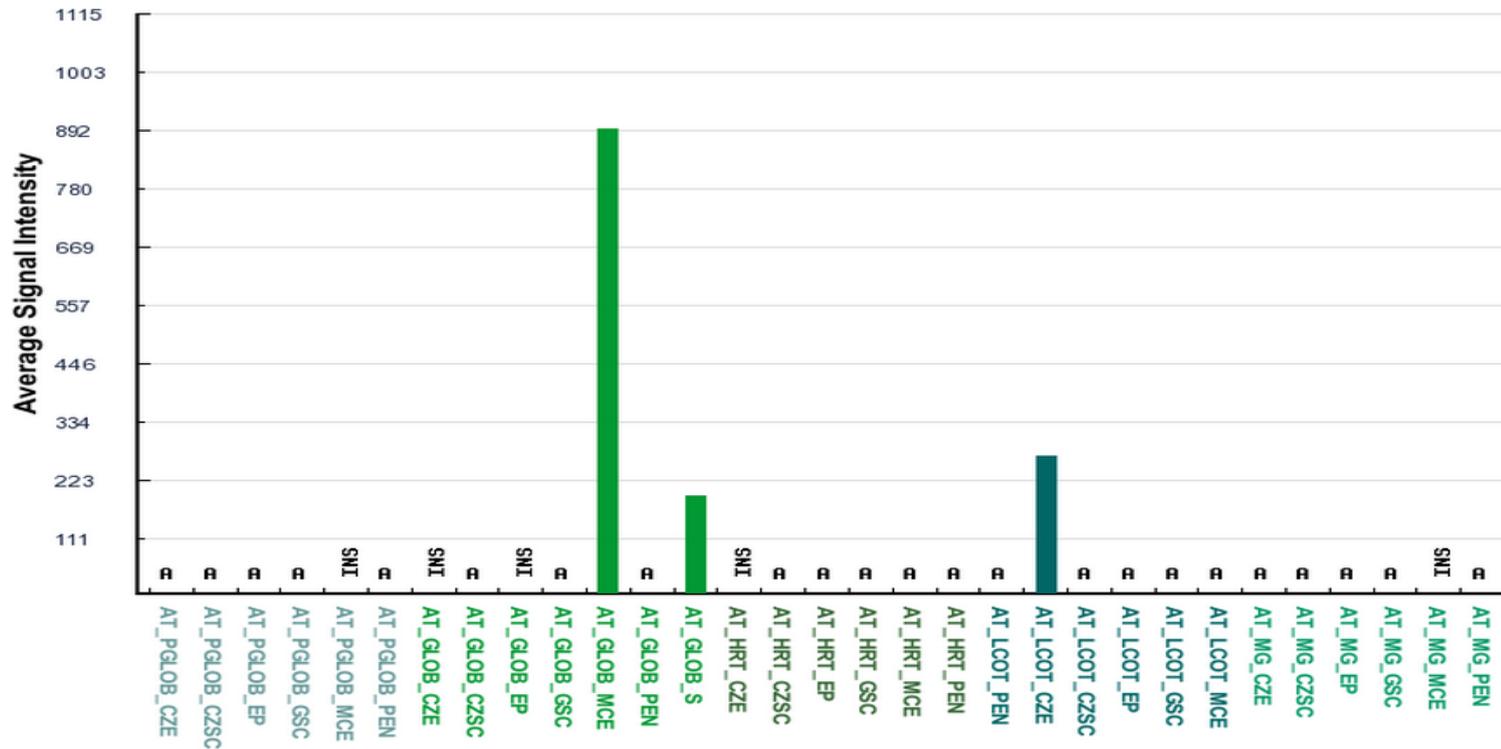
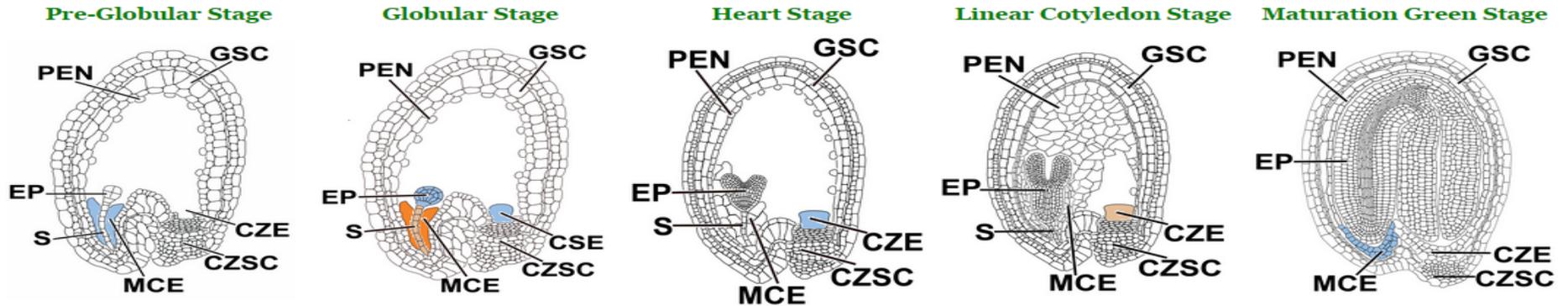
Light Microscopy



Nomarski Microscopy



When is gene active



What next

- Induce various kinds of stress and compare how this plant responds with the wildtype.

Thank you

"It has been a fantastic
experience."-Harry Chung