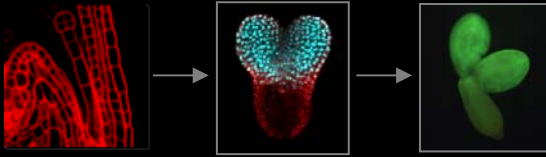


# Developmental Staging



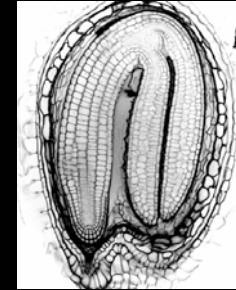
Define stages

Rate of development

Gene stage markers

Optimal stage comparisons

# Seed components



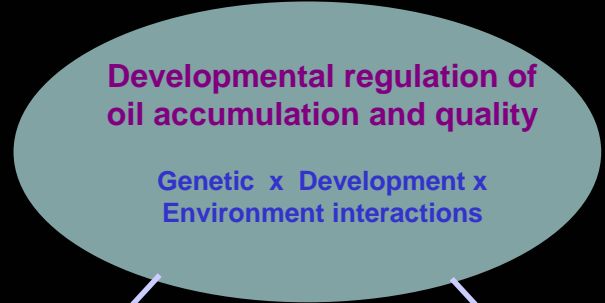
embryo

Cotyledons  
Hypocotyl  
Root

endosperm

Size  
Ploidy

integument



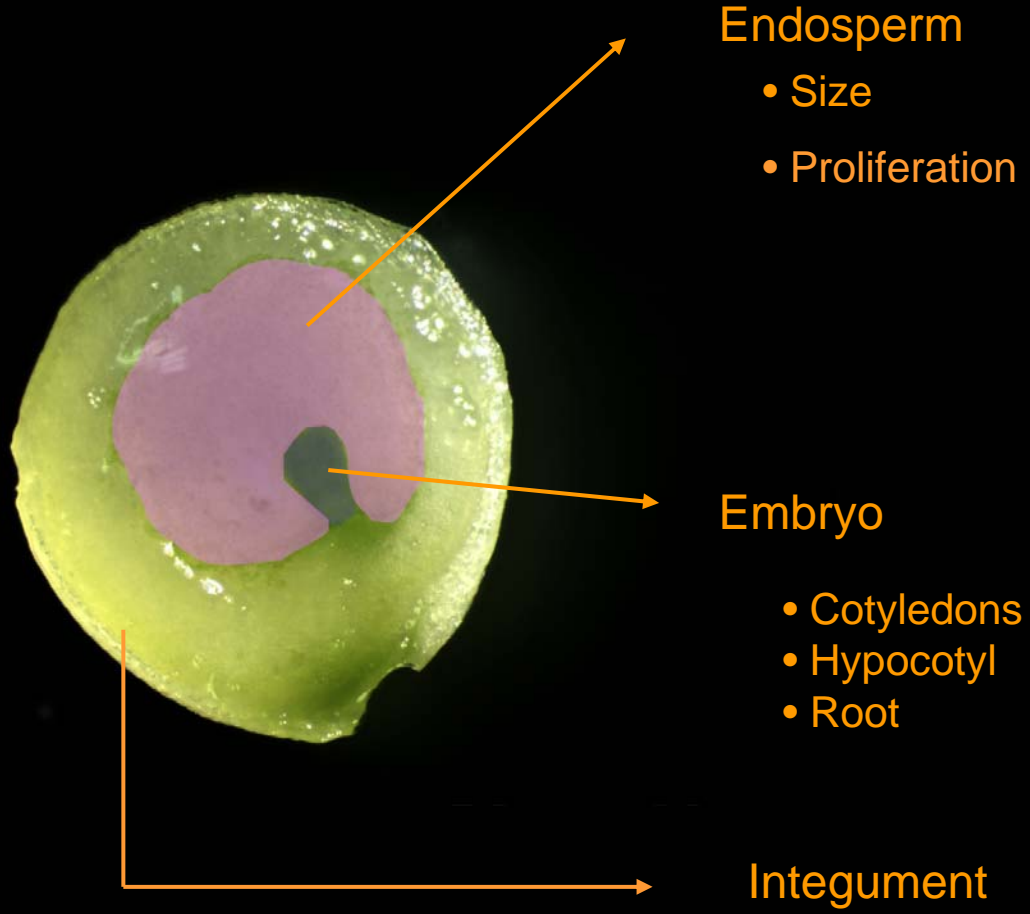
## Transcriptional competence

Stage/locus specific transcription  
Chromatin conformation

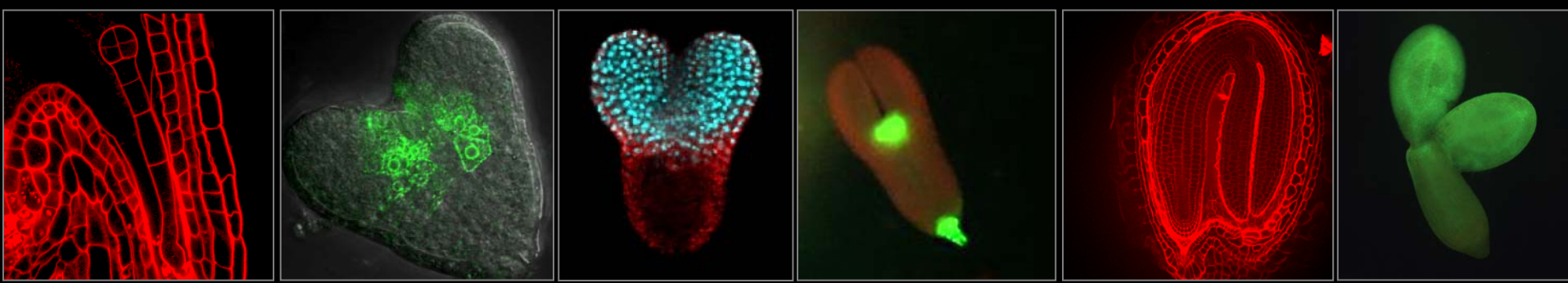
## FA synthesis/ modification

Total TAG  
FA profile

# Seed components



# Embryo Developmental Staging: Arabidopsis



*AtML1*

*Transparent Testa 1*  
*PEI1*  
*STM*  
*MP*

*LEC1*  
*GL2 FUS3*  
*CUC*

*AP2*  
*ABI3*  
*NAC81*



ROTHAMSTED  
RESEARCH

Smita Kurup

# Embryo Developmental Staging: *Brassica rapa* (R-0-18)

Days after pollination →



*B. napus*



*B. oleracea*



18

20

25

# Comparative Embryo Developmental Staging

*B. rapa*

50 days



14 days



Rapid cycling lines



? Variation in oil content, profile,  
FA biosynthesis