

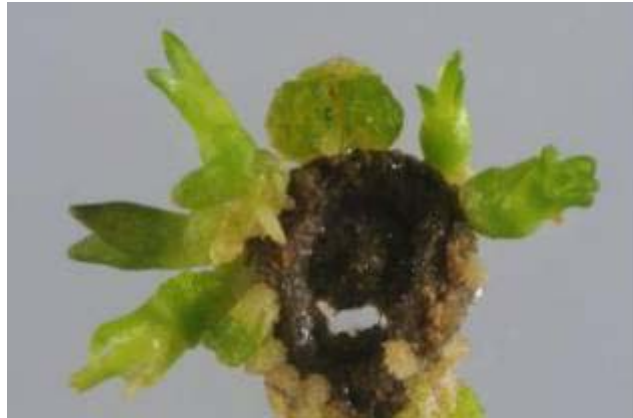
**Streptocarpus – Regeneration  
from Leaf and Petal Explants**



# Lily - Stargazer



**Normally 6 petals**



**Pedicel-derived somatic embryos**



# Securing of "Sports" - Natural Mutations

**Chrysanthemum**

**White Enbee  
Wedding**



**Excise  
"sported" petals;  
culture**



**Regenerate  
plants**

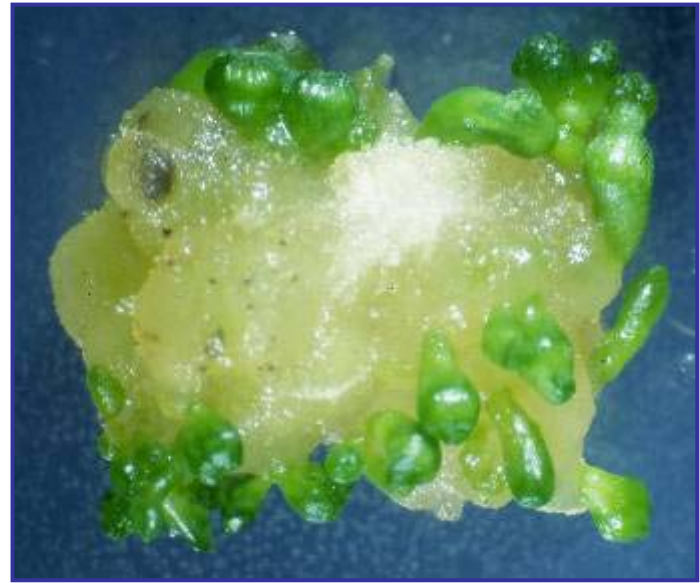
**Assess floral  
characteristics**



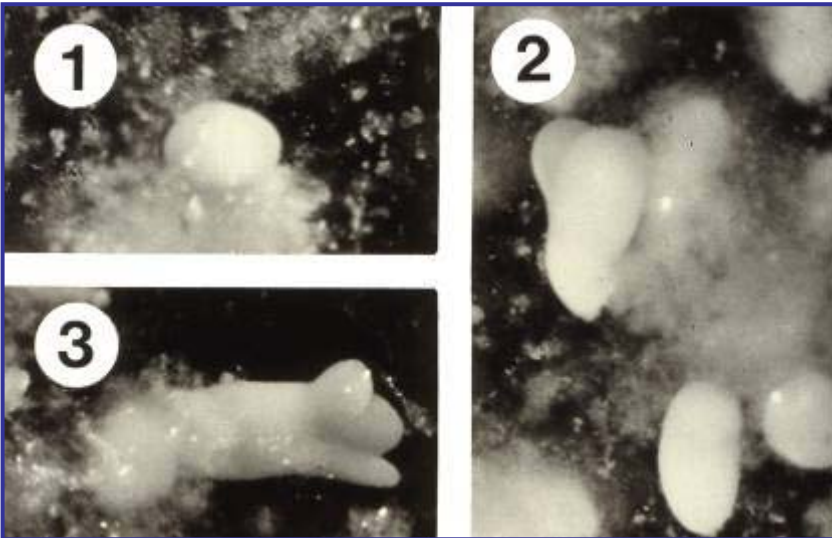
# Plant Regeneration



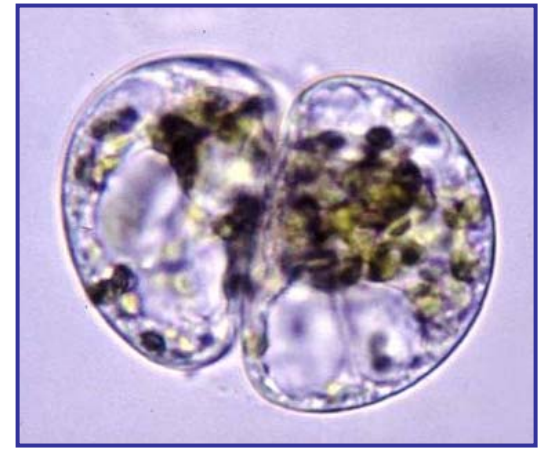
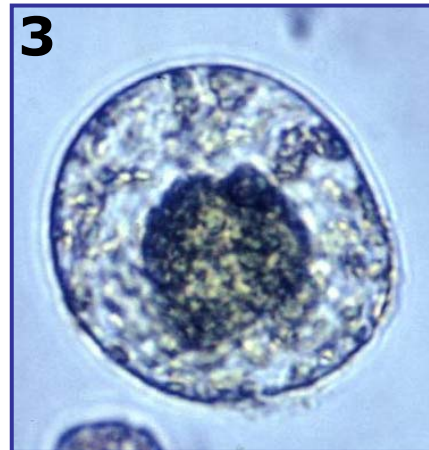
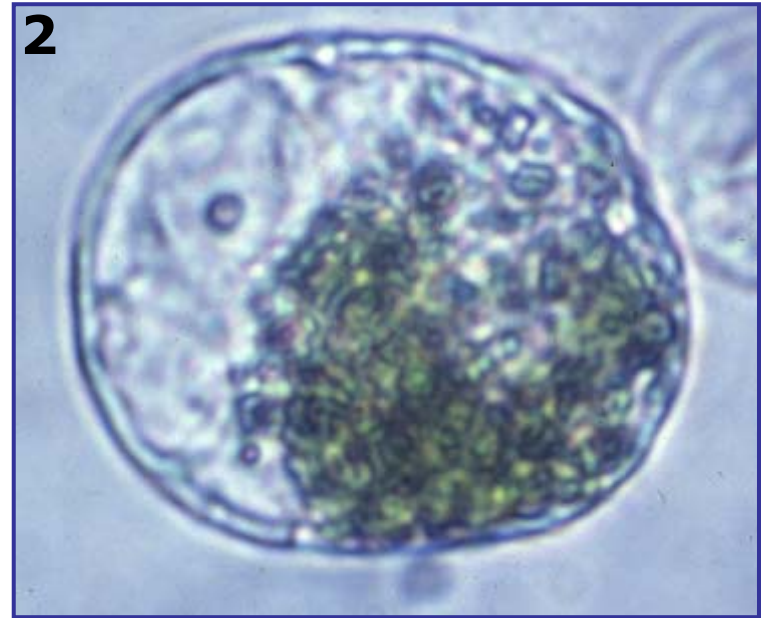
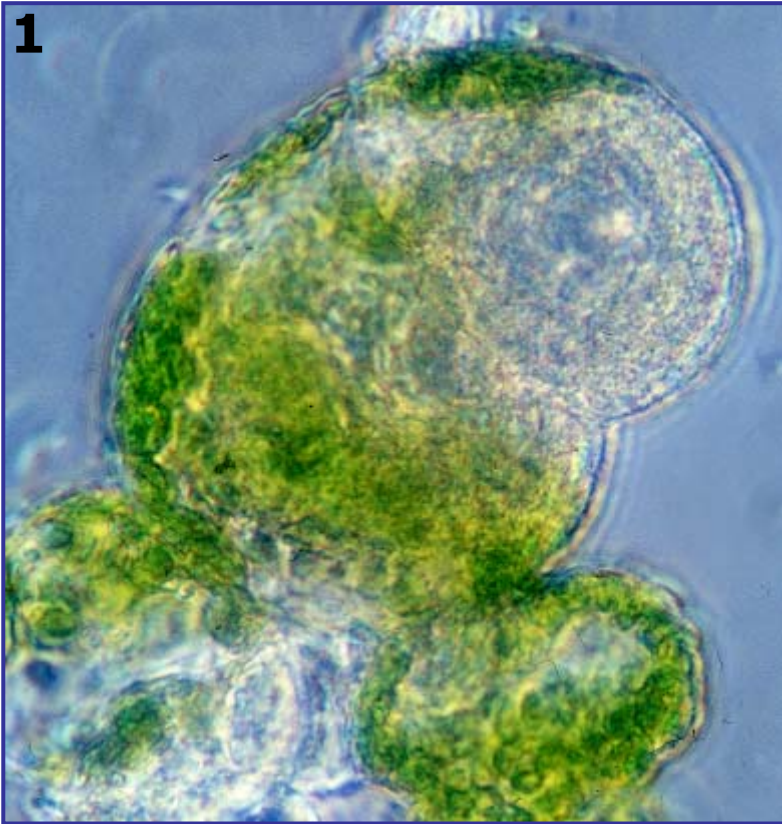
**Organogenesis**



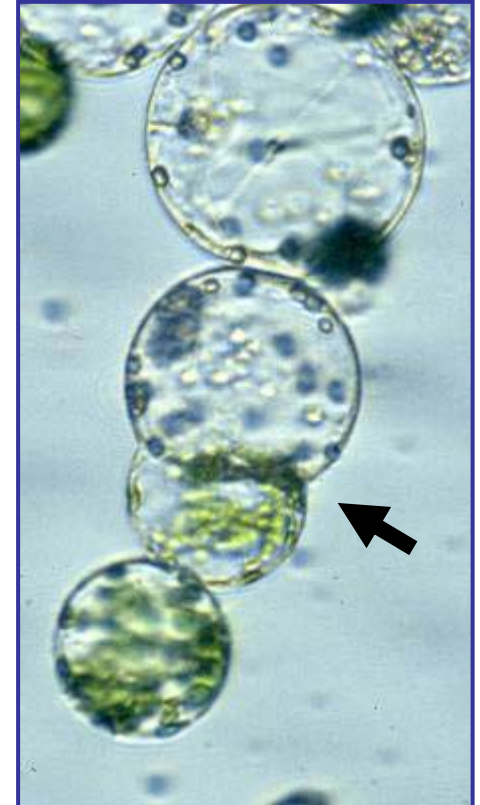
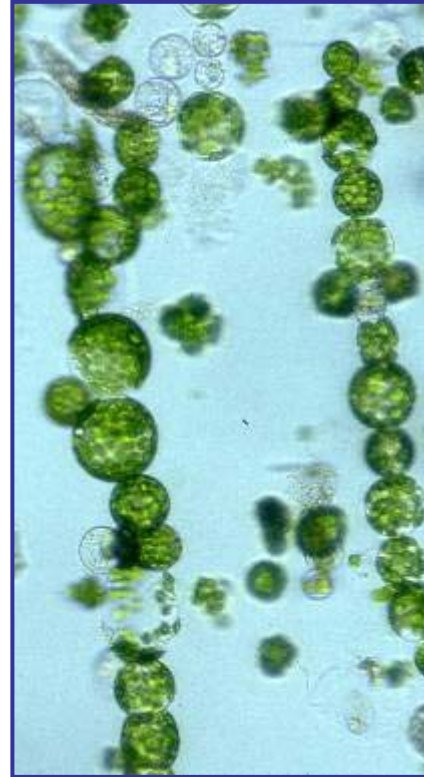
**Somatic Embryogenesis**



# PEG-Induced Protoplast Fusion



# Electrofusion



**"Pearl chain"  
formation**



# Somatic Hybrid

*Passiflora edulis* (+)  
*Passiflora incarnata*



**Fusion of leaf  
protoplasts**

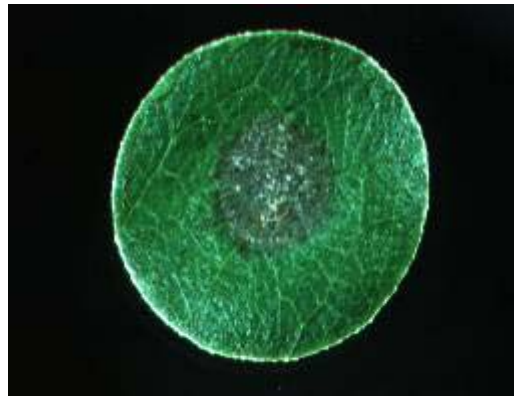
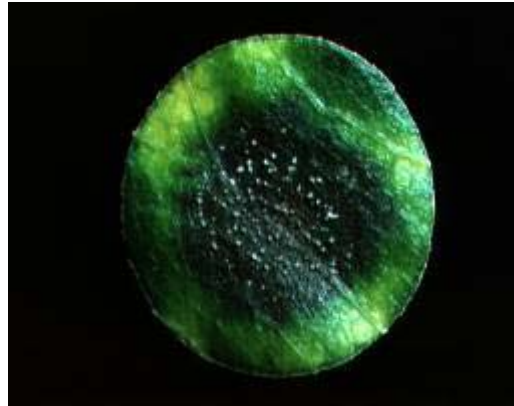
**Somatic hybrid  
flower**



# Resistance to Black Spot Disease incited by *Diplocarpon rosae*

Introduction and expression  
of a rice chitinase gene

*Rosa hybrida* cv. Glad Tidings



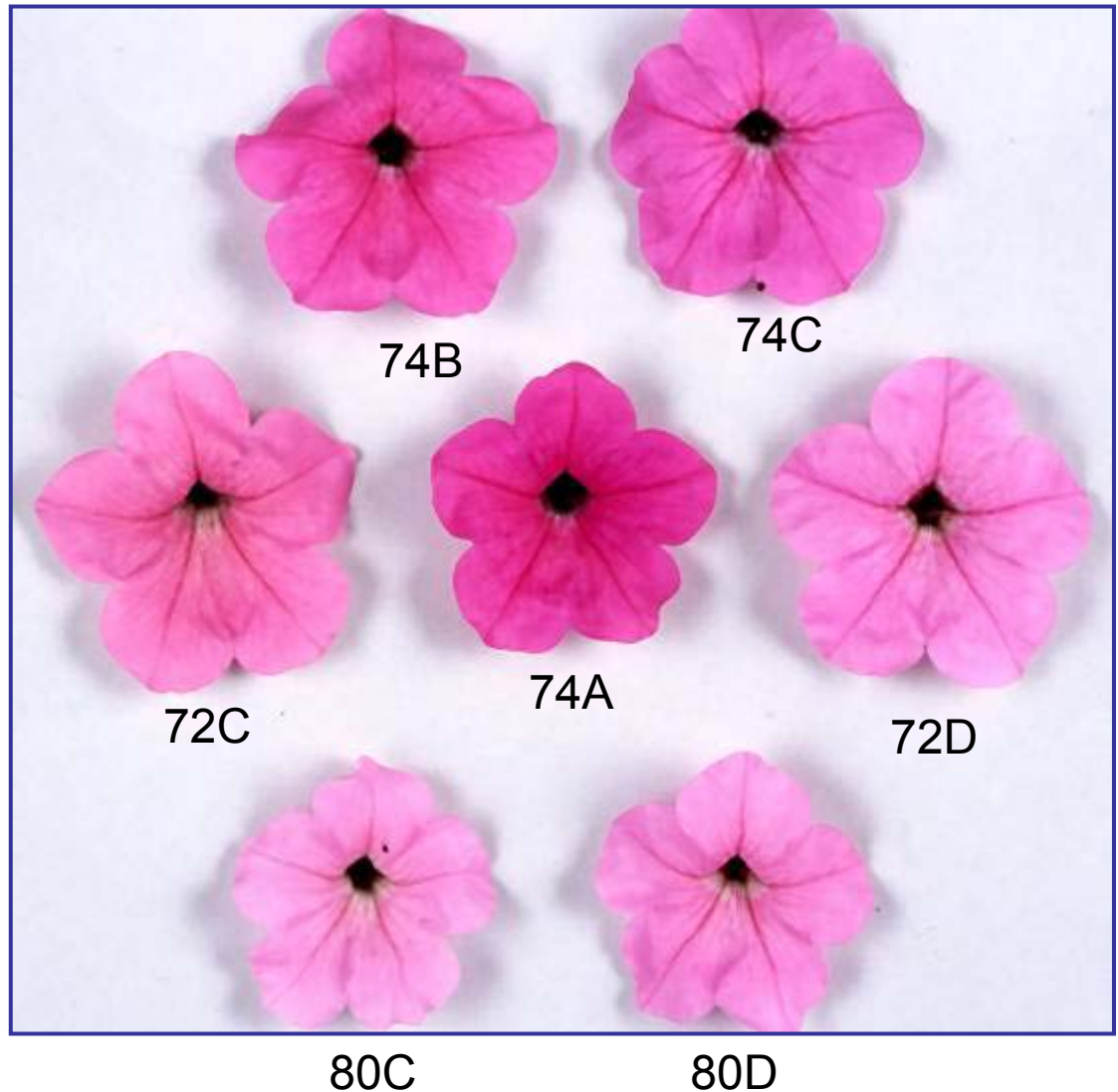
Leaf disc assay

# Modification of Pigmentation in *Petunia*

**Chalcone synthase and 6'-hydroxychalcones in *Petunia***

**Introduction of a chalcone reductase gene (*chr7*) from *Medicago sativa* into *Petunia*, produces 6'-deoxychalcones**

**Royal Horticultural Society Colour Chart**

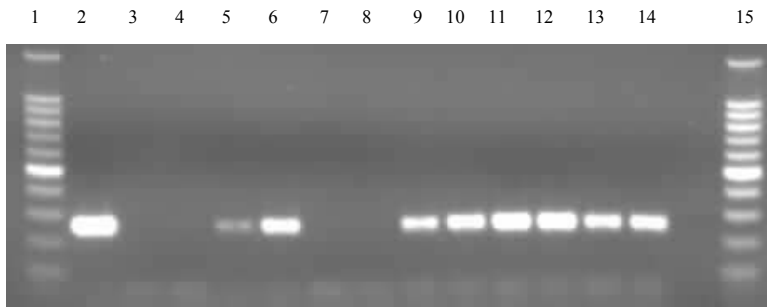


# *Agrobacterium*-mediated transformation: Molecular characterisation of putative transgenics

## Polymerase Chain Reaction analyses

### Bambara groundnut

Detection of 261bp *nptII* gene fragment

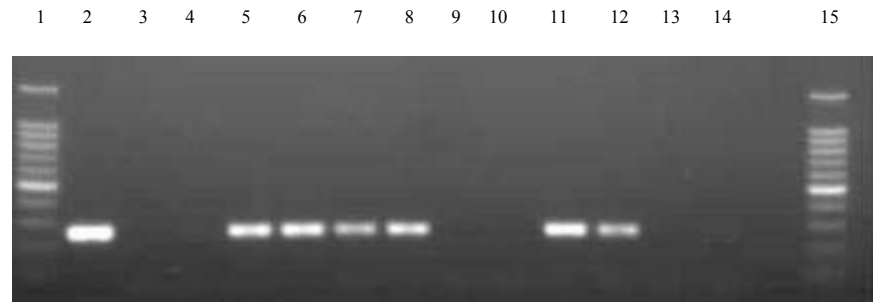


Detection of 1023bp *gus* gene fragment

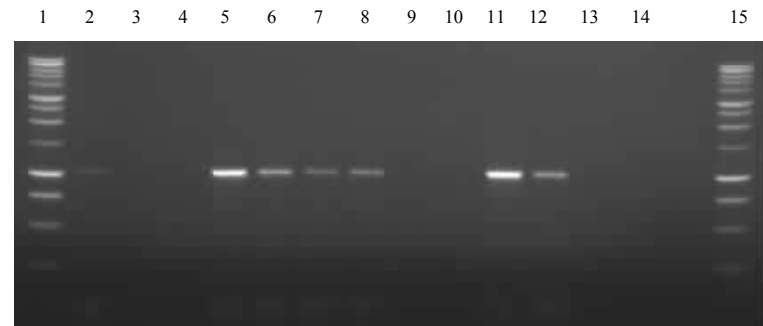


### Jicama

Detection of 261bp *nptII* gene fragment



Detection of 1023bp *gus* gene fragment

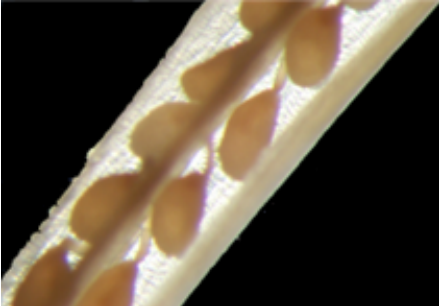


# GUS expression profile in *Arabidopsis*

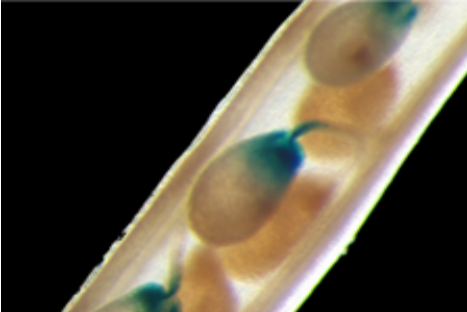
No expression in both short and long promoter lines (except siliques)



SP (unwounded)



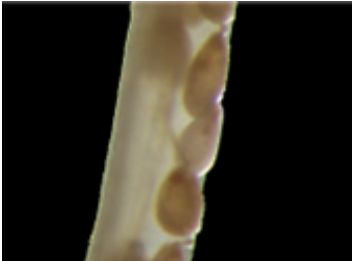
SP (wounded)



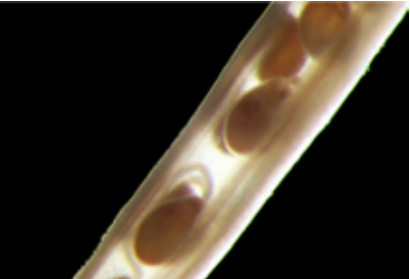
K2



LP (unwounded)



LP (wounded)



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