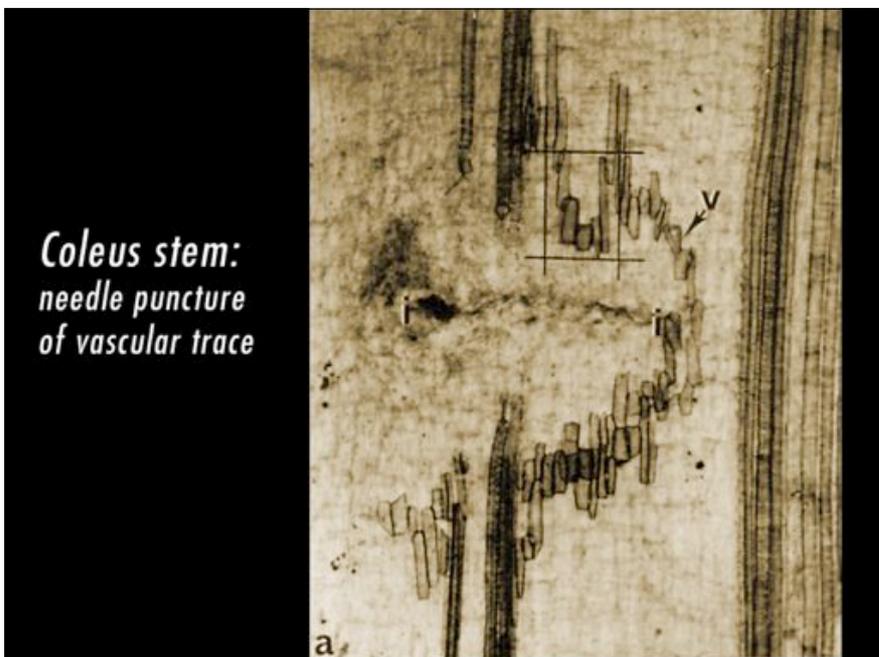
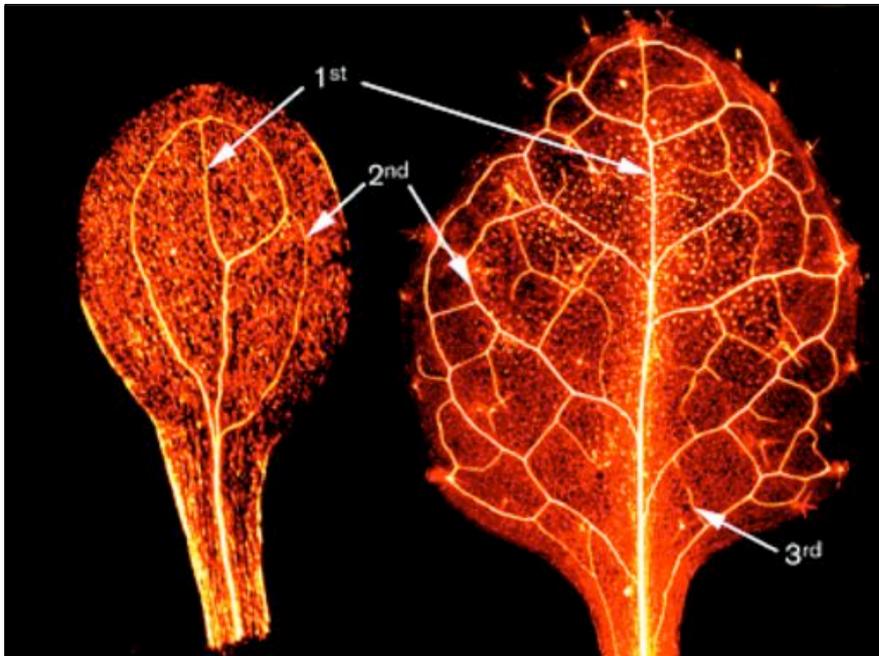
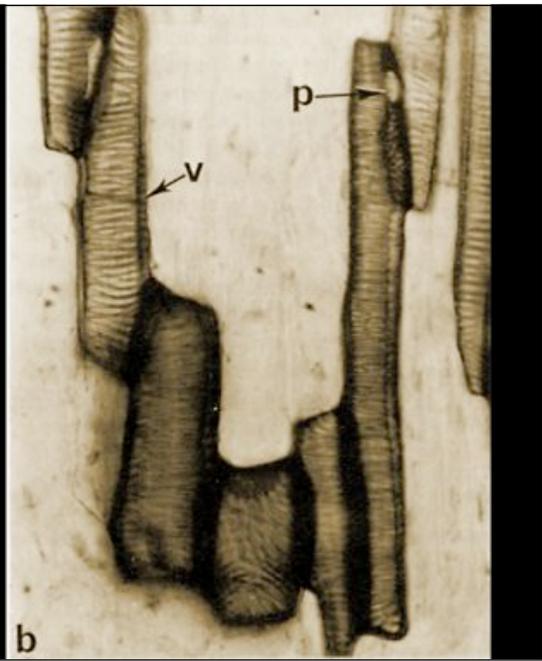


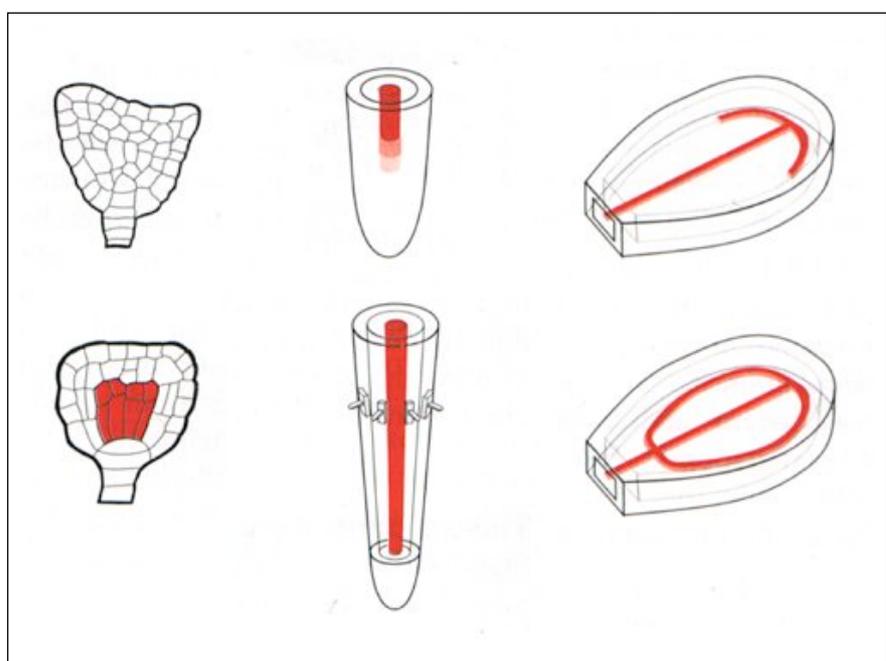
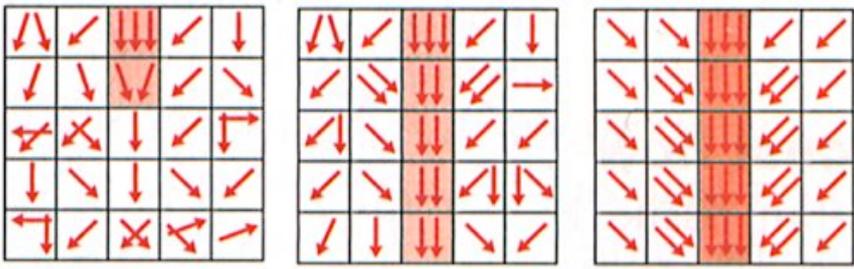
Week I

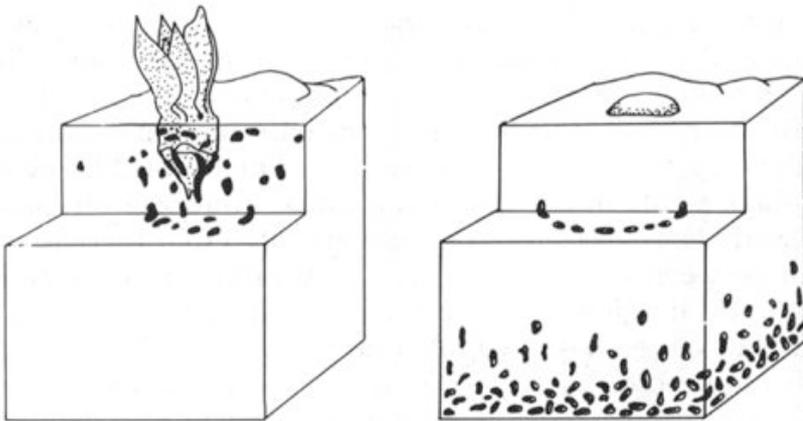
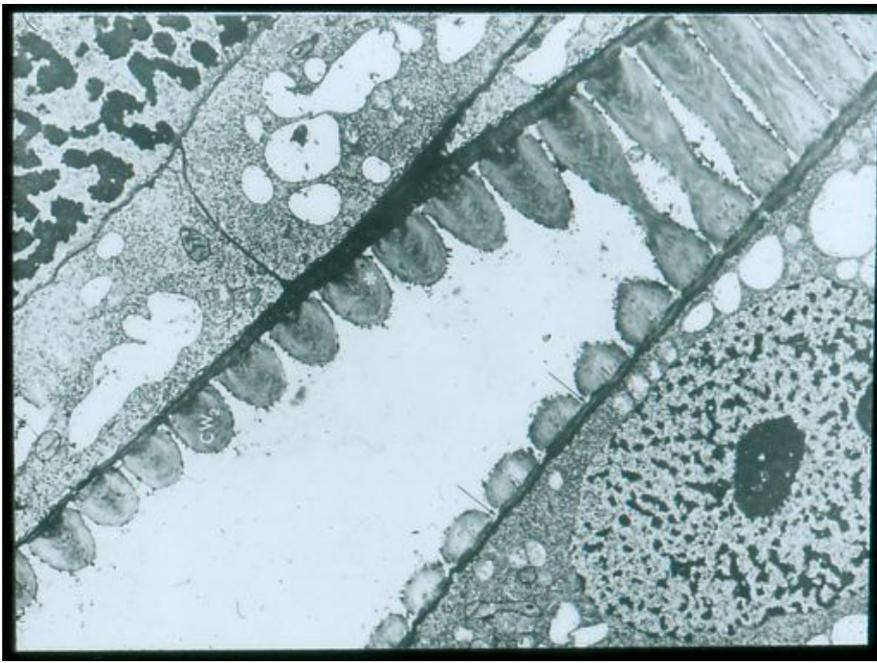


Coleus stem:
differentiation of
new xylem vessels
in response to
local wounding



“Canalisation”

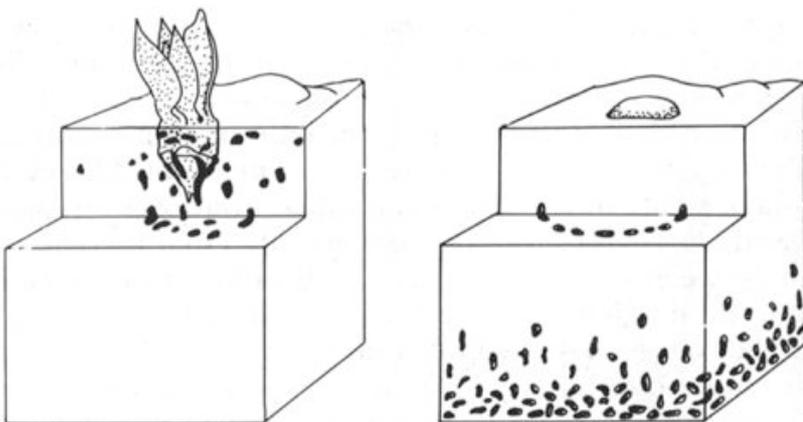


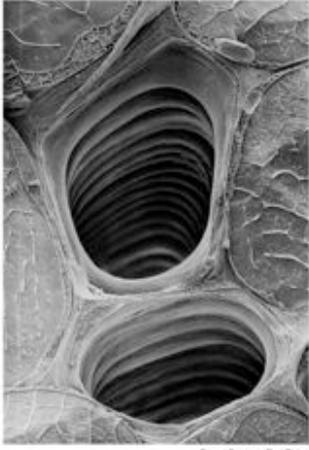


Week 1: Induction of Xylogenesis

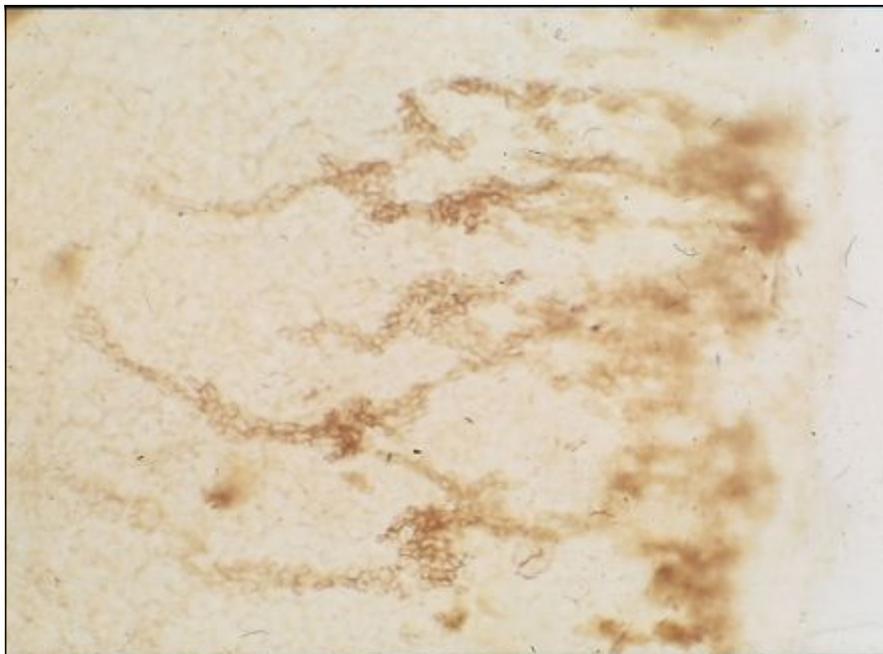
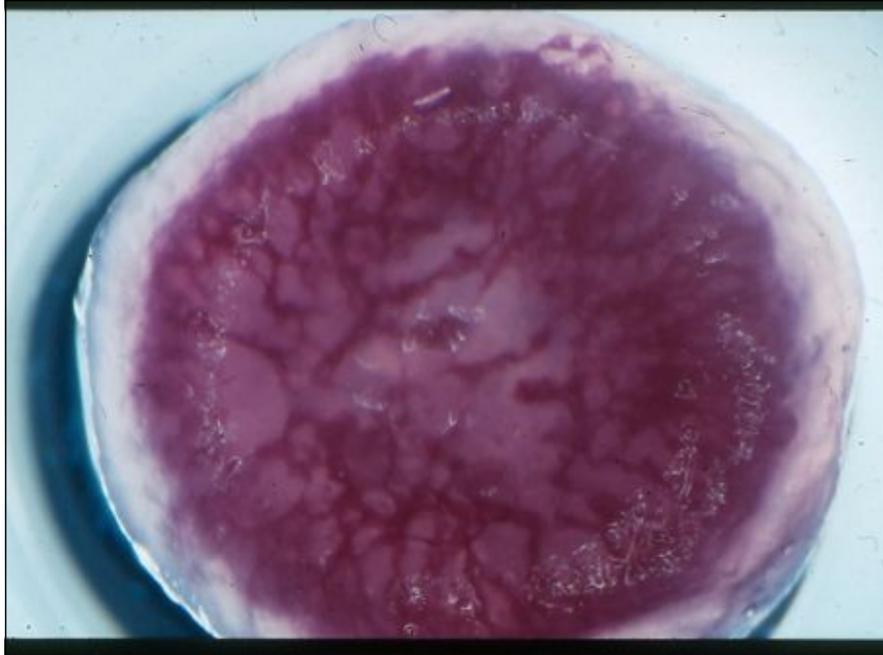
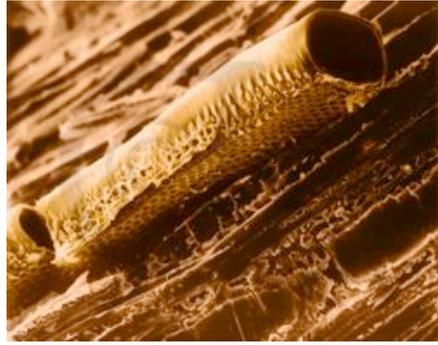
1. Trim Jerusalem artichoke tuber
2. Surface sterilise with sodium hypochlorite solution
3. Transfer under sterile "tent"
4. Wash 3x with sterile water
5. Trim top and bottom of tuber piece with large scalpel on sterile petri dish lid
6. Take cores of pith
7. Slice cores into 1mm explants & transfer to small beaker of sterile water
8. Wash twice with sterile water
9. Transfer to plates: weigh plate immediately before and after addition of explants to obtain fresh weight.
10. Wrap in aluminium foil - incubate for 1 week at 25°C

Week 2





Current Opinion in Plant Biology





Week 2: Measurement

- 1. Inspect tissue discs and note any differences**
- 2. Weigh the tissue discs in plastic weigh boats**
- 3. Incubate in 5% NaOH solution at 80°C for 1 hour**
- 4. Wash several times with water**
- 5. Incubate in 0.03% aqueous safranin O for 0.5 hour at 55°C**
- 6. Destain in several changes of 1M HCl over the period of an hour**
- 7. Inspect pattern of differentiated cells within intact discs**
- 8. Transfer discs to small beakers and sonicate**
- 9. Count differentiated cells in haemocytometer slide**
- 10. Calculate numbers of differentiated cells (per g fresh weight) for the different treatments**