

Cell death and autophagy in plant life

GUEST LECTURE by



Peter Bozhkov, PhD

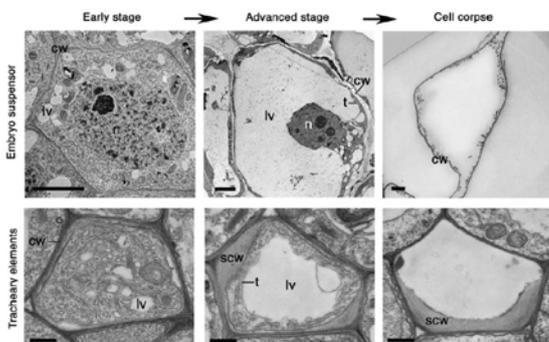
Department of Plant Biology & Forest Genetics,
Uppsala BioCenter, Swedish University of
Agricultural Sciences & Linnean Center for
Plant Biology, Uppsala / Sweden

Monday, 21.05.2012, 17:00h

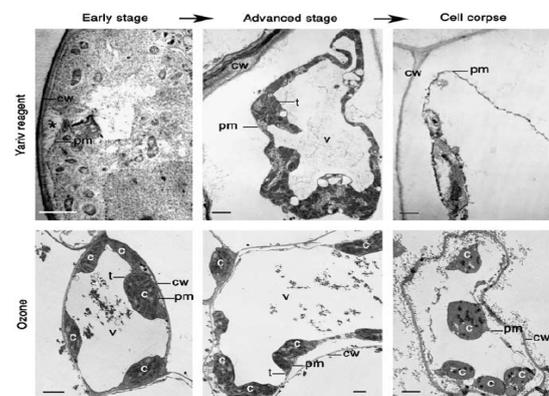
SR 44.22, ZMB, KFUG
(Humboldtstrasse 48, 2nd floor)

The talk will dwell on the following findings and paradigms

- Cell corpses play many important roles during plant development.
- There is no apoptotic cell death in plants.
- Spruce embryos: "*Caenorhabditis elegans*" in plant cell death research.
- Metacaspases are ancestors of animal caspases with a key role in plant cell death.
- Degradomes of caspases and metacaspases might overlap despite distinct substrate specificity of the two groups of enzymes.
- Terminal differentiation triggers autophagy to dismantle cells during plant development.
- Autophagy prolongs lifespan of plants.

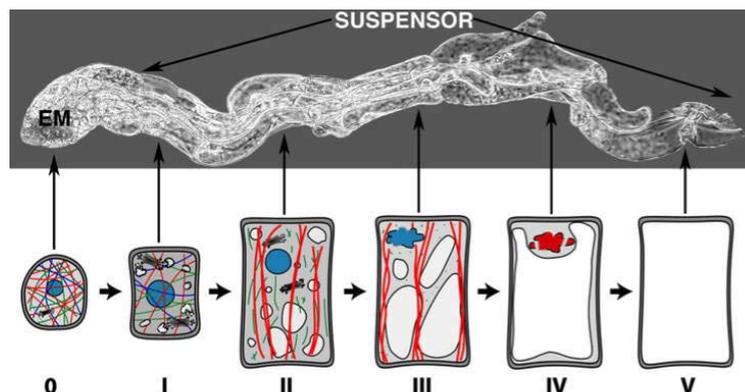


Vacuolar cell death



Necrotic cell death

Morphological characterization of plant cell deaths
Cell Death Diff. (2011) 18, 1241-46



A gradient of programmed cell death along apical-basal axis of Norway spruce embryo