

# DOES PLANT NEED A SUSPENSOR?

## Summary

This review concerns the structure and role of the embryo-suspensor in angiosperms. The suspensor is the first differentiated structure produced during plant embryogenesis. Angiosperm suspensors vary widely in size and morphology, from a single cell to a massive structure composed of hundreds of cells. A few suspensors produce elaborate outgrowths (haustoria) that invade surrounding endosperm or maternal tissues. Suspensor cells may also be polytene, polyploid or multinucleate. In most case the suspensor functions early in embryogenesis and degenerates during later stages of development. In many suspensors, the cytoplasm is rich in ribosomes, profiles of endoplasmic reticulum, dictyosomes, lipid droplets, and contains also mitochondria, plastids, microbodies. Cells of

the suspensor often contain a variety of structural modifications not found in the embryo-proper (e. g. presence of extensive wall ingrowths, specialized plastids, and variations in general morphology). The functional role of the suspensor was long thought to be limited to mechanically pushing the embryo into the nutrient endosperm. It now appears that the suspensor in flowering plants is an embryonic organ essential to embryo development. Extensive cytochemical, ultrastructural and biochemical studies with a variety of angiosperms shown the suspensor to play an active role early in development by promoting continued growth of the embryo-proper. The death of the suspensor is an example of physiological programmed cell death (PCD) in floral organ of higher plants.