

Expression of cell wall proteins in seeds and during early seedling growth of *Araucaria araucana* is a response to wound stress and is developmentally regulated

Cardemil, Liliana

Riquelme, Alejandro

Araucaria araucana seeds and seedlings respond to wounding after 48 h with a 3- to 4-fold increase of hydroxyproline-rich glycoproteins (HRGP) in the cell walls of the embryo and with a 15-fold increase in the cell walls of the megagametophyte. The megagametophyte walls accumulate six times more hydroxyproline per μg of cell wall protein than the embryo in this wound response.

Tissue immunoprints of different parts of seeds and seedlings obtained with polyclonal antibodies raised against HRGP from carrot roots or soybean seed coats indicate that the response is due to an increase in a protein similar to the ones seen in carrot roots or soybean seed coats. Western blots of embryo and megagametophyte cell wall proteins subjected to SDS-PAGE show three bands that cross-react with these antibodies. In a native cationic gel system followed by Western blot analysis, only two bands react with these antibodies. Expression of such proteins in *Araucaria araucana* seeds seems to be developmentally