

Hartwigsen, J. A. and A. S. Goggi. 2002. Expression of a dehydrin-like protein in maize seedlings germinated from seed exposed to freezing. **Journal of Plant Biology**, 45(2):225-229.

### **Abstract**

Dehydrin are a family of heat-soluble, hydrophilic proteins that share a considerable degree of sequence homology. Their expression has been reported in numerous plant species in response to a multitude of environmental stresses including low temperature, freezing, and desiccation, it has also been established that exposing plant tissues to freezing temperatures generates desiccation stress. We observed differential accumulation Of a dehydrin-like protein and corresponding mRNA in three-day-old maize (*Z\_ea mays* L) seedlings germinated under favorable environmental conditions from seed that had been exposed to freezing temperatures during maturation. This represents the first documented situation in which a dehydrin-like protein differentially accumulates under favorable environmental conditions. We believe that the dehydrin-like protein and corresponding mRNA are synthesized de novo in seedlings that are germinated from seed that have been exposed to freezing in response to desiccation-like stress that persists under favorable environmental conditions resulting from freeze-induced damage sustained by the ungerminated embryo.

### **URL:**

<http://www.springerlink.com/content/n54935wp6mk70076/fulltext.pdf>