

## **Salt tolerance of four mutants of *Dunaliella salina* Teod. and their wild types**

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**Abstract** -The halotolerant alga *Dunaliella salina* (wild type) and its four mutants grow at 0.5 to 4.5 M NaCl, maintaining a low intracellular ion concentration throughout this range. The NaCl concentration, which yielded the best growth, was 1.25 M NaCl. However, the wild type is most salt sensitive, mutant 2 is most salt tolerant while the other three mutants were intermediate. 1 M NaCl is a glycerol inducer in the mutants compared with 1.25 M in the wild type. Accumulation of glycerol is at the expense of sugars. The appearance of a 150 k Da protein in the wild type and mutant 2 under hypersaline conditions could play a potential role in the extreme halotolerance of the alga. Additionally the variation in the number of peroxidase isozymes among the mutants in response to salt concentration is probably due to the variation in gene.

**Key words:** *Dunaliella salina*, glycerol, protein pattern, similarity coefficient, peroxidase zymogram.