

Abstract:

In order to determine *TaGSK1* gene expression levels in 25 selected wheat genotypes, a comparison between genotypes was performed under control and stress conditions in Zabol University Biotechnology Institute. Three replicates for each genotype were considered and then specimens under stress were subjected to 200 mM NaCl. RNA was extracted from leaf samples. cDNA was synthesized using reverse transcription. 18S rRNA gene expression was used as an internal control gene in Real Time PCR to normalize *TaGSK1* gene expression levels. Results showed that the Sistan genotype had significant differences between the level of *TaGSK1* gene expression under conditions of salinity and control. In this genotype, *TaGSK1* gene expression showed a maximum increase of 2.5 fold and the lowest increase of 1.1 fold was observed in S-82-15 genotype.

Key words: *TaGSK1* gene, Gene expression, Salt stress, Wheat and Real Time PCR



University of Zabol
Graduate School
Faculty of Agriculture
Department of Plant Breeding and Biotechnology

**The Thesis Submitted for the Degree of Master of Science.
(In the Field of Agricultural Biotechnology)**

Title:

**Evaluation of GSK gene expression in selected wheat
lines using Real Time PCR**

Supervisor:

Dr. M. Solouki

Advisor:

Dr. B. A. Siah SAR

By:

R. Kazemi Sani

October 2010