

Biotechnology 2019 & Enzymology 2019: Genotypic variation in gene expression under environmental perturbation: A case study of wheat under salinity

Nidal A Odat

Al Balqa Applied University, Jordan

E-mail: nidalodat@gmail.com

Abstract

The expression patterns and transcript levels of four candidate genes (CAT, GAD, ASN and SOD) were analyzed in leaf of five durum wheat varieties from Jordan with under different conditions of salinity stress (50, 100, 150). Only ASN gene was found to show an up-regulation pattern of expression in response to salinity stress in all varieties while CAT, GAD and SOD showed significant down-regulation of expression under varied salt conditions. The increase in salinity levels cause a significant increase in the expression levels of both GAD and SOD genes, while the expression of CAT was decreasing with salinity. Accordingly, it seems that GAD and SOD have varied responses to different levels of salinity. The results presented here suggest that GAD and SOD are more responsive to NaCl stress compared with CAT and ASN.

This work is partly presented at Joint Event on 22nd Global Congress on Biotechnology & 5th International Conference on Enzymology and Protein Chemistry on February 28-March 02, 2019 held in Berlin, Germany