

## **Study the Heat Shock Protein 70 gene in Breast Cancer in Iraqi population**

**Sheerin H. Abbas<sup>1</sup>, Moaed E. Al-Gazally<sup>2\*</sup>, Alaa S. Al-Awad<sup>3</sup>**

<sup>1</sup> Babylon University, College of science for women. Iraq.

<sup>2</sup>Department of biochemistry, Faculty of medicine, Babylon University, Iraq

<sup>3</sup> Oncology center, Merjan teaching hospital, Babylon, Iraq

**Abstract: Objectives:** this study was planned to analysis the effect of HSP70-2 gene A/G polymorphism on the plasma humane level of Hsp70 and compare these results that will obtain with healthy control.

**Design and methods:** The present study was performed on seventy patients which forty-two of them obese, twenty-eight overweight. Thirty was as a control, eighteen of them obese and twelve overweight. Whole blood samples received from study subjects used to extract DNA for the study of polymorphism in Hsp70-2 gene by way of PCR-RFLP technique.

**Results:** The Hsp70-2 gene polymorphism was detecting by using PCR-RFLP. The alleles were designate as AA, AG and GG. There was statistically no significant difference in each the genotyping distribution and allelic frequency between each patient corporations and healthy control group ( $P > 0.05$ ). The current study shows that subjects with AG, GG and AA genotype had the highest level of Hsp70 in all study groups.

**Conclusion:** the results indicate that relative risk of breast carcinoma not associated with Hsp70-2 polymorphism in patients.

**Key words:** Breast Cancer, Heat Shock Protein 70, polymerase chain reaction, and polymorphism.